AECOM Environment

Prepared for:
Sacramento Municipal Utility District
Sacramento, CA

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May 2021

Site Characterization Report Addendum

SMUD 59th Street Corporation Yard

Draft

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Prepared for:

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PREFACE

This site characterization report addendum was prepared by AECOM Technical Services, Inc. (AECOM) for the Sacramento Municipal Utility District (SMUD) under Master Contract 4600001299, Task Contract 4500121576, Task Number 576-003. The work was initiated by SMUD in accordance with the requirements of the Corrective Action Consent Agreement, Docket Number HWCA P1-13/14-007 between SMUD and the California Department of Toxic Substances Control (DTSC). The work partially relies on information provided by SMUD and information in reports available on the DTSC EnviroStor website. Assumptions based on this data, although believed reasonable and appropriate based on the data provided herein, may not prove to be true in the future as new data are collected.

Approved:

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List of Acronyms and Abbreviations

°	degree
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
’	minute (in the context of latitude and longitude)
#	number
%	percent
®	registered trademark
”	second (in the context of latitude and longitude)
™	trademark
AECOM	AECOM Technical Services, Inc.
AF	attenuation factor
AOC	area of concern
APN	Assessor’s Parcel Number
B&B	B&B Locating, Inc.
BDCM	bromodichloromethane
bgs	below ground surface
CACA	Corrective Action Consent Agreement
CalEPA	California Environmental Protection Agency
CAM	California Administrative Manual
CCC	calibration check compound
COC	chemical of concern
Confluence	Confluence Environmental, Inc.
COPC	chemical of potential concern
DBE	dibromoethane
DCA	dichloroethane
DCE	dichloroethene
DCP	dichloropropane
DPT	direct push technology
DQO	data quality objective
DTSC	California Department of Toxic Substances Control
e.g.	*exempli gratia*, for example
ECLR	excess lifetime cancer risk
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
et al.	*et alia*, and others
HERO	Human and Ecological Risk Office
HHRA	Human Health Risk Assessment
i.e.	*id est*, that is
IDW	investigation-derived waste
Kleinfelder	Kleinfelder, Inc.
MCL	Maximum Contaminant Level
MDL	method detection limit
mg/kg	milligrams per kilogram
OWS	oil/water separator
Patriot	Patriot Environmental Services, Inc.
PCB	polychlorinated biphenyl
PCE	tetrachloroethene

List of Acronyms and Abbreviations (continued)

PG&E	Pacific Gas and Electric
PID	photoionization detector
ppb	parts per billion
ppm	parts per million
PQL	practical quantitation limit
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RFI	RCRA Facility Investigation
RSD	relative standard deviation
SacRT	Sacramento Regional Transit
Safety-Kleen	Safety-Kleen Systems, Inc.
SAP	Sampling and Analysis Plan
SCEMD	Sacramento County Environmental Management Department
SCR	Site Characterization Report
Site	59th Street Corporation Yard
SL	screening level
SMUD	Sacramento Municipal Utility District
SNC	Sierra National Construction, Inc.
SVE	soil vapor extraction
SVOC	semi-volatile organic compound
SVSL	soil vapor screening level
SWMU	solid waste management unit
SWRCB	California State Water Resources Control Board
TCE	trichloroethene
TCP	trichloropropane
TO	Toxic Organics
TPH	total petroleum hydrocarbons
TPH_d	total petroleum hydrocarbons as diesel
TPH_g	total petroleum hydrocarbons as gasoline
$TPH_{ho/mo}$	total petroleum hydrocarbons as hydraulic oil/motor oil
U.S.	United States
USA North 811	Underground Service Alert of Northern California and Nevada
USEPA	United States Environmental Protection Agency
VI	vapor intrusion
VOC	volatile organic compound
XRF	x-ray fluorescence

Executive Summary

The Sacramento Municipal Utility District (SMUD) conducted a supplemental site investigation at the SMUD 59th Street Corporation Yard (Site) in accordance with the *Scope of Work for Phase II* within the *First Amendment to Corrective Action Consent Agreement*, Docket HWCA P1-13/14-007 (California Department of Toxic Substances Control [DTSC], 2018). SMUD conducted soil gas and soil sampling in support of selecting and implementing a corrective action for the Site. This Site Characterization Report (SCR) Addendum was prepared by AECOM Technical Services, Inc. (AECOM) on behalf of SMUD to document the work performed and the results from the site investigation activities conducted at the Site from June 2020 through March 2021. This SCR Addendum is a companion document to the SCR (AECOM, 2019), which documented the work performed and the results from site investigation activities conducted at the Site from December 2018 through March 2019.

The Site encompasses 19.74 acres in an area of varied land use. Residential neighborhoods are situated to the west, commercial developments are situated to the north, and United States Highway 50 is located south of the Site. A California Department of Transportation laboratory is located east of the Site. The SMUD headquarters and other buildings of the SMUD campus are located southeast of the Site. The yard is bisected by a Sacramento Regional Transit light rail line and a petroleum product pipeline beneath the light rail right-of-way.

The purpose of the current Site investigation was to further characterize the lateral and vertical extent of volatile organic compounds (VOCs) in soil gas. Additionally, soil sampling was performed to refine the lateral and vertical extent of arsenic-impacted soil requiring remedial action in support of the forthcoming 59th Street Corporation Yard Remedial Action Plan.

Soil Gas. Previous investigations at the Site identified tetrachloroethene (PCE) in soil gas near the Tool Issue Building as a chemical of concern because it is present at concentrations exceeding residential and commercial/industrial soil vapor screening levels (SVSLs). The lateral extent of PCE in soil gas near the Tool Issue Building was previously defined using residential and commercial/industrial SVSLs derived by applying a 0.001 attenuation factor (AF) to the DTSC Human and Ecological Risk Office Human Health Risk Assessment Note 3 ambient air (e.g., indoor air) screening levels (SLs) consistent with DTSC's Vapor Intrusion (VI) Guidance (DTSC, 2011). DTSC later proposed a more conservative AF of 0.03 (California Environmental Protection Agency, 2020) which reduced the SVSLs causing the lateral extent of PCE in soil gas exceeding residential and commercial/industrial SVSLs to no longer be defined. Furthermore, historical concentrations of benzene, chloroform, ethylbenzene, PCE, and trichloroethene (TCE) detected in soil gas at other potential source areas (e.g., Garage Building, Shops Building) that did not previously exceed residential and commercial/industrial SVSLs did exceed the lower commercial/industrial and/or residential SVSLs derived using an AF of 0.03.

Additionally, the laboratory method detection limits (MDLs) associated with 19 VOCs exceeded the lower commercial/industrial and/or residential SVSLs for soil gas samples collected from one of more previous investigation sampling locations. For the instances in which these VOCs were previously reported as not detected above their respective MDLs, it was not known if any of these VOCs were present at concentrations above their respective commercial/industrial and/or residential SVSLs. Also, previous soil gas sample analyses did not include naphthalene, which may be present in soil gas based on the detection of other petroleum-related VOCs (e.g., benzene, ethylbenzene) at concentrations exceeding SVSLs.

Finally, PCE concentrations detected in soil gas at locations around the perimeter of the Tool Issue Building were higher in samples collected from 14.5 feet below ground surface (bgs) than in samples collected from 5.5 feet bgs. The vertical extent of PCE in soil gas near the Tool Issue Building was unknown.

Therefore, additional characterization was necessary to (1) further define the lateral and vertical extent of VOC-impacted soil gas based on the residential and commercial/industrial SVSLs derived using an AF of 0.03, and (2) determine if any of the 19 VOCs that previously had elevated MDLs and naphthalene, which was previously not analyzed for, are present in soil gas at concentrations exceeding commercial/industrial and/or residential SVSLs.

Seventeen analytes (benzene, benzyl chloride, bromodichloromethane [BDCM], chloroform, 1,2-dibromoethane [DBE], 1,2-dichloroethane [DCA], *cis*-1,2-dichloroethene [DCE], 1,2-dichloropropane [DCP], ethylbenzene, n-heptane, hexane, naphthalene, PCE, toluene, TCE, 1,2,3-trichloropropane [TCP], and total petroleum hydrocarbons as gasoline [TPH_g]) were detected at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.03 AF. The highest benzene, benzyl chloride, BDCM, 1,2-DBE, 1,2-DCA, ethylbenzene, n-heptane, hexane, toluene, 1,2,3-TCP, and TPH_g concentrations were detected in soil gas samples collected at 14.5 feet. The highest chloroform, *cis*-1,2-DCE, 1,2-DCP, naphthalene, PCE, and TCE concentrations were detected in shallower soil gas samples collected from 5.5 feet or less. In comparison, only seven of these analytes (benzene, chloroform, 1,2-DBE, *cis*-1,2-DCE, PCE, TCE, and 1,2,3-TCP) were detected at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.001 AF.

The analytes detected in shallow soil gas (i.e., 5.5 feet or less) are of particular interest when evaluating the potential for VI to indoor air. Eleven analytes (benzene, BDCM, chloroform, 1,2-DBE, *cis*-1,2-DCE, 1,2-DCP, ethylbenzene, naphthalene, PCE, TCE, and TPH_g) were detected in shallow soil gas at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.03 AF. In comparison, only five of these analytes (chloroform, 1,2-DBE, *cis*-1,2-DCE, PCE, and TCE) were detected in shallow soil gas at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.001 AF.

PCE in soil gas was previously identified as a chemical of concern (COC) at the Site because of the potential for unacceptable human health risk if soil gas migrated into indoor air (i.e., the VI pathway). This conclusion was based on a 0.001 vapor AF. After evaluating the results of the current investigation, 1,2-DBE, *cis*-1,2-DCE, chloroform, and TCE were identified as additional COCs in soil gas based on a 0.001 AF. When a more conservative 0.03 AF was applied, benzene, BDCM, ethylbenzene, naphthalene, and toluene were also identified as COCs in soil gas.

The lateral extent of VOC concentrations in shallow soil gas exceeding the SVSLs derived using a 0.03 AF extend beneath approximately 9.2 acres in the western two-thirds of the North Corporation Yard and may extend beyond the property boundary to the north, west and south. In comparison, the lateral extent of VOC concentrations in soil gas exceeding the SVSLs derived using a 0.001 AF is limited to two localized areas: in the vicinity of vapor wells SVM-1 and VW14 at the north side of the Tool Issue Building and an area encompassing vapor wells VW19, VW24, and VW30, including the area beneath the western portion of the Garage Building. These two areas comprise approximately 0.65 acre.

The maximum concentration of five soil gas COCs (chloroform, naphthalene, PCE, TCE, and *cis*-1,2-DCE) were detected in soil gas samples collected from 4 to 5.5 feet bgs. The maximum concentration of five soil gas COCs (benzene, ethylbenzene, toluene, BDCM, and 1,2-DBE) were detected in samples collected from 14.5 feet bgs. The vertical extent of these COCs beyond 14.5 feet bgs is not known, except at vapor wells VW14 and VW15, which were installed to depths of 25.5 and 23.5 feet bgs, respectively. Six soil gas COCs (chloroform, ethylbenzene, toluene, PCE, TCE, and cis-1,2-DCE) were detected in the soil gas sample collected from vapor well VW14. Only chloroform, PCE, and TCE were detected at concentrations exceeding their respective SVSLs based on a 0.03 AF, and only PCE was detected at concentration exceeding its SVSL based on a 0.001 AF at this location. Only two soil gas COCs (benzene and toluene) were detected in the soil gas sample collected from vapor well VW15. Only benzene was detected at a concentration exceeding its SVSL based on a 0.03 AF, but it did not exceed its SVSL based on a 0.001 AF at this location.

Soil. Based on previous investigations, arsenic concentrations in soil exceeding the 17.53 milligram per kilogram (mg/kg) background concentration at a depth of 3 feet bgs or less was identified in four areas of the Site with an estimated combined area of approximately 2.6 acres. However, the full extent of these areas was not fully defined. Therefore, additional soil characterization was necessary to refine the lateral and vertical extent of arsenic-impacted soil to support the remedy selection and design.

Based on the current and previous investigations, arsenic concentrations in soil exceeding the 17.53 mg/kg background concentration at a depth of 3 feet bgs or less was identified in five areas of the Site with an estimated combined area of approximately 1.7 acres. The two largest areas of arsenic-impacted soil at a depth of 3 feet bgs or less are located south of the Warehouse Building (approximately 0.9 acre) and in the vicinity of the Salvage Building (approximately 0.6 acre). Three smaller areas of arsenic-impacted soil at a depth of 3 feet bgs or less are located in the vicinity of the Tool Issue Building, west of the Hazardous Material Building, and south of the Garage Building (approximately 0.2 acre combined).

Arsenic concentrations exceeding background in soil at a depth greater than 3 feet bgs were identified in three localized areas: south of the east end of the Warehouse Building (approximately 0.3 acre), south of the Tool Issue Building (approximately 0.03 acre) and west of the Salvage Building (approximately 0.02 acre). In the area south of the east end of the Warehouse Building, the vertical extent of arsenic concentrations exceeding background extends to a depth of at least 10 feet bgs. In the area south of the Tool Issue Building, arsenic concentrations exceeding background extend to a depth between 6 and 11 feet bgs. In the area west of the Salvage Building, the vertical extent of arsenic concentrations exceeding background extend to a depth between 5 and 7.5 feet bgs.

Although the primary focus of the current soil investigation was to further refine the lateral and vertical extent of arsenic-impacted soil to support remedy selection and design, evidence of suspected soil contamination was identified during advancement of vapor well boreholes VW15, VW31, VW35, and VW38. The laboratory analytical results for the soil samples collected from these boreholes, indicated arsenic-impacted soil was present in the vicinity of boreholes VW31 and VW35 west of the Salvage Building. Furthermore, lead and total petroleum hydrocarbons as hydraulic oil/motor oil ($TPH_{ho/mo}$) concentrations exceeding their respective 80 and 2,400 mg/kg residential SLs were identified in a localized area within the area of arsenic-impacted soil west of the Salvage Building. The vertical extent of lead and $TPH_{ho/mo}$ concentrations exceeding their residential SLs extend to a depth between 2 and 5 feet bgs. No significant contamination was identified in the soil samples collected from boreholes VW15 and VW38.

Based on the understanding of site conditions following the 2020-2021 site characterization effort and regulatory SLs in effect at the time, recommended next steps include:

- Conducting additional soil gas sampling at existing vapor wells in the summer for comparison to the winter sampling results from the current investigation to evaluate seasonal and temporal variations and support future risk management decisions.
- Conducting sub-slab vapor sampling beneath existing buildings overlying areas where soil gas COCs were detected at concentrations exceeding their SVSLs to evaluate soil vapor conditions beneath the buildings to further develop lines of evidence regarding soil vapor attenuation at the Site.
- Conducting ambient air sampling of onsite subsurface pipe networks (e.g., sewers, drains, etc.) in areas where detected VOC concentrations in soil gas exceed their SVSLs to assess preferential pathway VI potential.
- Conducting additional soil gas characterization to better define the vertical extent of contamination, if necessary, to support remedial design.
- Implementing a remedial action to address VOC concentrations in soil gas that could pose an unacceptable risk to human health should the vapors migrate into indoor.

- Implementing a remedial action to address arsenic concentrations in soil above background levels, and lead and $TPH_{ho/mo}$ concentrations in soil above their respective SLs.

1.0 Introduction

The Sacramento Municipal Utility District (SMUD) conducted a supplemental site investigation at the SMUD 59th Street Corporation Yard (Site) in accordance with the *Scope of Work for Phase II* within the *First Amendment to Corrective Action Consent Agreement (CACA)*, Docket HWCA P1-13/14-007 (California Department of Toxic Substances Control [DTSC], 2018). Under the CACA, DTSC is the lead regulatory agency and SMUD is the responsible party for corrective action at the Site. SMUD conducted soil gas and soil sampling in support of selecting and implementing a corrective action for the Site. The laboratory analytical data produced from this effort are considered valid and usable for their intended purposes within the constraints of the final usability qualifiers assigned in data quality assessment as detailed in Section 4.2.1. In accordance with Attachment 4 of the CACA, this Site Characterization Report (SCR) Addendum document meets the requirements of preparing and submitting to DTSC an SCR that presents the data, summarizes the findings of the investigation, validates the data, and includes recommendations and conclusions.

This SCR Addendum was prepared by AECOM Technical Services, Inc. (AECOM) on behalf of SMUD to document the work performed and the results from the site investigation activities conducted at the Site from June 2020 through March 2021, which included:

- Installing vapor wells and collecting and analyzing soil gas samples; and
- Advancing shallow boreholes and collecting and analyzing soil samples.

The site investigation was performed according to the methods, protocols, and requirements specified in the *Site Characterization Sampling and Analysis Plan, SMUD 59th Street Corporation Yard* (SAP)(AECOM, 2018), except as noted in the *Site Characterization Sampling and Analysis Plan, SMUD 59th Street Corporation Yard* (SAP Addendum)(AECOM, 2020b), additional soil sampling notification letters in Appendix A, and SAP deviations identified in Section 3.5.

This SCR Addendum is a companion document to the SCR (AECOM, 2019), which documented the work performed and the results from site investigation activities conducted at the Site from December 2018 through March 2019.

1.1 Site Description

The SMUD 59th Street Corporation Yard is the Site addressed in this SCR Addendum. The DTSC EnviroStor website identifies the Site as the SMUD Corporation Yard (EnviroStor Identification Number 34490015). The Site is located at 1708 59th Street in Sacramento, California, approximately 5 miles east of downtown Sacramento (Figure 1-1). The Site is located on the Sacramento East United States (U.S.) Geological Survey Quadrangle Map in Township 8 North, Range 5 East, Section 9 (Mount Diablo Baseline and Meridian). The Site's approximate coordinates are 121 degrees (˚) 26 minutes (') 18 seconds (") West longitude, 38˚ 33' 22" North latitude.

The Site encompasses 19.74 acres in an area of varied land use. Residential neighborhoods are situated to the west, commercial developments are situated to the north, and U.S. Highway 50 is located south of the Site. A California Department of Transportation laboratory is located east of the Site. The SMUD headquarters and other buildings of the SMUD campus are located southeast of the Site. The yard is bisected by the Sacramento Regional Transit (SacRT) light rail Gold Line and a 10-inch diameter petroleum product pipeline beneath the light rail right-of-way (Figure 1-1).

Figure 1-2 presents site features and the land parcels that make up the Site. The main portion of the Site is Assessor's Parcel Number (APN) 008-0010-009-0000 (12.89 acres). The wedge shaped portion of the Site situated south of the light rail line and north of U.S. Highway 50 consists of the following 10 parcels listed west to east: APN

011-0073-001-0000 (0.45 acre), APN 011-0073-002-0000 (1.11 acres), APN 011-0073-003-0000 (0.2 acre), APN 011-0073-004-0000 (0.39 acre), APN 011-0073-006-0000 (0.1 acre), APN 011-0073-008-0000 (1.79 acres), APN 011-0081-001-0000 (0.86 acre), APN 011-0081-002-0000 (0.86 acre), APN 011-0081-003-0000 (0.86 acre), APN 011-0081-008-0000 (0.23 acre). The described wedge-shaped area totals 6.85 acres.

There are eight permanent buildings located on the Site including an office building, inventory warehouse, tool issue building, vehicle maintenance garage, workshops building, hazardous materials building, vehicle storage and salvage building, and a pre-fabrication building. In addition, there are designated areas for the storage of new and refurbished electrical transformers, power poles, power cable, and hazardous wastes. However, since the relocation of SMUD's equipment yard to their East Campus Operations Center, the Site was subsequently used for office space and warehouse storage. The Site lies approximately 30 feet above mean sea level. The Site is within a reclaimed floodplain and is, therefore, flat and generally lacking in any notable natural landform relief. The majority of the Site is surfaced with a minimum of 4-inch thick asphalt or concrete (SMUD, 1989).

1.2 Purpose and Objectives

The purpose of the current Site investigation was to further characterize the lateral and vertical extent of volatile organic compounds (VOCs) in soil gas. Additionally, soil sampling was performed to refine the lateral and vertical extent of arsenic-impacted soil requiring remedial action in support of the forthcoming 59th Street Corporation Yard Remedial Action Plan. The media-specific objectives are described in Sections 1.2.1 and 1.2.2.

1.2.1 Soil Gas

Previous investigations at the Site identified tetrachloroethene (PCE) in soil gas near the Tool Issue Building as a chemical of concern (COC) because it is present at concentrations exceeding residential and commercial/industrial soil vapor screening levels (SVSLs). The lateral extent of PCE in soil gas near the Tool Issue Building was previously defined using residential and commercial/industrial SVSLs derived by applying a 0.001 attenuation factor (AF) to the DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3 ambient air (e.g., indoor air) screening levels (SLs) consistent with DTSC Vapor Intrusion (VI) Guidance (DTSC, 2011). DTSC later proposed a more conservative AF of 0.03 (California Environmental Protection Agency [CalEPA], 2020) which reduced the SVSLs causing the lateral extent of PCE in soil gas exceeding residential and commercial/industrial SVSLs to no longer be defined. Furthermore, historical concentrations of benzene, chloroform, ethylbenzene, PCE, and trichloroethene (TCE) detected in soil gas at other potential source areas (e.g., Garage Building, Shops Building) that did not previously exceed residential and commercial/industrial SVSLs did exceed the lower commercial/industrial and/or residential SVSLs derived using an AF of 0.03.

Additionally, the laboratory method detection limits (MDLs) associated with the following 19 VOCs exceeded the lower commercial/industrial and/or residential SVSLs for soil gas samples collected from one of more previous investigation sampling locations.

1. Bromodichloromethane (BDCM)
2. Bromomethane
3. 1,3-Butadiene
4. Carbon Tetrachloride
5. 3-Chloropropene (allyl chloride)
6. alpha-Chlorotoluene (benzyl chloride)
7. 1,2-Dibromoethane (DBE)
8. 1,4-Dichlorobenzene
9. 1,2-Dichloroethane (DCA)
10. 1,2-Dichloropropane (DCP)

11. *cis*-1,3-DCP
12. *trans*-1,3-DCP
13. 1,4-Dioxane
14. Hexachlorobutadiene
15. Methylene chloride
16. 1,1,2,2-Tetrachloroethane
17. 1,2,4-Trichlorobenzene
18. 1,1,2-Trichloroethane
19. Vinyl chloride

For the instances in which these VOCs were previously reported as not detected above their respective MDLs, it was not known if any of these VOCs were present at concentrations above their respective commercial/industrial and/or residential SVSLs. Also, previous soil gas sample analyses did not include naphthalene, which may be present in soil gas based on the detection of other petroleum-related VOCs (e.g., benzene, ethylbenzene) at concentrations exceeding SVSLs.

Finally, PCE concentrations detected in soil gas at locations around the perimeter of the Tool Issue Building were higher in samples collected from 14.5 feet below ground surface (bgs) than in samples collected from 5.5 feet bgs. The vertical extent of PCE in soil gas near the Tool Issue Building was unknown.

Therefore, additional characterization was necessary to (1) further define the lateral and vertical extent of VOC-impacted soil gas based on the residential and commercial/industrial SVSLs derived using an AF of 0.03, and (2) determine if any of the 19 VOCs that previously had elevated MDLs and naphthalene, which was previously not analyzed for, are present in soil gas at concentrations exceeding commercial/industrial and/or residential SVSLs.

1.2.2 Soil

Previous investigations at the Site identified arsenic in soil as a COC because it is present in soil at concentrations exceeding its 0.11 and 0.36 milligram per kilogram (mg/kg) residential and commercial/industrial SLs, respectively, and the 17.53 mg/kg Site-specific background concentration. The arsenic concentrations previously detected in soil above background were limited to four areas within the North Corporation Yard; however, the full extent of these areas was not fully defined. Remedial action is planned for the arsenic-impacted soil as part of the overall Site remedy. Therefore, additional soil characterization was necessary to refine the lateral and vertical extent of arsenic-impacted soil to support the remedy selection and design.

2.0 Background

The following subsections present the Site history, summarize previous site investigations, describe the local geology and hydrogeology, and identify potential exposure pathways for human and ecological receptors.

2.1 Site History

SMUD has operated the 59th Street Corporation Yard since 1947, when it was purchased from the Pacific Gas and Electric Company (PG&E). The Corporation Yard served as a central storage area for hazardous and non-hazardous wastes generated on-site and at other off-site SMUD facilities or sites. Historical uses of the yard by SMUD and PG&E appear to have been the same (Ecology and Environment, 1989).

The SMUD Corporation Yard managed three waste streams. The major waste stream consisted of polychlorinated biphenyls (PCBs) and associated electrical transformers. A second waste stream consisted of Resource Conservation and Recovery Act (RCRA)-regulated wastes, which primarily consisted on spent solvents. A third waste stream consisted of wastes generated at SMUD's various off-site locations within the service area.

Waste oils from electrical transformers, including PCB-contaminated waste oils, accounted for approximately 95 percent of wastes managed on-site. All waste oils were analyzed for PCBs prior to final off-site disposal. Transformers that were removed from service were brought to the Corporation Yard for maintenance. The transformer oil was drained into a tank, and then into 55-gallon drums. The drums were then stored in steel hoppers at the PCB Storage Area pending analytical results. After determination of the PCB content in oil from each drum, the drums were sorted for final disposal. Waste oil that contained less than 5 parts per million (ppm) PCB was recycled. Waste oil that contained between 5 and 10,000 ppm PCB was sent off-site for treatment by decomposition (dechlorination). Waste oil that contained more than 10,000 ppm PCB was sent off-site for incineration (Ecology and Environment, 1989).

RCRA-regulated wastes included spent solvents which were generated by several shops on-site. These wastes were stored on-site for less than 90 days in U.S. Department of Transportation-approved drums prior to shipment to off-site facilities. All drums were appropriately labeled and marked with the start date of accumulation. An inventory identifying the location and date of pickup of each drum was maintained. On or before the 90-day accumulation time limit, the drums were collected and transported to the off-site facility. Transportation of RCRA and PCB wastes was done by SMUD or an independent licensed hauler. As of 1981, waste solvents were sent to recyclers. Prior to 1981, the final disposition of the waste solvents is unknown (Ecology and Environment, 1989).

The third waste stream consisted of wastes which were generated at off-site locations within the service area and were transferred to the main yard for consolidation and appropriate disposal. These wastes included asbestos used for insulation of underground electric lines, herbicides and pesticides used for right-of-way weed control and pest management, wood products (poles and cross members) treated with pentachlorophenol and creosote, and occasional sulfur wastes from SMUD's geothermal projects. Asbestos wastes were stored in double plastic bags and dampened to inhibit mobility of the fibers. Waste solvents were stored in drums in the designated area at the Corporation Yard. Herbicide and pesticide containers were triple rinsed in the field, and empty containers were disposed of at the county landfill. Treated wood products were given away to the public for landscape uses (Ecology and Environment, 1989).

Over the years, SMUD has upgraded both equipment and processes. As a result, PCB fluids and related wastes are no longer generated in significant quantity. The former PCB Storage Area is empty but was previously used for the storage of surplus equipment like insulators, cables, and construction equipment. Hazardous waste activities were

primarily conducted at the HazMat Building, a 90-day storage area for hazardous waste and for the processing and segregation of PCB and non-PCB transformers.

2.2 Previous Investigations and Ongoing Pilot Study

The previous investigations conducted and ongoing pilot study taking place at the Site are summarized in the Sections 2.2.1 through 2.2.7. Tables 2-1 and 2-2 present previous investigation maximum analyte concentrations detected in soil compared to current SVSLs derived using AFs of 0.03 and 0.001, respectively. Table 2-3 presents previous investigation maximum analyte concentrations detected in soil compared to current SLs and, in the case of arsenic, the Site-specific background concentration. Table 2-4 presents previous investigation maximum analyte concentrations detected in groundwater compared to current primary Maximum Contaminant Levels (MCLs).

2.2.1 Underground Storage Tank Removals

Table 2-5 presents an inventory of known historical underground storage tanks (USTs) associated with the Site since 1960. These USTs are described below and their historical locations are presented on Figure 2-1.

Garage Building. Twelve USTs (USTs 77 through 88) built into the floor of the Garage Building are concrete-lined pits (USTs 77 through 87) or a sump (UST 88) for hydraulic oil containment. Installed in 1974, UST 77 is an alignment machine pit with a capacity of 3,500 gallons. Installed in 1963, USTs 78 through 87 are vehicle hoist pits and UST 88 is a sump, each with a capacity of 1,000 gallons (SMUD, 1984; California State Water Resources Control Board [SWRCB], 1988). These pits and sump were either removed in 2020 as part of the vehicle hydraulic lift removals (see Section 2.2.7) or will be removed when the Garage Building is demolished. However, soil sampling beneath pits 77 through 87 and sump 88 was conducted and soil with total petroleum hydrocarbons (TPH) as diesel (TPH_d) and TPH as hydraulic oil/motor oil ($TPH_{ho/mo}$) concentrations detected above SLs was removed.

Six USTs (USTs 89/89D, 90, 96/96D, 97, 98, and 99) were located outside the north and west sides of the Garage Building. Installed in 1981, UST 89 was a 500-gallon capacity tank that stored used oil (SWRCB, 1988). UST 89 was located north of the eastern portion of the Garage Building. USTs 90, 96, 97, and 98 were installed in 1963 and UST 99 was installed in 1960. Located outside the western wall of the Garage Building, USTs 90, 96, 97, 98, and 98 were 500-gallon capacity tanks that stored Stoddard solvent, used oil, transmission fluid, motor oil, and hydraulic oil, respectively (SMUD, 1986; SWRCB, 1988). All six USTs were removed in 1986. USTs 89 and 96 were replaced with 550-gallon capacity tanks designated as USTs 89D and 96D, respectively. UST 96D was installed north of the western side of the Garage Building. USTs 89D and 96D were removed in 2004 (SMUD, 2004).

Shops Building. Three USTs (USTs 1, 2, and 3) were located outside the south side of the western portion of the Shops Building. USTs 1 and 2 were installed in 1972. Each UST had a capacity of 5,000 gallons and stored transformer oil (SMUD, 1986). Both USTs were removed sometime after May 1990. In 2018, a subsurface investigation was conducted to confirm USTs 1 and 2 were no longer present. Geophysical survey methods were used to scan the subsurface where the USTs were located. No metallic anomalies consistent with a UST were identified. The geophysical survey results indicated that an area of soil had been previously excavated to a depth of approximately 4 feet bgs. UST 3 had a capacity of 500 gallons and stored used transformer oil (SMUD, 1986). It is not known when UST 3 was installed; the tank was removed in 1986.

Tool Issue Building. Three USTs (USTs 1/1D, 2, and 3) were located outside the southeast corner of the Tool Issue Building. USTs 1 through 3 were installed in 1973 and each had a capacity of 350 gallons. USTs 1 through 3 stored regular gasoline, Stoddard solvent, and kerosene, respectively (SMUD, 1986). All three USTs were removed in 1986. During the UST removal, a small hole was identified in UST 1 and a strong petroleum odor was noted originating from the northwest corner of the excavation. TPH was detected at a concentration of 2,900 mg/kg in a soil sample collected from the west side of the excavation. Further investigation confirmed the petroleum-impacted

soil was limited in areal and vertical extent suggesting the leak from UST 1 was relatively minor (URS Corporation, 1986). UST 1 was replaced with UST 1D, a 550-gallon capacity unleaded gasoline tank. UST 1D was removed in 2004 (SMUD, 2004).

Vehicle Fueling Station. Up to five USTs (USTs 91/91D, 92, 93/93D, 94/94D, and 95) were present at the vehicle station at one time. USTs 91, 92, and 94 were installed in 1963. UST 91 had a capacity of 10,000 gallons and stored regular gasoline. USTs 92 and 94 each had a capacity of 5,000 gallons and stored unleaded gasoline and diesel fuel, respectively. USTs 93 and 95 were installed in 1974 and 1982, respectively. Both tanks had a capacity of 10,000 gallons and stored regular and unleaded gasoline, respectively (SWRCB, 1988). USTs 91, 92, and 94 were removed in 1986. UST 93 was removed in 1986 or 1987. UST 91 was replaced with UST 91D, which was also had a capacity of 10,000 gallons, but was used to stored unleaded gasoline instead of regular gasoline. USTs 93 and 94 were replaced with USTs 93D and 94D, respectively, which were larger 10,000-gallon capacity tanks that stored unleaded gasoline and diesel fuel, respectively. In late 1990 and early 1991, USTs 91D, 93D, and 94D were replaced with newer tanks with the same capacity and contents as the tanks they replaced. In 2004, USTs 91D, 93D, 94D, and 95 were removed. All but UST 95 were replaced with newer tanks with the same capacity and contents as the tanks they replaced. In 2014, USTs 91D, 93D, and 94D were removed after the Vehicle Fueling Station was decommissioned (Kleinfelder, Inc. [Kleinfelder], 2014b).

Unknown Location. Installed in 1975, UST 100 had a capacity of 200 gallons and stored motor oil (SWRCB, 1988). UST 100 was removed in 1986. The former location of UST 100 is not known.

2.2.2 RCRA Facility Assessment and Investigation

From 2009 to 2012, DTSC conducted a RCRA Facility Assessment to identify and evaluate solid waste management units (SWMUs) and areas of concern (AOCs) at the SMUD Corporation Yard. A SWMU is any discernible waste management unit at a facility from which hazardous waste or hazardous constituents might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste. An AOC is an area that is not a SWMU but which has the potential for hazardous waste or hazardous constituents to be released (DTSC, 2012). DTSC identified the 19 SWMUs and 2 AOCs listed below. Figure 2-2 presents the SWMU and AOC locations.

<u>SWMUs</u>

- SWMU #1: Vehicle Oil/Water Separator (OWS) #1 at the Garage Building
- SWMU #2: Parts Washer west of the Garage Building
- SWMU #3: Lube Room in the Garage Building
- SWMU #4: Parts Washers in the Garage Building
- SWMU #5: Used Oil Aboveground Storage Tank at the Garage Building
- SWMU #6: Battery Room in the Garage Building
- SWMU #7: Diesel Filter Pulse Cleaner along the southwest side of the Garage Building
- SWMU #8: Former Waste Oil UST near northeast corner of the Garage Building
- SWMU #9: Former Waste Oil UST along the north side of the Garage Building
- SWMU #10: Paint Booth and Paint Storage Room in the Carpenter Shop
- SWMU #11: HazMat Used Battery Storage Area
- SWMU #12: HazMat Building
- SWMU #13: Oil Storage Tanks along the west side of the HazMat Building
- SWMU #14: Drained Transformer Staging Area and Universal Waste Storage Area
- SWMU #15: Former Fuel UST near the southeast corner of the Tool Issue Building
- SWMU #16: Former PCB Storage Area

- SWMU #17: Treated Wood Waste Area and Storage Containers
- SWMU #18: Vehicle OWS #2 near the Treated Wood Waste Area
- SWMU #19: Satellite Accumulation Areas in the Garage Building, Shops Building, and Tool Issue Building

AOCs

- AOC #1: Vehicle Fueling Station
- AOC #2: Utility Pole Storage Area

DTSC recommended that Vehicle OWS #1 at the Garage Building (SWMU #1), Vehicle OWS #2 near the Treated Wood Waste Area (SWMU #18), and the Utility Pole Storage Area (AOC #2) be included in a RCRA Facility Investigation (RFI). DTSC recommended no further RCRA corrective action for the other SWMUs and AOC (DTSC, 2012).

Use of OWS #1 was discontinued in 2013. In February 2014, following issuance of the RCRA Facility Assessment Report, Kleinfelder hydrostatically tested OWS #1 and OWS #2, and no evidence of leakage was identified. SMUD submitted a report describing the hydrostatic test procedures and results to DTSC in March 2014 (Kleinfelder, 2014a). Based on the leak testing results, DTSC did not require immediate investigation of the OWSs allowing assessment for potential historical leakage of the two OWSs and ancillary piping to occur at the time of OWS removal. OWS #2 remained in service until just prior to removal in 2020.

In 2015, Kleinfelder performed an RFI for the Utility Pole Storage Area. The RFI assessed whether chemicals applied during wood treatment processes may have migrated from the treated poles to the subsurface. Thirty soil samples were analyzed for TPH; semi-volatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons and phthalates; metals, and organochlorine pesticides. The RFI Report (Kleinfelder, 2015) concluded that no further investigation is required at the Utility Pole Storage Area. DTSC concurred with the conclusion (DTSC, 2016).

In 2020, OWS #1 and OWS #2 were removed and a ground cavity assessment was performed by SMUD with support from Patriot Environmental Services, Inc. (Patriot), Safety-Kleen Systems, Inc. (Safety-Kleen), Sierra National Construction, Inc. (SNC), and AECOM. In preparation for the OWS removals, Patriot removed residual oil, water, and sludge from both OWSs and pressure-washed the OWS interior sidewalls and bottom. The non-RCRA hazardous waste was transported by Safety-Kleen to their facility in Davis, California. Following cleanout, SMUD inspected the interiors of both OWSs, which were observed to be in good condition with no visible cracks. After SNC removed both OWSs, the resulting ground cavities were inspected by SMUD and soil from the ground cavity sidewalls and bottom was screened by AECOM using a photoionization detector (PID) capable of detecting VOCs in the parts per billion (ppb) concentration range. Limited soil staining and odors were observed around where the inlet pipe had entered OWS #1, and the PID detected VOCs in soil from this northern portion of the ground cavity. With DTSC present to observe, SNC continued to excavate soil from the north end of the OWS #1 ground cavity until VOCs were no longer detected using the PID and DTSC indicated the cavity could be backfilled. At OWS #2, no evidence of contamination (i.e., no staining or odors) was observed and no VOCs were detected in soil from the ground cavity sidewalls and bottom. SMUD concluded no further investigation is warranted and has requested closure of OWS # 1 and OWS #2 (SMUD, 2021a).

2.2.3 Phase II Environmental Site Assessment

In 2015, Kleinfelder performed a Phase II Environmental Site Assessment (ESA) to evaluate areas of the SMUD Corporation Yard where past and/or current activities may have chemically-impacted soil gas, soil, or groundwater, in preparation for possible property redevelopment (Kleinfelder, 2016). Investigation activities included passive soil gas, active soil gas, soil, and groundwater sampling and analysis. PCE was detected in soil gas at concentrations

exceeding the 210 and 2,100 micrograms per cubic meter (µg/m^3) residential and commercial/industrial Environmental Screening Levels (ESLs) (SWRCB, 2013), respectively, in effect at the time. Figure 2-3 presents PCE concentrations detected in soil gas during the Phase II ESA. Arsenic was detected in soil at concentrations ranging from 14 to 110 mg/kg, which exceeded the 0.39 and 1.6 mg/kg residential and commercial/industrial direct contact ESLs, respectively, in effect at the time. Figure 2-4 presents arsenic concentrations detected in soil during the Phase II ESA. Three VOCs (BDCM, chloroform, and PCE) and petroleum hydrocarbons (TPH as diesel [TPH_d], TPH as gasoline [TPH_g], and TPH as motor oil) were detected in groundwater at concentrations that did not exceed their respective primary MCLs, if established. Figure 2-5 presents VOC and TPH concentrations detected in groundwater during the Phase II ESA. Metals including cobalt, copper, nickel, silver, and vanadium were detected in groundwater at concentrations that did not exceed their respective primary MCLs, if established.

2.2.4 2018-2019 Soil Gas, Soil, and Groundwater Investigation

From December 2018 to March 2019, AECOM conducted Site investigation activities to further characterize the lateral and vertical extent of PCE in soil gas, soil, and groundwater and arsenic in soil (AECOM, 2019). The lateral extent of PCE in soil gas was delineated using soil gas data collected from 5.5 feet bgs and the 460 and 2,000 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF in effect at the time. The areal extent of PCE concentrations in soil gas exceeding the residential and commercial/industrial SVSLs were 0.9 and 0.2 acre, respectively, and were partially underlying the Tool Issue Building. Figure 2-3 presents PCE concentrations detected in soil gas during the 2018-2019 soil gas investigation with the lateral extent of PCE approximated using the 15 and 67 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the current 0.03 AF. The lateral extent of PCE exceeding these lower SVSLs is significantly larger and not fully defined, which prompted the current soil gas investigation. PCE was detected in two soil samples at a maximum concentration of 0.0048 mg/kg, which did not exceed its 0.59 and 2.7 mg/kg residential and commercial/industrial SLs, respectively. PCE was detected in groundwater at a maximum concentration of 0.73 microgram per liter (µg/L), which did not exceed its 5 µg/L primary MCL. Figure 2-5 presents PCE concentrations detected in groundwater during the 2018 groundwater investigation.

Figure 2-4 presents arsenic concentrations detected in soil during the 2018 soil investigation. The arsenic concentrations detected in soil during the 2018 soil investigation and earlier investigations were used to derive a Site-specific arsenic background concentration of 17.53 mg/kg (AECOM, 2019). The arsenic concentrations detected in soil above background were primarily limited to the southern portion of the North Corporation Yard. Within this area, the arsenic concentrations exceeding background in soil at a depth of 3 feet bgs or less covered approximately 2.4 acres in the vicinity of the Tool Issue and Salvage Buildings (0.8 acre) and the south side of the Warehouse Building (1.6 acres); however, the full extent of these areas was not fully defined. There were also two smaller areas covering approximately 0.2 acre combined beneath the parking lots to the west of the Hazardous Material Building and south of the Garage Building. Arsenic concentrations exceeding background in soil between a depth of greater than 3 feet to 6 feet bgs occurred in two localized areas: in the vicinity of the Tool Issue Building (approximately 0.2 acre) and in the vicinity of the eastern end of the Warehouse Building, including the area between the building and the SacRT light rail line (approximately 0.3 acre). In the vicinity of the Tool Issue Building, the vertical extent of arsenic concentrations exceeding background appeared to extend down to a depth of at least 6 feet bgs but did not exceed 11 feet bgs. In the vicinity of the eastern end of the Warehouse Building, the vertical extent of arsenic concentrations exceeding background also extended down to a depth of at least 6 feet bgs, but the total depth was unknown. Additional soil characterization was necessary to refine the lateral and vertical extent of arsenic-impacted soil to support the remedy selection and design, which prompted the current soil investigation.

2.2.5 Phase I Environmental Assessment

In 2020, AECOM performed a Phase I ESA of the Site to evaluate potential environmental liabilities resulting from past or current uses (AECOM, 2020a). The Phase I ESA identified five recognized environmental conditions (RECs) associated with the Site. These RECs include the following.

1. The presence of potentially uncharacterized environmental impacts associated with 11 vehicle hydraulic lifts and related hydraulic oil reservoirs in the Garage Building, Vehicle OWS #1 at the Garage Building, and Vehicle OWS #2 near the Treated Wood Waste Area. These features have since been removed and investigated as discussed in Sections 2.2.2 and 2.2.7.
2. Lack of information or documentation regarding the removal of Tool Issue Building USTs 2 and 3. Removal documentation for these USTs has since been found. Removal dates for Tool Issue Building USTs 2 and 3 are provided in Section 2.2.1 and Table 2-5.
3. The presence of PCBs in building materials with concentrations greater than 50 mg/kg. For demolition and disposal purposes, building materials with PCB concentrations greater than or equal to 50 mg/kg are considered PCB bulk product waste under Title 40, Code of Federal Regulations Part 761 and are classified as hazardous waste by DTSC. Any PCB-related work at the Site (e.g., inspection, removal, or clean-up) must be performed by individuals trained and qualified to do so. PCB abatement has since been completed in the Hazmat Building.
4. The presence of potentially uncharacterized PCE in soil gas and the potential for vapor encroachment for buildings within 100 feet of PCE-impacted areas. Additional soil gas characterization for PCE and other VOCs was performed as part of the current investigation and the results are presented in Section 4.2.2.
5. The presence of potentially uncharacterized arsenic in soil. Additional soil characterization for arsenic was performed as part of the current investigation and the results are presented in Section 4.2.3.

2.2.6 Soil Vapor Extraction Pilot Study

In 2020, AECOM initiated a pilot study in the vicinity of the Tool Issue Building to determine whether soil vapor extraction (SVE) would be an effective technology to address VOC contamination in soil gas (AECOM, 2021). The pilot study was conducted in two phases. In May 2020, an initial 5-day pilot test (Phase I) was performed using five SVE wells and a portable SVE unit to evaluate vapor recovery rates obtainable at various applied vacuum pressures and estimate the area of influence and efficiency of a given well or combination of wells. In August 2020, long-term pilot test operation of the SVE system (Phase II) began using information learned from the 5-day pilot test. The SVE system operation is ongoing. Quarterly system monitoring includes collection and analysis of soil gas samples from SVE wells SVE-1 through SVE-5 and vapor monitoring wells SVM-1 through SVM-3. The November 2020 and March 2021 quarterly monitoring events took place concurrently with the current investigation. November 2020 and March 2021 analytical data for soil gas samples collected from vapor monitoring wells SVM-1 through SVM-3 were incorporated into the current investigation soil gas data set.

2.2.7 Garage Building Hydraulic Lift Removal

In 2020, SMUD removed the hydraulic vehicle lifts in the Garage Building. Prior to removal of the lifts, the hydraulic oil was removed. During removal, several of the subsurface hydraulic rams were found to have leaked hydraulic oil. Limited soil excavation was performed to remove contaminated soil. Subsequently, a soil investigation was performed to determine if any additional soil contamination was present. Soil samples were analyzed for TPH, PCBs, and California Administrative Manual (CAM) 17 metals. PCBs and metals were not detected in soil above their respective SLs, except for arsenic; however, the detected arsenic concentration did not exceed the Site-specific background concentration. TPH_d and TPH as hydraulic oil/motor oil ($TPH_{ho/mo}$) were detected in soil above their respective SLs. The TPH_d detections are likely associated with weathered hydraulic oil in the TPH_d carbon range

because diesel was not used in the hydraulic lifts. Additional soil excavation was performed until confirmation soil sample analytical results indicated TPH_d and $TPH_{ho/mo}$ concentrations were below their SLs (SMUD, 2021b).

2.3 Geology

The Site lies within the southern portion of the Sacramento Valley, which was formed from sedimentary deposits that were carried as erosion debris from the surrounding mountain ranges. Much of the area near the Site consists of ancient American River deposits. These sedimentary deposits are of Cretaceous to Quaternary age and are quite deep in the general area (SMUD, 1989). The American River is located approximately 1 mile northeast. The American River is confined on the north by steep bluffs, and its ancient course was likely south of its present course, including the area now occupied by the Site (Ecology and Environment, 1989).

Borehole logs from the Phase II ESA (Kleinfelder, 2016) indicate that several layers of clay, silty clay, clayey silt, silt, silty sand, and sand underlie the Site to a depth of at least 37.5 feet bgs.

2.4 Hydrogeology

Based on data obtained during the Phase II ESA, the depth to first groundwater beneath the Site is approximately 35 feet bgs and flows in a south to southeasterly direction, at a gradient of approximately 0.001 foot per foot (Kleinfelder, 2016). Municipal drinking water wells draw from depths of approximately 100 to 400 feet bgs. Although many municipal wells are located between 2 and 3 miles from the Site, no active drinking water wells were confirmed to exist within 2 miles of the Site. Several private domestic wells were installed within 2 miles of the Site during the 1950s. Well logs for these installations are generally incomplete. Available information indicates that the wells were completed to depths of approximately 75 to 200 feet. The area where these wells are located is now served by the City of Sacramento, which derives its water from groundwater sources more than 2 miles away from the Site and from surface water from the American River and the Sacramento River. Groundwater generally flows in a southwest direction, although it may be affected by the American River. The shallow aquifer has a groundwater flow velocity of approximately 50 to 60 feet per year. The deeper aquifer has a groundwater flow velocity of approximately 10 to 15 feet per year (DTSC, 2012).

2.5 Potential Exposure to Human and Ecological Receptors

Residential neighborhoods are located adjacent to the Site on the western boundary, north of Folsom Boulevard north of the Site, and south of U.S. Highway 50 south of the Site. Seven schools are located within approximately 0.5 mile from the Site (DTSC, 2012). Surface runoff from the Site is collected by storm drains and transported by the sewer system for off-site treatment. The Site is not open to public access, so exposure to contaminated media on Site would be restricted to SMUD personnel. The Site is considered to be unsuitable habitat for ecological receptors due to its highly developed nature.

Based on soil sampling performed at the Site, the primary risk driver from soil exposure is arsenic. Potential exposure routes for soil include inhalation of soil particulates and direct contact via incidental ingestion and dermal contact. The majority of the Site is covered with buildings and pavement; therefore, current Site workers are unlikely to be exposed to soil at the Site unless they are involved in landscape maintenance in unpaved areas or construction activities involving excavation, trenching, or pavement removal. Site personnel engaging in activities that could result in inhalation of soil particulates or direct soil contact can minimize their potential risk by reducing dust generation, wearing personal protective equipment, and following good sanitation practices.

Based on groundwater sampling performed at the Site, the primary risk driver from groundwater exposure is PCE. Potential groundwater exposure routes include direct contact via ingestion and dermal contact. Groundwater is located at approximately 35 feet bgs and there are no water wells located on Site; therefore, these exposure

pathways are currently incomplete for Site workers. Additionally, PCE concentrations detected in groundwater are below the 5.0 µg/L primary MCL; therefore, the PCE concentrations in groundwater are within acceptable limits for potable use should the groundwater be extracted for such use in the future.

Current indoor workers may be exposed to volatile chemicals through the VI pathway. In December 2016, SMUD performed an indoor air quality assessment at the Tool Issue Building for VOCs, mold, and dust. PCE was not detected in the indoor air samples collected from the Tool Issue Building. SMUD proceeded with collection of additional indoor air samples from the Tool Issue Building in April 2019 following review of the 2018 soil gas investigation findings to determine if there is unacceptable indoor air risk to building occupants from PCE and its associated degradation products. PCE was detected in 2 of 6 indoor air samples collected; however, the detected concentrations were less than the 0.46 µg/m^3 residential ambient air SL (DTSC, 2020). *cis*-1,2-Dichloroethene (DCE) was the only PCE degradation product detected. *cis*-1,2-DCE was detected in 1 of 6 indoor air samples collected, and the detected concentration was less than the 8.3 µg/m^3 residential ambient air SL (DTSC, 2020).

3.0 Site Investigation Scope, Approach, and Methods

The following subsections describe the Site investigation scope and approach, field and analytical methods, quality assurance (QA)/quality control (QC) measures, and SAP deviations.

3.1 Scope and Approach

The Site investigation activities conducted from June 2020 through March 2021 included soil gas and soil sampling (hereinafter referred to as the current investigation). The current investigation scope and approach for soil gas and soil sampling are described in Sections 3.1.1 and 3.1.2, respectively.

3.1.1 Soil Gas Investigation

As discussed in Section 1.2.1, additional soil gas characterization was necessary to (1) further define the lateral and vertical extent of VOC-impacted soil gas based on the residential and commercial/industrial SLs derived using an AF of 0.03, and (2) determine if any of the 19 VOCs that had elevated MDLs during the Phase II ESA and naphthalene, which was not previously analyzed for in soil gas, are present in soil gas at concentrations exceeding commercial/industrial and/or residential SLs. Table 3-1 lists soil gas samples collected during the current investigation, their respective sample depths, and analyses performed. Soil gas sampling locations are shown on Figure 3-1.

The current investigation soil gas sampling approach was to initially collect soil gas samples from 29 permanent vapor well locations (VW14 through VW42) spaced approximately 100 feet or less apart. Vapor monitoring wells VW14 and VW15 were proposed as single-completion wells with a sampling probe placed at 25.5 feet bgs. Vapor monitoring wells VW16 through VW42 were proposed as dual-completion wells with sampling probes placed at 5.5 and 14.5 feet bgs. A single round of soil gas sampling was planned with the sample analysis for VOCs at a fixed laboratory using United States Environmental Protection Agency (USEPA) Method Toxic Organics (TO)-15.

Subsequently, additional vapor monitoring wells were proposed to be installed by stepping out from locations where elevated VOC concentrations (i.e., greater than the commercial/industrial and/or residential SVSLs) were detected to further define the lateral extent of impact. Potential step-out locations were proposed to be approximately 100 feet or less from the location being stepped out from. Based on the soil gas analytical results from vapor monitoring wells VW16, VW19, VW20, VW25, VW26, VW30, VW31, VW34, VW35, VW36, and VW39 through VW42, 15 step-out vapor monitoring wells (VW43 through VW57) were installed with vapor probes at 5.5 and 14.5 feet bgs. These step-out wells were placed to the west and east of the initially-installed vapor wells.

The soil gas sampling approach included a contingency in the event that the soil cores collected during vapor well borehole advancement suggested the presence of VOC-impacted soil (e.g., staining or elevated PID readings). If the presence of VOC-impacted soil was suspected, the proposed sampling probe depth would be modified so that the actual sampling probe depth corresponded to the depth of suspected VOC-impacted soil. However, no suspected VOC-impacted soil was observed below 5 feet bgs; therefore, the soil vapor probes were installed at their default depths of 5.5 and 14.5 feet bgs. Suspected VOC-impacted soil was identified at 2 feet bgs in four boreholes (VW15, VW31, VW35, and VW38); however, 2 feet bgs was too shallow to install a vapor sampling probe. Instead, samples of the suspected VOC-impacted soil were collected for laboratory analysis as described in Section 3.1.2.

3.1.2 Soil Investigation

As discussed in Section 1.2.2, remedial action is planned for the arsenic-impacted soil as part of the overall Site remedy. Therefore, additional soil characterization was necessary to refine the lateral and vertical extent of arsenic-impacted soil to support the remedy selection and design. Table 3-2 lists the soil samples collected during the

current investigation, their respective sample depths, and analyses performed. Soil sampling locations are shown on Figure 3-2. Soil sampling was conducted during vapor well installation if evidence of soil contamination was identified (e.g., stained soil, odor, elevated VOC field measurement). However, the primary scope of soil sampling during the current investigation was to refine the extent of arsenic impacts in areas where remedial action is planned.

Phase 1 Step-Out Boreholes. On June 22, 2020, SMUD submitted a letter (Appendix A) to the DTSC project manager notifying him of SMUD's intentions to conduct additional soil sampling at depths of 1.5 and 3 feet bgs in four areas (south of the Garage Building, east-northeast of the Tool Issue Building, southeast of the Salvage Building, and west of the Hazardous Material Building) to refine the extent of arsenic impacts. South of the Garage Building, four step-out boreholes (KA-44-N, KA-44-S, KA-44-E, and KA-44-W) were proposed at a distance 15 feet to the north, south, east, and west from previous investigation borehole KA-44. East-northwest of the Tool Issue Building, three step-out boreholes (KA-17-N, KA-17-E, and KA-17-W) were proposed at a distance 15 feet to the north, east, and west from previous investigation borehole KA-17. Southeast of the Salvage Building, four step-out boreholes (B08-N, B08-S, B08-E, and B08-W) were proposed at a distance 15 feet to the north, south, east, and west from previous investigation borehole B08. West of the Hazardous Material Building, three step-out boreholes (KA-10-N, KA-10-S, and KA-10-W) were proposed at a distance 15 feet to the north, south, and west from previous investigation borehole KA-10. Soil sampling was performed on June 29 and 30, 2020. Following review of the analytical results, SMUD decided to conduct additional soil sampling.

Phase 2 Step-Out Boreholes. On July 15, 2020, SMUD submitted a letter (Appendix A) to the DTSC project manager notifying him of SMUD's intentions to conduct additional soil sampling at 1.5 feet bgs in three areas (east-northeast of the Tool Issue Building, southeast of the Salvage Building, and west of the Hazardous Material Building) to further refine the extent of arsenic impacts. East-northwest of the Tool Issue Building, three step-out boreholes (KA-17-NN, KA-17-NW, and KA-17-WW) were proposed to the north, northwest, and west from previous investigation borehole KA-17 beyond the Phase 1 step-out boreholes. Southeast of the Salvage Building, three step-out boreholes (B08-NN, B08-SS, and B08-EE) were proposed to the north, south, and east from previous investigation borehole B08 beyond the Phase 1 step-out boreholes. West of the Hazardous Material Building, three step-out boreholes (KA-10-SS, KA-10-SW, and KA-10-WW) were proposed to the south, southwest, and west from previous investigation borehole KA-10 beyond the Phase 1 step-out boreholes. Soil sampling was performed on July 20, 2020. Following review of the analytical results, SMUD decided to conduct additional soil sampling.

Phase 3 Step-Out Boreholes. SMUD proposed to conduct additional soil sampling at 1.5 feet bgs in three areas (east-northeast of the Tool Issue Building, southeast of the Salvage Building, and west of the Hazardous Material Building) to further refine the extent of arsenic impacts. East-northwest of the Tool Issue Building, four step-out boreholes (KA-17-3-N, KA-17-3-NE, KA-17-3-NW, and KA-17-3-W) were proposed to the north, northeast, northwest, and west from previous investigation borehole KA-17 beyond the Phase 2 step-out boreholes. Southeast of the Salvage Building, three step-out boreholes (B08-3-N, B08-3-S, and B08-3-E) were proposed to the north, south, and east from previous investigation borehole B08 beyond the Phase 2 step-out boreholes. West of the Hazardous Material Building, one step-out borehole (KA-10-3-S) was proposed to the south from previous investigation borehole KA-10 beyond the Phase 2 step-out boreholes. Soil sampling was performed on August 7, 2020. Following review of the analytical results, SMUD decided to conduct additional soil sampling.

Phase 4 Step-Out Borehole. SMUD proposed to conduct additional soil sampling at 1.5 feet bgs in one area (east-northeast of the Tool Issue Building) to further refine the extent of arsenic impacts. One step-out borehole (KA-17-4-NE) was proposed to the northeast from previous investigation borehole KA-17 beyond Phase 3 step-out borehole KA-17-3-NE. Soil sampling was performed on August 28, 2020.

Warehouse Building Step-Out Boreholes. On November 2, 2020, SMUD submitted a letter (Appendix A) to the DTSC project manager notifying him of SMUD's intentions to conduct additional soil sampling at a depth of 1.5 feet bgs within and around the Warehouse Building to refine the extent of arsenic impacts. A total of 12 boreholes were proposed, including three boreholes within the Warehouse Building, two boreholes along the southern loading dock (WB01 and WB02), two boreholes in the parking stalls south of the loading dock (WB03 and WB04), three boreholes in the area southeast of the Warehouse Building (WB05 through WB07), and two boreholes near the estimated western extent of arsenic impacts. The proposed locations for the two western boreholes were in close proximity to the proposed locations for vapor wells VW56 and VW57; therefore, soil samples for arsenic analysis were collected from these vapor well boreholes instead of advancing two more boreholes nearby. Soil sampling was performed on December 21 and 22, 2020. Following review of the analytical results, SMUD decided to conduct additional soil sampling.

Vapor Well Boreholes. In December 2020, during the installation of vapor monitoring wells VW15, VW31, VW35, and VW38, shallow soil samples were collected when evidence of soil contamination was identified (e.g., stained soil, odor, elevated PID readings). The soil samples were analyzed for VOCs, SVOCs, TPH, PCBs, and CAM 17 metals. Following review of the analytical results, SMUD decided to conduct additional soil sampling near boreholes VW31 and VW35. As further discussed in Section 4.2.3, arsenic was detected at concentrations exceeding its Site-specific background concentration in the soil samples collected from boreholes VW31 and VW35. Additionally, lead, TPH_d, and $TPH_{ho/mo}$ were detected at concentrations exceeding their respective residential SLs in the soil sample collected from borehole VW35.

Vapor Well Borehole Step-Outs and Warehouse Building Phase 2 Borehole Step-Outs. On February 17, 2021, SMUD submitted a letter (Appendix A) to the DTSC project manager notifying him of SMUD's intentions to conduct additional soil sampling in two areas (adjacent to the Salvage Building and adjacent to the Warehouse Building). Adjacent to the Salvage Building, four step-out boreholes (VW35-N, VW35-S, VW35-E, and VW35-W) with soil samples at 2 feet bgs were proposed at a distance 15 feet to the north, south, east, and west from borehole VW35 to further define the lateral extent of arsenic, lead, TPH_d, and $TPH_{ho/mo}$. Additionally, one step-out borehole (VW31-S) with a soil sample at 2 feet bgs was proposed at a distance 15 feet south from borehole VW31 to further define the lateral extent of arsenic. Adjacent to the Warehouse Building, five step-out boreholes (WB08 through WB12) were proposed. Boreholes WB08 and WB09 were located on the southern loading dock and were step-outs from previous investigation boreholes KA-48 and B11, respectively. Borehole WB10 was placed at approximately the same location as previous investigation borehole B17 in order to further define the vertical extent of arsenic at this location. Step-out boreholes WB11 and WB12 were placed to the north of borehole WB06 and east of borehole WB07, respectively. For this sampling event, SMUD proposed using a handheld x-ray fluorescence (XRF) analyzer to field screen soil samples for arsenic prior to submittal to the laboratory for analysis. XRF field readings facilitate real-time decisions to determine if collection of additional soil samples should be considered. Soil sampling was performed February 22 through 24, 2021. Upon reviewing the XRF readings for soil samples collected from boreholes VW35-N and VW35-S, SMUD proceeded with advancing two additional boreholes (VW35-NN and VW35-SS) to the north and south during the same mobilization.

3.2 Field Methods

This section provides an overview of the field methods used to conduct the site investigation. Detailed procedures are presented in the SAP (AECOM, 2018) and SAP Addendum (AECOM, 2020b). The field investigation was performed by AECOM with support from B&B Locating, Inc. (B&B) and Confluence Environmental, Inc. (Confluence) (C-57 License #913194). B&B provided subsurface utility locating services. Confluence provided pavement coring, hand augering, soil sampling, borehole destruction, pavement patching, direct-push technology (DPT), and vapor well installation services.

3.2.1 Site Reconnaissance and Proposed Sample Location Marking

In preparation for the field investigation, AECOM met with SMUD's project manager and in-house utility clearance personnel to review and mark sampling locations. The asphalt or pavement was marked using white paint to indicate the proposed borehole and vapor well locations. Prior to marking the locations, reconnaissance was performed in the area surrounding each proposed borehole or vapor well location to look for surface evidence of subsurface utilities (e.g., utility vaults, manholes, light poles) or other possible hazards such as overhead utility lines. If a potential hazard was identified, the affected proposed borehole or vapor well location was adjusted to avoid the hazard.

3.2.2 Subsurface Utility Clearance

AECOM contacted Underground Service Alert of Northern California and Nevada (USA North 811) at least 2 working days prior to initiation of subsurface activities to notify utility service providers of the work to be performed and allow them to mark any utility lines that may be present on Site. USA North 811 Ticket Numbers X017001791 (valid June 22 through August 13, 2020), X032202757 (valid November 23, 2020 through February 4, 2021), and X104704066 (valid February 18 through March 16, 2021) were issued during the course of the site investigation. B&B conducted subsurface utility clearances at proposed borehole and vapor well locations. If a subsurface utility line or unknown subsurface hazard was identified during the subsurface utility clearance, the affected proposed borehole or vapor well location was adjusted to avoid the hazard.

3.2.3 Permitting

AECOM obtained well permits from the Sacramento County Environmental Management Department (SCEMD). Permits 62027 through 62055 applied to the initial 29 vapor wells (VW14 through VW42). Permits 62056-A through 62056-O applied to 15 step-out vapor wells (VW43 through VW57). AECOM coordinated with SCEMD to schedule an inspector when required and provided SCEMD with daily status updates while work covered by the well permits was being performed.

3.2.4 Borehole Advancement and Soil Sampling

Boreholes intended for vapor well installation (VW14 through VW57) were initially advanced by Confluence to 5 feet bgs using a 3.5-inch diameter hand auger. Soil lithology for the initial 5 feet was logged by the field geologist using the soil cuttings removed from the borehole. Beyond 5 feet bgs, the boreholes were advanced by Confluence using a DPT rig. DPT involves advancing a sampling probe by direct hydraulic pressure or percussion using small diameter rods. Continuous soil cores were collected in acetate liners from 5 feet bgs to the total borehole depth for lithologic description, except at deeper boreholes VW14 and VW15, where continuous soil cores were collected from 15 feet bgs to the total borehole depth. A PID was used to screen the hand auger soil cuttings and DPT soil cores for VOCs. Soil samples for laboratory analysis were not collected from vapor well boreholes, except at boreholes VW15, VW31, VW35, and VW38. Soil samples for laboratory analysis were collected from these four boreholes at 2 feet bgs because evidence of possible contamination (e.g., soil staining/discoloration, odor, PID readings indicating VOC concentrations above background) was identified at this depth in the field. The soil samples for laboratory analysis were collected using the hand auger bucket and placed into glass sample jars.

Boreholes intended for soil sampling only (i.e., no vapor well installation) were advanced to total depth using a 3.5-inch diameter hand auger. This included boreholes advanced by Confluence on June 29 and 30, 2020; July 20, 2020; August 7 and 28, 2020; December 21 and 22, 2020; and February 22 through 24, 2021. Soil lithology was not logged for these shallow boreholes because the soil lithology for shallow soil across the site was logged during previous investigations. The current investigation boreholes were step-outs from these previous investigation boreholes, or step-outs from boreholes for which soil lithology was logged as part of the current investigation vapor well installation effort. Soil samples intended for laboratory analysis were collected at the target depth intervals using

the hand auger bucket and placed into glass sample jars. At borehole WB01, refusal was encountered between 0.5 and 1.5 feet below surrounding grade. Therefore, a second borehole (WB01A) was advanced adjacent to borehole WB01 in order to collect a soil sample from 1.5 feet below surrounding grade.

In February 2021, a Bruker S1 TITAN Series handheld XRF analyzer was used to field screen soil samples for lead and/or arsenic to facilitate real-time decisions regarding the need to collect deeper soil samples and when to step-out laterally and advance additional boreholes. Soil samples were submitted to the project laboratory to confirm the XRF screening results.

3.2.5 Vapor Monitoring Well Installation and Soil Gas Sampling

Confluence constructed vapor monitoring wells VW16A/B, VW19A/B, VW20A/B, VW24A/B through VW26A/B, VW30A/B through VW32A/B, and VW34A/B through VW42A/B from November 23 through 25, 2020 and vapor monitoring wells VW14, VW15, VW17A/B, VW18A/B, VW21A/B through VW23A/B, VW27A/B through VW29A/B, VW33A/B, VW43A/B through VW57A/B from December 15 through 18 and 21, 2020. All vapor monitoring wells were installed in areas paved with asphalt or concrete of varying thicknesses ranging from 2 to 9 inches. To ensure that the shallowest vapor probes were installed at least 5 feet below the top of the soil, all vapor well construction specification depths were referenced to the bottom of pavement/top of soil (i.e., the bottom of pavement/top of soil = 0 feet bgs). Vapor monitoring wells VW14 and VW15 were constructed by placing vapor probes at depths of 25.5 and 23.2 feet bgs, respectively, within a 1-foot sand pack (intervals of 25 to 26 and 22.7 to 23.7 feet bgs, respectively). The vapor probe for vapor monitoring well VW15 was placed at 23.5 feet bgs instead of its planned depth of 25.5 feet bgs because a clay layer was encountered at 24 feet bgs and extended to at least 26 feet bgs; therefore, the probe was placed above this clay layer. Vapor monitoring wells VW16A/B through VW57A/B were constructed by placing vapor probes at depths of 5.5 and 14.5 feet bgs within a 1-foot thick sand pack (intervals of 5 to 6 and 14 to 15 feet bgs). Vapor well designation “A” was assigned to probes at 5.5 feet bgs, and vapor well designation “B” was assigned to probes at 14.5 feet bgs.

Approximately 1 foot of dry granular bentonite was placed above each sand pack. Additional dry granular bentonite was placed in 1-foot lifts and hydrated to form a seal between the lower sampling depth and the upper sampling depth and between the upper sampling depth and the ground surface. Each probe had 1/4-inch diameter Teflon™ tubing extending to the ground surface to enable sample collection from the target depths. A dedicated gas-tight three-way valve was attached to the end of the exposed tubing to facilitate connection of sampling equipment and to seal the tubing when not in use. A flush-mount well box was installed at the surface to protect the exposed tubing and valve.

On November 16, 2020, AECOM collected soil gas samples from existing vapor monitoring wells SVM-1 through SVM-3 as part of the fall 2020 quarterly SVE system monitoring event. From November 30 through December 4, 2020, AECOM collected soil gas samples from the vapor monitoring wells that were installed in November 2020. On December 22, 23, 29, and 30, 2020, AECOM collected soil gas samples from the vapor monitoring wells installed in December 2020. All soil gas samples were collected using 1.4-liter passivated stainless steel canisters.

New vapor wells were allowed to equilibrate for a minimum of 48 hours prior to soil gas sampling. Soil gas sampling was not performed unless at least 5 days had passed following a significant rain event (i.e., 1/2 inch or greater of rainfall during a 24-hour period). Additionally, the SVE system was temporarily shut down at least 2 days prior to soil gas sampling. A shut-in test was conducted prior to purging/sampling to check for leaks in the aboveground sampling system. In order to remove stagnant air from the sampling system, three volumes of air corresponding to the void space in the sample tubing and pore space of the sand pack were purged prior to sample collection. A leak test was conducted each time a sample was collected to evaluate whether an adequate seal was established in the sampling train and at the soil vapor probe interface with the ground surface. Helium and isopropyl alcohol were used to test for ambient air leaks. A helium detector was used to monitor for leaks during the leak test. Isopropyl alcohol

was included in the USEPA Method TO-15 analyte list to identify any leaks that may have occurred during sample collection.

AECOM collected additional soil gas samples from vapor monitoring wells VW24A, VW30A, VW30B, VW42A, VW45A, VW48A, VW49A, VW57B, and SVM-1 through SVM-3 on March 3 and 4, 2021 using 1.4-liter passivated stainless steel canisters. Duplicate soil gas samples were collected from vapor well VW24A to confirm a PCE concentration detected above the commercial/industrial SVSL in the initial soil gas sample collected from this well. Soil gas samples were collected from vapor wells VW30A and VW30B to confirm BDCM and chloroform concentrations detected above commercial/industrial SVSLs in the initial soil gas samples collected from these wells. Soil gas samples were collected from vapor wells VW42A and VW57B to confirm TPH_g concentrations detected above commercial/industrial and/or residential SVSLs in the initial soil gas samples collected from these wells. A soil gas sample was collected from vapor well VW45A to confirm a benzene concentration detected above the commercial/industrial SVSL in the initial soil gas sample collected from this well. A soil gas sample was collected from vapor well VW48A to confirm a PCE concentration detected above the residential SVSL in the initial soil gas sample collected from this well. A soil gas sample was collected from vapor well VW49A to confirm chloroform and PCE concentrations detected above residential SVSLs in the initial soil gas sample collected from this well. Soil gas samples were collected from vapor wells SVM-1 through SVM-3 as part of the winter 2021 quarterly SVE monitoring event.

3.2.6 Soil Investigation Borehole Destruction

Boreholes advanced as part of the soil investigation were destroyed immediately following soil sample collection by backfilling each hole with the soil cuttings that originated from that hole. A tamping bar was used to compact the backfilled soil. In paved areas, the pavement was patched by placing cement from the top of the backfilled soil to the top of the surrounding pavement.

3.2.7 Land Surveying

Borehole and vapor well locations were determined by measuring distances from previously surveyed boreholes and other previously mapped site features.

3.2.8 Investigative-Derived Waste Management and Disposal

Investigative-derived waste (IDW) included hand auger cuttings (e.g., soil) and soil cores from vapor well installation, acetate liners, disposable personal protective equipment (e.g., nitrile gloves, ear plugs, Tyvek® coveralls), and paper towels. Soil IDW from vapor well installation was consolidated with soil IDW from a concurrent environmental investigation of hydraulic vehicle lifts within the Garage Building. The soil IDW was managed, characterized, and disposed of as part of the Garage Building hydraulic lift investigation and will be documented in the forthcoming Garage Building Hydraulic Lift Removal Report. All other IDW was disposed of as general refuse in a garbage dumpster located on Site.

3.3 Analytical Methods

Soil gas and soil samples collected for laboratory analysis were submitted to BC Laboratories in Bakersfield, California, following chain-of-custody protocol. Soil gas samples collected from vapor monitoring wells VW14, VW15, VW16A/B through VW57A/B, and SVM1 through SVM-3 were analyzed for VOCs by USEPA Method TO-15. The laboratory reported a full suite of VOC analytes for each soil gas sample, except the soil gas samples collected from vapor wells SVM-1 through SVM-3 in November 2020, which had a VOC analyte list limited to chlorinated ethenes and ethanes consistent with the SVE system monitoring requirements. The VOC analyte list for the soil gas samples collected from vapor wells SVM-1 through SVM-3 in March 2021 was expanded to include a full suite of VOCs so

the data could be used in the human health risk assessment of the VI pathway in addition to monitoring the SVE system progress.

Soil samples collected from boreholes VW35-E, VW-35-N, VW-35-NN, VW-35-S, VW-35-SS, and VW-35-W were analyzed for arsenic and lead by USEPA Method SW6020 and TPH by USEPA Method SW8015B. Soil samples collected from boreholes VW15, VW31, VW35, and VW38 were analyzed for CAM 17 metals by USEPA Methods SW6020 and either SW6020A (VW15) or SW7471A (VW31, VW35, and VW38), TPH by USEPA Method SW8015B, PCBs by USEPA Method SW8082, VOCs by USEPA Method SW8260B, and SVOCs by USEPA Method SW8270C. Soil samples collected all other boreholes were analyzed for arsenic by USEPA Method SW6020.

CAM 17 metals analytes include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. TPH analytes include light naptha, heavy naptha, aviation gas, Stoddard solvent, gasoline (TPH_g), jet fuel (JP4, JP5, JP8), kerosene, diesel (TPH_d), fuel oil #6, crude oil, hydraulic oil/motor oil ($TPH_{ho/mo}$), and WD-40®.

3.4 Quality Assurance/Quality Control

QA/QC samples collected in the field included field duplicates. Ten field duplicate sample pairs were collected for soil gas and are listed below. These sample pairs were collected from vapor monitoring wells VW17A, VW21A, VW24A, VW32A, VW37B, VW38B, VW41A, VW50A, VW53A, and VW57B and analyzed for VOCs.

- SG-VW17B-01 and SG-VW17B-02
- SG-VW21A-01 and SG-VW21A-02
- SG-VW24A-02 and SG-VW24A-03
- SG-VW32A-01 and SG-VW32A-02
- SG-VW37B-01 and SG-VW37B-02
- SG-VW38B-01 and SG-VW38B-02
- SG-VW41A-01 and SG-VW41A-02
- SG-VW50A-01 and SG-VW50A-02
- SG-VW53A-01 and SG-VW53A-02
- SG-VW57B-01 and SG-VW57B-02

Eleven field duplicate sample pairs were collected for soil and are listed below. These sample pairs were collected from boreholes B08-N, B08-3-N, KA-10-S, KA-10-WW, KA-44-W, VW-31-S, VW35-S, VW35-SS, WB01, WB06, and WB11. The sample pairs collected from boreholes VW-35-S and VW-35-SS were analyzed for arsenic, lead, and TPH. The sample pairs collected from the other eight boreholes were analyzed for arsenic.

- B08-N-1.5 and B08-N-1.5-FD
- B08-3-N-1.5 and B08-3-N-1.5-FD
- KA-10-S-3 and KA-10-S-3-FD
- KA-10-WW-1.5 and KA-10-WW-1.5-FD
- KA-44-W-1.5 and KA-44-W-1.5-FD
- VW-31-S-5 and VW-31-S-5-FD
- VW-35-S-5 and VW-35-S-5-FD
- VW-35-SS-5 and VW-35-SS-5-FD
- WB01-0.5 and WB01-0.5-FD
- WB06-5 and WB06-5FD
- WB11-5 and WB11-5-FD

Leak-check compound isopropyl alcohol was detected above the laboratory practical quantitation limit (PQL) in the soil gas samples collected from vapor wells VW18B, VW21B, VW24A, VW28B, VW30A/B, VW46B, VW51B, VW53A, and VW56A/B. If the detected concentration of the leak check compound is greater than or equal to 10 times the laboratory PQL for the target analyte(s), then corrective action is necessary according to Section 4.2.2.1 of the *Advisory – Active Soil Gas Investigations* (CalEPA, 2015). The isopropyl alcohol concentrations detected in three soil gas samples (42 µg/m^3 in sample SG-VW28B-01, 35 µg/m^3 in sample SG-VW46B-01, and 94 µg/m^3 in sample SG-VW56A-01) exceeded 10 times the lowest laboratory PQL for the target analytes in their respective samples. Although this would normally trigger corrective action, no corrective action is needed because two leak check compounds were used and the other leak check compound (helium) was not detected during the leak tests; therefore, a leak was not confirmed. Additionally, isopropyl alcohol was detected in soil gas samples collected from vapor wells SVM-1 through SVM-3 where isopropyl alcohol was not used as a leak-check compound. This suggests the isopropyl alcohol detections were either site related or a result of equipment contamination and not leak related.

3.5 Sampling and Analysis Plan Deviations

Deviations from the SAP (AECOM, 2018), SAP Addendum (AECOM, 2019), and soil sampling notification letters (Appendix A) are described in the bullets below. These deviations are not considered to have affected the project data quality objectives (DQOs) in a negative way, and in some cases were necessary to achieve the project DQOs.

- **The vapor sampling probe for vapor monitoring well VW15 was placed at 23.5 feet bgs instead of its planned depth of 25.5 feet bgs.** SAP Addendum Section 4.1 states the proposed vapor sampling probe depth for vapor monitoring well VW15 was 25.5 feet bgs; however, a clay layer was encountered at 24 feet bgs and extended to at least 26 feet bgs. To avoid this low permeability zone and provide a higher quality soil gas sample, the probe was placed immediately above this clay layer.
- **Proposed boreholes within the Warehouse Building were not advanced.** Figure 1 attached to the November 2, 2020 soil sampling notification letter shows three proposed borehole locations within the Warehouse Building. These boreholes were proposed to define the northern extent of arsenic impacts in the Warehouse Building vicinity if the soil samples collected from boreholes WB01 and WB02 along the southern loading dock indicated arsenic impacts extended under the Warehouse Building. The analytical results for the soil samples collected from boreholes WB01 and WB02 indicated that step-out boreholes inside the Warehouse Building were not needed. Instead, two additional boreholes (WB08 and WB09) were advanced along the southern loading dock to further refine the northern extent of arsenic impacts along the south side of the Warehouse Building.
- **Soil samples collected from the borehole VW31 and VW35 step-out locations and Warehouse Building step-out locations were not analyzed for CAM 17 metals.** Soil samples collected from the borehole VW31 step-out location (VW31-S) and the Warehouse Building step-out locations (WB08 through WB12) were analyzed for arsenic by USEPA Method SW6020. Soil samples collected from the borehole VW35 step-out locations (VW35-N, VW35-S, VW35-E, VW35-W, VW35-NN, and VW35-SS) were analyzed for arsenic and lead by USEPA Method SW6020. The February 17, 2021 additional soil sampling notification letter incorrectly indicated soil samples from these boreholes would be analyzed for CAM 17 metals by USEPA Methods SW6020 and SW7471A. The letter should have specified arsenic by USEPA Method SW6020 for the borehole VW31 and Warehouse Building step-out soil samples and arsenic and lead by USEPA Method SW6020 for the borehole VW35 step-out soil samples as these were the target metal analytes.

4.0 Investigation Results

This section presents the results of the current investigation conducted from June 2020 through March 2021.

4.1 Geology and Hydrogeology

Based on lithologic logging of boreholes VW14 through VW57, the Site soil consists of a heterogeneous combination of coarse-grained and fine-grained material throughout the areas and depths that were sampled consistent with previous boreholes advanced at the Site. The coarse-grained soil is predominantly comprised of poorly-graded sand and silty sand. The fine-grained soil is predominantly comprised of inorganic silts and clays and very fine sands. Neither bedrock nor groundwater was encountered in any of the boreholes, the deepest of which was advanced to 26.6 feet bgs. Appendix B contains the lithologic logs of the vapor well boreholes.

4.2 Analytical Results

4.2.1 Data Validation and Data Usability

Laboratory analytical data for the soil gas and soil samples collected during the current investigation were validated by the AECOM project chemist, except the November 2020 SVE quarterly soil gas monitoring analytical data and the analytical data for the soil samples collected from boreholes VW15 and VW38. The November 2020 SVE quarterly soil gas monitoring samples were not collected specifically for this investigation and were analyzed for a limited VOC analyte list; therefore, these data were not used in the VI pathway risk assessment and are considered supplemental to the March 2021 SVE quarterly soil gas monitoring analytical data, which were validated and include a full VOC analyte list. The analytical data associated with the unplanned soil samples collected from boreholes VW15 and VW38 were used for screening purposes and these locations were not the focus of the soil investigation.

The data validation results and data quality assessment are documented in the data validation summary contained within Appendix C. Laboratory analytical reports from BC Laboratories are contained within Appendix D. Validation is performed to ensure the quality of collected data and to assess limitation on usability, as well as to evaluate laboratory compliance with specified methods and protocols. The data are considered valid and usable for their intended purposes within the constraints of the final usability qualifiers assigned in data quality assessment. Data qualified with the “J” qualifier are considered estimated and usable with acceptable quantitative uncertainty. Data qualified with the “U” qualifier are considered non-detected. Non-detected results are reported at the laboratory MDL, except for blank-qualified data, which are reported at the measured value. Data qualified with the “R” qualifier are considered rejected and unusable.

For SVOCs by USEPA Method SW8270C, all sample results in two samples (VW-31-2 and VW-35-2) were rejected (“R” qualifier) because the calibration check compound (CCC) pentachlorophenol exceeded the relative standard deviation (RSD) of 30 percent (%) specified in the method. According to the method, “*high variability for these compounds may be indicative of system leaks or reactive sites on the column. If the RSD of any CCC is greater than 30%, then the chromatographic system is too reactive for analysis to begin.”* SVOCs were not previously identified as COCs in soil and SVOC analysis of soil samples was not included in the planned analytic approach for the current investigation; therefore, the rejected SVOC data is not considered essential in meeting the DQOs. Additionally, the soil samples associated with the rejected SVOC data are located in an area with arsenic-impacted soil that has been identified as requiring remedial action.

4.2.2 Soil Gas

In order to evaluate VI using subsurface data (e.g., soil gas), a vapor AF was applied to the ambient air (e.g., indoor air) SL to estimate a corresponding SVSL. Vapor attenuation refers to the reduction in VOC concentrations that

occurs during vapor migration in the subsurface, coupled with the dilution that can occur when the vapors enter a building and mix with indoor air (Johnson and Ettinger, 1991). The vapor AF represents the ratio between the indoor air concentration for a given VOC and its soil gas concentration. California VI guidance previously recommended using a default AF of 0.001 for existing commercial buildings with samples collected at the contamination source, along with the maximum soil gas concentration (DTSC, 2011). California draft VI guidance (CalEPA, 2020) currently recommends using the USEPA empirically-derived AF of 0.03 (USEPA, 2015) for preliminary screening of VOCs detected in soil gas. However, USEPA derived the 0.03 AF using VOC data primarily from single-family residences constructed with basements in states outside California with relatively cold climates. Basement construction and building heating are factors that can increase VI potential. Therefore, the 0.03 AF may overpredict VI for buildings without basements in warmer climates that are more typical in California and for larger commercial/industrial buildings with greater dilution potential when vapors entering the building mix with indoor air. Additionally, the 2020 California VI guidance recommending the use of the 0.03 AF has not been finalized. DTSC is conducting a VI AF study to derive a California-specific AF for VI calculations (DTSC, 2021), which when complete, will provide the redevelopment sector with an additional tool to facilitate the land revitalization process. Although the study is under peer review and the associated report has not been released to the public, the study investigators have presented preliminary findings at industry conferences (Bosan et al., 2020 and Abbasi et al. 2021). The preliminary findings suggest an AF closer to 0.001 than 0.03, which is consistent with other California-specific VI AF studies such as that performed by Ettinger et al. (2018), which resulted in an empirical AF of 0.002 for soil gas. Due to the uncertainties in which AF will ultimately be adopted for use in California, the following evaluation of the current investigation soil gas results used both the 0.03 AF and the 0.001 AF.

Tables 4-1 and 4-2 present the current investigation maximum analyte concentrations detected in soil gas compared to SVSLs. The SVSLs for all analytes except TPH_g were derived by dividing the DTSC HERO HHRA Note 3 residential and commercial/industrial ambient air SLs (DTSC 2020) by either the 0.03 AF (CalEPA, 2020) in Table 4-1 or the 0.001 AF (DTSC, 2011) in Table 4-2. TPH_g does not have established DTSC SLs; therefore, the TPH_g SVSLs were derived by dividing the San Francisco Bay Regional Water Quality Control Board residential and commercial/industrial indoor air ESLs (SWRCB, 2019) by either the 0.03 AF in Table 4-1 or the 0.001 AF in Table 4-2. Seventeen analytes (benzene, benzyl chloride, BDCM, chloroform, 1,2-DBE, 1,2-DCA, *cis*-1,2-DCE, 1,2-DCP, ethylbenzene, n-heptane, hexane, naphthalene, PCE, toluene, TCE, 1,2,3-trichloropropane [TCP], and TPH_g) were detected at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.03 AF. The highest benzene, benzyl chloride, BDCM, 1,2-DBE, 1,2-DCA, ethylbenzene, n-heptane, hexane, toluene, 1,2,3-TCP, and TPH_g concentrations were detected in soil gas samples collected at 14.5 feet. The highest chloroform, *cis*-1,2-DCE, 1,2-DCP, naphthalene, PCE, and TCE concentrations were detected in shallower soil gas samples collected from 5.5 feet or less. In comparison, only seven of these analytes (benzene, chloroform, 1,2-DBE, *cis*-1,2-DCE, PCE, TCE, and 1,2,3-TCP) were detected at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.001 AF.

The analytes detected in shallow soil gas (i.e., 5.5 feet or less) are of particular interest when evaluating the potential for VI to indoor air. Tables 4-3 and 4-4 present the current investigation analyte concentrations detected in shallow soil gas compared to residential and commercial/industrial SVSLs derived using the 0.03 and 0.001 AFs, respectively. Eleven analytes (benzene, BDCM, chloroform, 1,2-DBE, *cis*-1,2-DCE, 1,2-DCP, ethylbenzene, naphthalene, PCE, TCE, and TPH_g) were detected in shallow soil gas at concentrations exceeding commercial/industrial and/or residential SVSLs derived using the 0.03 AF. The frequency and magnitude of detection of these analytes is described below.

- **Benzene.** Benzene concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of benzene concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-1 and 4-2, respectively. For vapor wells sampled in December 2020 and March 2021, benzene concentrations detected during both sampling events are presented on

Figure 4-3. Benzene was detected in 37 of 57 shallow soil gas samples at a maximum concentration of 39 µg/m^3 (vapor well VW27A). The benzene concentrations detected in 23 of these samples exceeded the 3.2 µg/m^3 residential SVSL derived using the 0.03 AF, and the benzene concentrations detected in 8 of these samples also exceeded the corresponding 14 µg/m^3 commercial/industrial SVSL. In comparison, none of the benzene concentrations detected in shallow soil gas exceeded the 97 and 420 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.

- **BDCM.** BDCM concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of BDCM concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-4 and 4-5, respectively. For vapor wells sampled in December 2020 and March 2021, BDCM concentrations detected during both sampling events are presented on Figure 4-3. BDCM was detected in 2 of 57 shallow soil gas samples at concentrations of 12 and 24 µg/m^3. Both samples were associated with vapor well VW30A. The higher concentration was detected in a sample collected in March 2021, and the lower concentration was detected in a sample collected in December 2020. Both detected BDCM concentrations exceeded the 2.5 and 11 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.03 AF. In comparison, none of the BDCM concentrations detected in shallow soil gas exceeded the 76 and 330 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.
- **Chloroform.** Chloroform concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of chloroform concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-4 and 4-5, respectively. For vapor wells sampled in December 2020 and March 2021, chloroform concentrations detected during both sampling events are presented on Figure 4-3. Chloroform was detected in 27 of 57 shallow soil gas samples at a maximum concentration of 1,400 µg/m^3 (vapor well VW30A). The chloroform concentrations detected in 18 of these samples exceeded the 4.0 µg/m^3 residential SVSL derived using the 0.03 AF, and the chloroform concentrations detected in 4 of these samples also exceeded the corresponding 18 µg/m^3 commercial/industrial SVSL. In comparison, only two of the chloroform concentrations (650 and 1,400 µg/m^3) detected in shallow soil gas exceeded the 120 and 530 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF. Both samples were associated with vapor well VW30A. The higher concentration was detected in a sample collected in March 2021 and the lower concentration was detected in a sample collected in December 2020.
- **1,2-DBE.** 1,2-DBE concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of 1,2-DBE concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-4 and 4-5, respectively. For vapor wells sampled in December 2020 and March 2021, 1,2-DBE concentrations detected during both sampling events are presented on Figure 4-3. 1,2-DBE was detected in 3 of 57 shallow soil gas samples at a maximum concentration of 5.1 µg/m^3 (vapor well VW19A). The 1,2-DBE concentrations detected in all three of these samples exceeded the 0.16 and 0.67 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.03 AF. All samples for which 1,2-DBE was not detected had laboratory MDLs that were higher than the 0.67 µg/m^3 commercial/industrial SVSL. The lowest MDL achieved by the laboratory was 0.83 µg/m^3. In comparison, only one of the 1,2-DBE concentrations (5.1 µg/m^3) detected in shallow soil gas exceeded the 4.7 µg/m^3 residential SVSL derived using the 0.001 AF, and none of the 1,2-DBE concentrations detected in shallow soil gas exceeded the corresponding 20 µg/m^3 commercial/industrial SVSL. Of the samples for which 1,2-DBE was not detected, the laboratory MDLs for all but six samples were below the residential and commercial/industrial SVSLs derived using the 0.001 AF.
- ***cis*-1,2-DCE.** *cis*-1,2-DCE concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of *cis*-1,2-DCE concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-6 and 4-7, respectively. For vapor wells sampled in December 2020 and March 2021, *cis*-1,2-DCE concentrations detected during both sampling

events are presented on Figure 4-3. *cis*-1,2-DCE was detected in 2 of 57 shallow soil gas samples at concentrations of 35,000 and 47,000 µg/m^3. Both samples were associated with SVE system vapor well SVM-1. The higher concentration was detected in a sample collected in November 2020, and the lower concentration was detected in a sample collected in March 2021. *cis*-1,2-DCE is a PCE daughter product and its presence may be an indication that PCE degradation is occurring in the SVE treatment zone. Additionally, the decrease in *cis*-DCE concentrations from November 2020 to March 2021 may be attributable to SVE system operation. Both detected *cis*-1,2-DCE concentrations exceeded the 280 and 1,200 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.03 AF. In comparison, both *cis*-1,2-DCE concentrations detected in shallow soil gas exceeded the 8,300 µg/m^3 residential SVSL derived using the 0.001 AF, but only the higher concentration exceeded the corresponding 35,000 µg/m^3 commercial/industrial SVSL.

- **1,2-DCP.** 1,2-DCP was detected in 1 of 57 shallow soil gas samples at a concentration of 600 µg/m^3 (vapor well SVM-1). The detected 1,2-DCP concentration exceeded the 25 and 110 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.03 AF. In comparison, the 1,2-DCP concentration detected in shallow soil gas did not exceed the 760 and 3,300 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.
- **Ethylbenzene.** Ethylbenzene concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of ethylbenzene concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-1 and 4-2, respectively. For vapor wells sampled in December 2020 and March 2021, ethylbenzene concentrations detected during both sampling events are presented on Figure 4-3. Ethylbenzene was detected in 48 of 57 shallow soil gas samples at a maximum concentration of 66 µg/m^3 (vapor well VW16A). The ethylbenzene concentrations detected in six of these samples exceeded the 37 µg/m^3 residential SVSL derived using the 0.03 AF. None of the ethylbenzene concentrations detected in shallow soil gas exceeded the corresponding 14 µg/m^3 commercial/industrial SVSL. In comparison, none of the ethylbenzene concentrations detected in shallow soil gas exceeded the 1,100 and 4,900 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.
- **Naphthalene.** Naphthalene concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of naphthalene concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-1 and 4-2, respectively. For vapor wells sampled in December 2020 and March 2021, naphthalene concentrations detected during both sampling events are presented on Figure 4-3. Naphthalene was detected in 11 of 57 shallow soil gas samples at a maximum concentration of 70 µg/m^3 (vapor well VW48A). The naphthalene concentrations detected in all 11 of these samples exceeded the 2.8 µg/m^3 residential SVSL derived using the 0.03 AF, and the naphthalene concentrations detected in 2 of these samples also exceeded the corresponding 12 µg/m^3 commercial/industrial SVSL. In comparison, none of the naphthalene concentrations detected in shallow soil gas exceeded the 83 and 360 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.
- **PCE.** PCE concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of PCE concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-6 and 4-7, respectively. For vapor wells sampled in December 2020 and March 2021, PCE concentrations detected during both sampling events are presented on Figure 4-3. PCE was detected in 55 of 60 shallow soil gas samples at a maximum concentration of 1,200,000 µg/m^3 (vapor well SVM-1). The PCE concentrations detected in 42 of these samples exceeded the 15 µg/m^3 residential SVSL derived using the 0.03 AF, and the PCE concentrations detected in 20 of these samples also exceeded the corresponding 67 µg/m^3 commercial/industrial SVSL. In comparison, three of the PCE concentrations detected in shallow soil gas exceeded the 460 µg/m^3 residential SVSL derived using the 0.001 AF, and two of these PCE concentrations exceeded the corresponding 2,000 µg/m^3 commercial/industrial SVSL. Both

concentrations exceeding the 2,000 µg/m^3 commercial/industrial SVSL are associated with soil gas samples collected from SVE system vapor well SVM-1 in November 2020 (1,200,000 µg/m^3) and March 2021 (320,000 µg/m^3). The decrease in PCE concentrations at vapor well SVM-1 from November 2020 to March 2021 may be attributable to SVE system operation. Excluding vapor well SVM-1, the maximum PCE concentration detected in shallow soil gas was 650 µg/m^3 (vapor well VW24A).

- **TCE.** TCE concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of TCE concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-6 and 4-7, respectively. For vapor wells sampled in December 2020 and March 2021, TCE concentrations detected during both sampling events are presented on Figure 4-3. TCE was detected in 12 of 60 shallow soil gas samples at a maximum concentration of 16,000 µg/m^3 (vapor well SVM-1). The TCE concentrations detected in two of these samples exceeded the 16 and 100 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.03 AF, and the 480 and 3,000 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF. Both samples were associated with SVE system vapor well SVM-1. TCE is a PCE daughter product and its presence may be an indication that PCE degradation is occurring in the SVE treatment zone.
- **TPH_g.** TPH_g concentrations detected in soil gas samples collected in November and December 2020 and the lateral extent of TPH_g concentrations in shallow soil gas exceeding SVSLs derived using 0.03 and 0.001 AFs are presented on Figures 4-8 and 4-9, respectively. For vapor wells sampled in December 2020 and March 2021, TPH_g concentrations detected during both sampling events are presented on Figure 4-3. TPH_g was detected in 57 of 57 shallow soil gas samples at a maximum concentration of 500,000 µg/m^3 (vapor well SVM-1). The TPH_g concentrations detected in two of these samples exceeded the 20,000 µg/m^3 residential SVSL derived using the 0.03 AF, and the TPH_g concentrations detected in one of these samples also exceeded the corresponding 83,000 µg/m^3 commercial/industrial SVSL. In comparison, none of the TPH_g concentrations detected in shallow soil gas exceeded the 600,000 and 2,500,000 µg/m^3 residential and commercial/industrial SVSLs, respectively, derived using the 0.001 AF.

As discussed in Section 3.2.5, additional soil gas samples were collected from vapor wells VW24A, VW30A, VW30B, VW42A, VW45A, VW48A, VW49A, and VW57B in March 2021 to confirm the detected concentrations of certain VOCs exceeding their SVSLs in the soil gas samples initially collected from these wells in December 2020. The December 2020 and March 2021 analytical results for these wells and VOCs are presented on Figure 4-3 and summarized below.

- **Vapor well VW24A.** Chloroform was detected at a concentration of 9.3 µg/m^3 in the soil gas sample collected from vapor well VW24A in December 2020, which exceeded its 4.0 µg/m^3 residential SVSL derived using a 0.03 AF. Chloroform was not detected in the soil gas sample collected from this well in March 2021. Naphthalene was detected at a concentration of 9.8 µg/m^3 in the soil gas sample collected from vapor well VW24A in December 2020, which exceeded its 2.8 µg/m^3 residential SVSL derived using a 0.03 AF. Naphthalene was detected at concentrations of 6.9 and 17 µg/m^3 in duplicate soil gas samples collected from this well in March 2021. The higher naphthalene concentration from March 2021 exceeded its 12 µg/m^3 commercial/industrial SVSL derived using a 0.03 AF. PCE was detected at a concentration of 650 µg/m^3 in the soil gas sample collected from vapor well VW24A in December 2020, which exceeded its 67 µg/m^3 commercial/industrial SVSL derived using a 0.03 AF and its 460 µg/m^3 residential SVSL derived using a 0.001 AF. PCE was detected at concentrations of 110 and 120 µg/m^3 in duplicate soil gas samples collected from this well in March 2021, which exceeded its 67 µg/m^3 commercial/industrial SVSL derived using a 0.03 AF.
- **Vapor well VW30A.** Benzene and naphthalene were detected at concentrations of 3.7 and 7.5 µg/m^3, respectively, in the soil gas sample collected from vapor well VW30A in December 2020, which exceeded their respective 3.2 and 2.8 µg/m^3 residential SVSLs derived using a 0.03 AF. Benzene and naphthalene were not detected in the soil gas sample collected from this well in March 2021. BDCM was detected at

concentrations of 12 and 24 µg/m^3 in the soil gas samples collected from vapor well VW30A in December 2020 and March 2021, respectively. Both concentrations exceed the 11 µg/m^3 commercial/industrial BDCM SVSL derived using a 0.03 AF. Chloroform was detected at concentrations of 650 and 1,400 µg/m^3 in the soil gas samples collected from vapor well VW30A in December 2020 and March 2021, respectively. Both concentrations exceed the 18 and 530 µg/m^3 commercial/industrial chloroform SVSLs derived using 0.03 and 0.001 AFs, respectively. PCE was detected at concentrations of 99 and 210 µg/m^3 in the soil gas samples collected from vapor well VW30A in December 2020 and March 2021, respectively. Both concentrations exceed the 67 µg/m^3 commercial/industrial PCE SVSL derived using a 0.03 AF.

- **Vapor well VW30B.** BDCM was detected at concentrations of 60 and 43 µg/m^3 in the soil gas samples collected from vapor well VW30B in December 2020 and March 2021, respectively. Both concentrations exceed 11 µg/m^3 commercial/industrial BDCM SVSL derived using a 0.03 AF. Chloroform was detected at concentrations of 1,300 and 920 µg/m^3 in the soil gas samples collected from vapor well VW30B in December 2020 and March 2021, respectively. Both concentrations exceed the 18 and 530 µg/m^3 commercial/industrial chloroform SVSLs derived using 0.03 and 0.001 AFs, respectively. PCE was detected at concentrations of 370 and 290 µg/m^3 in the soil gas samples collected from vapor well VW30B in December 2020 and March 2021, respectively. Both concentrations exceed the 67 µg/m^3 commercial/industrial PCE SVSL derived using a 0.03 AF.
- **Vapor well VW42A.** TPH_g was detected at a concentration of 63,000 µg/m^3 in the soil gas sample collected from vapor well VW42A in December 2020 exceeding its 20,000 µg/m^3 residential SVSL derived using a 0.03 AF. The TPH_g concentration detected in the soil gas sample collected from this well in March 2021 was 91 µg/m^3, which is below its SVSLs derived using 0.03 and 0.001 AFs.
- **Vapor well VW45A.** Benzene was detected at a concentration of 17 µg/m^3 in the soil gas sample collected from vapor well VW45A in December 2020, which exceeds its 14 µg/m^3 commercial/industrial SVSL derived using a 0.03 AF. Benzene was not detected in the soil gas sample collected from this well in March 2021. 1,2-DBE, which was not detected in the December 2020 soil gas sample collected from vapor well VW45A, was detected at a concentration of 4.0 µg/m^3 in the March 2021 soil gas sample collected from this well, exceeding its 0.67 µg/m^3 commercial/industrial SVSL derived using a 0.03 AF.
- **Vapor well VW48A.** PCE was detected at concentrations of 35 and 29 µg/m^3 in the soil gas samples collected from vapor well VW48A in December 2020 and March 2021, respectively. Both concentrations exceed the 15 µg/m^3 residential PCE SVSL derived using a 0.03 AF. Chloroform was detected at concentrations of 3.5 and 5.4 µg/m^3 in the soil gas samples collected from vapor well VW48A in December 2020 and March 2021, respectively. The chloroform concentration detected in December 2020 did not exceed SVSLs, while the chloroform concentration detected in March 2021 exceeds the 4.0 µg/m^3 residential SVSL derived using a 0.03 AF. 1,2-DBE and naphthalene, which were not detected in the December 2020 soil gas sample collected from vapor well VW48A, were detected at concentrations of 2.8 and 70 µg/m^3, respectively, in the March 2021 soil gas sample collected from this well, exceeding their respective 0.67 and 12 µg/m^3 commercial/industrial SVSLs derived using a 0.03 AF.
- **Vapor well VW49A.** Chloroform was detected at concentrations of 4.7 and 7.6 µg/m^3 in the soil gas samples collected from vapor well VW49A in December 2020 and March 2021, respectively. Both concentrations exceed the 4.0 µg/m^3 residential chloroform SVSL derived using a 0.03 AF. PCE was detected at concentrations of 54 and 55 µg/m^3 in the soil gas samples collected from vapor well VW49A in December 2020 and March 2021, respectively. Both concentrations exceed the 15 µg/m^3 residential SVSL derived using a 0.03 AF.
- **Vapor well VW57B.** In December 2020, benzene was detected at concentrations of 2,100 and 2,500 µg/m^3 and ethylbenzene was detected at concentrations of 180 and 220 µg/m^3 in duplicate soil gas samples collected from vapor well VW57B, exceeding their respective commercial/industrial SVSLs derived using a 0.03 AF. In December 2020, n-heptane was detected at concentrations of 13,000 and 16,000 µg/m^3, hexane was detected at concentrations of 64,000 and 76,000 µg/m^3, and toluene was detected at

concentrations of 8,200 and 11,000 µg/m^3 in duplicate soil gas samples collected from vapor well VW57B. One or both detected concentrations of n-heptane, hexane, and toluene exceeded their respective residential SVSLs derived using a 0.03 AF. Benzene, ethylbenzene, n-heptane, hexane, and toluene were not detected in the soil gas samples collected from vapor well VW57B in March 2021. In December 2020, TPH_g was detected at concentrations of 1,500,000 and 1,900,000 µg/m^3 in duplicate soil gas samples collected from vapor well VW57B, exceeding its commercial/industrial SVSLs derived using a 0.03 AF and its residential SVSL derived using a 0.001 AF. The TPH_g concentration detected in the soil gas sample collected from this well in March 2021 was 100 µg/m^3, which is below the TPH_g SVSLs derived using 0.03 and 0.001 AFs.

4.2.3 Soil

Analytical results for arsenic in soil are presented in Table 4-5. Arsenic concentrations detected in soil during the current and previous investigations are presented on Figure 4-10. Arsenic concentrations detected in soil during the current investigation ranged from 3.4 to 280 mg/kg with the maximum concentration detected in the sample collected from 2 feet bgs at borehole VW35-S. The highest arsenic concentrations detected during the current investigation were associated with borehole locations at the western portion of the Site to the west and northwest of the Salvage Building.

Borehole B08 Step-Outs. In June 2020, four step-out boreholes were advanced to the north (B08-N), east (B08-E), south (B08-S), and west (B08-W) of previous investigation borehole B08. Soil samples were collected from each step-out borehole at depths of 1.5 and 3 feet bgs. Arsenic concentrations detected in these soil samples ranged from 5.7 to 54 mg/kg. All detected arsenic concentrations exceeded the 17.53 mg/kg Site-specific arsenic background concentration, except for the concentrations detected in the soil samples collected from 3 feet bgs at boreholes B08-N, B08-S, and B08-W.

In July 2020, three additional step-out boreholes were advanced to the north (B08-NN), east (B08-EE), and south (B08-SS). Soil samples were collected from each step-out borehole at a depth of 1.5 feet bgs. An additional soil sample was collected at a depth of 3 feet bgs from borehole B08-EE. Arsenic concentrations detected in these soil samples ranged from 13 to 99 mg/kg. The arsenic concentrations detected in the soil samples collected from 1.5 feet bgs exceeded the 17.53 mg/kg background concentration.

In August 2020, three additional step-out boreholes were advanced to the north (B08-3-N), east (B08-3-E), and south (B08-3-S). Soil samples were collected from each step-out borehole at a depth of 1.5 feet bgs. Arsenic concentrations detected in these soil samples ranged from 39 to 48 mg/kg. The arsenic concentrations detected in the soil samples collected from boreholes B08-3-N and B08-3-W exceeded the 17.53 mg/kg background concentration. No additional step-out boreholes were advanced.

Borehole KA-10 Step-Outs. In June 2020, three step-out boreholes were advanced to the north (KA-10-N), south (KA-10-S), and west (KA-10-W) of Phase II ESA borehole KA-10. A step-out borehole was not advanced to the east due to the presence of the Hazardous Material Building. Soil samples were collected from each step-out borehole at depths of 1.5 and 3 feet bgs. Arsenic concentrations detected in these soil samples ranged from 3.9 to 110 mg/kg. The arsenic concentrations of 110 and 35 mg/kg detected in the soil samples collected from 1.5 feet bgs at boreholes KA-10-S and KA-10-W, respectively, exceeded the 17.53 mg/kg Site-specific arsenic background concentration.

In July 2020, three additional step-out boreholes were advanced to the south (KA-10-SS), southwest (KA-10-SW), and west (KA-10-WW). Soil samples were collected from each step-out borehole at a depth of 1.5 feet bgs. Arsenic concentrations detected in these soil samples ranged from 11 to 38 mg/kg. The arsenic concentrations of 38 and 21 mg/kg detected in the soil samples collected from boreholes KA-10-SS and KA-10-SW, respectively, exceeded the 17.53 mg/kg background concentration.

In August 2020, one additional step-out borehole was advanced to the south (KA-10-3-S) and a soil sample was collected from a depth of 1.5 feet bgs. Arsenic was detected at a concentration of 16 mg/kg, which did not exceed the 17.53 mg/kg background concentration.

Borehole KA-17 Step-Outs. In June 2020, three step-out boreholes were advanced to the north (KA-17-N), east (KA-17-E), and west (KA-17-W) of Phase II ESA borehole KA-17. A step-out borehole was not advanced to the south because previous investigation borehole B09 defines the lateral extent of arsenic in soil to the south. Soil samples were collected from each step-out borehole at depths of 1.5 and 3 feet bgs. Arsenic concentrations detected in these soil samples ranged from 3.6 to 150 mg/kg. The arsenic concentrations of 78 and 150 mg/kg detected in the soil samples collected from 1.5 feet bgs at boreholes KA-17-N and KA-17-W, respectively, exceeded the 17.53 mg/kg Site-specific arsenic background concentration.

In July 2020, three additional step-out boreholes were advanced to the north (KA-17-NN), northwest (KA-17-NW), and west (KA-17-WW). Soil samples were collected from each step-out borehole at a depth of 1.5 feet bgs. Arsenic concentrations detected in these soil samples ranged from 37 to 59 mg/kg, which exceeded the 17.53 mg/kg background concentration.

In August 2020, four additional step-out boreholes were advanced to the north (KA-17-3-N), northeast, (KA-17-3-NE), northwest (KA-17-3-NW), and west (KA-17-3-W). Soil samples were collected from each step-out borehole at a depth of 1.5 feet bgs. Arsenic concentrations detected in these soil samples ranged from 3.4 to 140 mg/kg. The arsenic concentrations of 60 and 140 mg/kg detected in the soil samples collected from boreholes KA-17-3-W and KA-17-3-NE, respectively, exceeded the 17.53 mg/kg background concentration. One additional step-out borehole was advanced to the northeast (KA-17-4-NE), and a soil sample was collected from a depth of 1.5 feet bgs. Arsenic was detected at a concentration of 14 mg/kg, which did not exceed the 17.53 mg/kg background concentration.

Borehole KA-44 Step-Outs. In June 2020, four step-out boreholes were advanced to the north (KA-44-N), east (KA-44-E), south (KA-44-S), and west (KA-44-W) of Phase II ESA borehole KA-44. Soil samples were collected from each step-out borehole at depths of 1.5 and 3 feet bgs. Arsenic concentrations detected in these soil samples ranged from 4.4 to 14 mg/kg, which were below the 17.53 mg/kg Site-specific arsenic background concentration.

Warehouse Building Step-Outs. In December 2020, two vapor well boreholes (VW56 and VW57) and seven step-out boreholes (WB01 through WB07) were advanced to the south and southeast of the Warehouse Building. During advancement of vapor well boreholes VW56 and VW57, soil samples were collected at a depth of 1.5 feet bgs. Boreholes WB01 and WB02 were advanced at the southern loading dock. Soil samples were collected from non-native fill material 1.5 feet below the loading dock platform ("Dock" samples) and from a depth equivalent to 0.5 foot below the surrounding grade. An additional soil sample was collected from 1.5 feet below the surrounding grade at borehole WB01. Boreholes WB03 and WB04 were advanced at the parking stalls adjacent to the loading dock where soil samples were collected from a depth of 1.5 feet bgs. Boreholes WB05 through WB07 were advanced along both sides of the driveway exiting the Site where soil samples were collected at depths of 1.5 and 5 feet bgs. Arsenic concentrations detected in the soil samples collected from boreholes VW56, WB01 (0.5 foot and 1.5 feet bgs), WB02 through WB05, WB06 (1.5 feet bgs), and WB07 (1.5 feet bgs) ranged from 3.7 to 12 mg/kg, which were below the 17.53 mg/kg Site-specific arsenic background concentration. Arsenic was detected in the soil samples collected from boreholes VW57, WB01 ("Dock"), WB06 (5 feet bgs), and WB07 (5 feet bgs) at concentrations ranging from 30 to 170 mg/kg, which exceeded the 17.53 mg/kg background concentration.

In February 2021, five additional step-out boreholes (WB08 through WB12) were advanced to the south and southeast of the Warehouse Building. Boreholes WB08 and WB09 were advanced at the southern loading dock to the west and east of boreholes WB01 and WB02, respectively. Soil samples were collected from non-native fill

material 1.5 feet below the loading dock platform (“Dock” samples) and from a depth equivalent to 1.5 feet below the surrounding grade. Borehole WB10 was advanced at the location of previous investigation borehole B17, where arsenic was detected at a concentration of 330 mg/kg in the soil sample collected from 5 feet bgs. Soil samples were collected from borehole WB10 at depths of 7.5 and 10 feet bgs to further delineate the vertical extent of arsenic. Boreholes WB11 and WB12 were advanced to the north of borehole WB06 and east of borehole WB07, respectively, where soil samples were collected from depths of 1.5 and 5 feet bgs. Arsenic concentrations detected in the soil samples collected from boreholes WB08, WB09, WB11, and WB12 ranged from 3.1 to 15 mg/kg, which were below the 17.53 mg/kg background concentration. Arsenic was detected in the 7.5 and 10-foot bgs soil samples collected from borehole WB10 at concentrations of 65 and 55 mg/kg, respectively, which exceeded the 17.53 mg/kg background concentration.

Vapor Well Boreholes and Step-Outs. Analytical results for soil samples collected from vapor well boreholes VW15, VW31, VW35, and VW38 and borehole VW35 and VW38 step-out locations are presented in Table 4-6. Concentrations of the analytes detected in soil at these locations are presented on Figure 4-11.

- **Borehole VW15.** During advancement of borehole VW15 in December 2020, the field geologist observed dark, possibly stained soil from 2 to 2.5 feet bgs. The soil had an organic odor. PID readings taken from the soil indicated VOC concentrations ranging from 73 to 76 ppb. A soil sample was collected from 2 feet bgs and analyzed for VOCs, SVOCs, PCBs, TPH, and metals (including mercury). VOCs and SVOCs were not detected. Aroclor 1260 was detected at a concentration of 0.010 mg/kg, which was below the 0.24 mg/kg residential SL. TPH_d and $TPH_{ho/mo}$ were detected at concentrations of 40 and 510 mg/kg, respectively, which are below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). All detected metals concentrations were below their respective SLs, except arsenic. Arsenic was detected at a concentration of 7.3 mg/kg, which exceeded its 0.11 and 0.36 mg/kg residential and commercial/industrial SLs, respectively, but did not exceed its 17.53 mg/kg background concentration. The analytical results did not indicate significant contamination; therefore, further soil investigation was not performed at this location.
- **Borehole VW31.** During advancement of borehole VW31 in November 2020, the field geologist observed stained soil from 2 to 2.5 feet bgs. The soil had a slight petroleum odor. A soil sample was collected from 2 feet bgs and analyzed for VOCs, SVOCs, PCBs, TPH, and metals (including mercury). VOCs and SVOCs were not detected. Aroclor 1260 was detected at a concentration of 0.0077 mg/kg, which was below the 0.24 mg/kg residential SL. TPH_d and $TPH_{ho/mo}$ were detected at concentrations of 7.7 and 29 mg/kg, respectively, which are below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). All detected metals concentrations were below their respective SLs, except arsenic. Arsenic was detected at a concentration of 26 mg/kg, which exceeded its 0.11 and 0.36 mg/kg residential and commercial/industrial SLs, respectively, and its 17.53 mg/kg background concentration. The analytical results indicated arsenic contamination in soil; therefore, further soil investigation to approximate the extent of arsenic-impacted soil was performed.
- **Borehole VW31 Step-Outs.** The lateral extent of arsenic to the west, east, and northwest of borehole VW31 is defined by arsenic data associated with previous investigation boreholes B04 and B05 and current investigation borehole KA-10-3-S. In February 2021, step-out borehole VW31-S was advanced approximately 15 feet to the south of borehole VW31 in an attempt to define the southern extent of arsenic impacted soil. Soil samples were collected at depths of 2 and 5 feet bgs from borehole VW31-S. Arsenic was detected at a concentration of 150 mg/kg in the soil sample from 2 feet bgs, exceeding the 17.53 mg/kg background concentration. Arsenic was detected at a concentration of 6.0 mg/kg in duplicate soil samples from 5 feet bgs, which is less than the 17.53 mg/kg background concentration. Borehole VW35-NN, which was advanced as a northern step-out for borehole VW35-N also served as a southern step-out from borehole VW31-S. Soil samples were collected at depths of 2 and 5 feet bgs from borehole VW35-NN. Arsenic was detected at a concentration of 100 mg/kg in the soil sample from 2 feet bgs, exceeding the 17.53 mg/kg background concentration. Arsenic was detected at a concentration of 4.4 mg/kg in the soil

sample from 5 feet bgs, which is less than the 17.53 mg/kg background concentration. The southern step-out sampling results indicate arsenic-impacted soil extends to the vicinity of borehole VW35, which is discussed in the following bullet.

- **Borehole VW35.** During advancement of borehole VW35 in November 2020, the field geologist observed dark brown to black stained soil from 0 to 3.5 feet bgs. The soil did not have an odor, but a slight greasy sheen was observed. PID readings taken from the soil indicated VOC concentrations ranging from 826 to 1,669 ppb. A soil sample was collected from 2 feet bgs and analyzed for VOCs, SVOCs, PCBs, TPH, and metals (including mercury). PCE was detected at a concentration of 0.0017 mg/kg, which was below its 0.59 mg/kg residential SL. No other VOCs were detected, and no SVOCs were detected. Aroclor 1260 was detected at a concentration of 0.035 mg/kg, which was below the 0.24 mg/kg residential SL. TPH_d and $TPH_{ho/mo}$ were detected at concentrations of 650 and 3,500 mg/kg, respectively. The detected TPH_d concentration was below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). The detected $TPH_{ho/mo}$ concentration exceeded the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High), but was below the corresponding 18,000 mg/kg commercial/industrial SL. All detected metal concentrations were below their respective SLs, except arsenic and lead. Arsenic was detected at a concentration of 46 mg/kg, which exceeded its 0.11 and 0.36 mg/kg residential and commercial/industrial SLs, respectively, and its 17.53 mg/kg background concentration. Lead was detected at a concentration of 120 mg/kg, which exceeded its 80 mg/kg residential SL, but not its 320 mg/kg commercial/industrial SL. The analytical results indicated $TPH_{ho/mo}$, arsenic, and lead contamination in soil; therefore, further soil investigation to approximate the extent of contamination was performed.
- **Borehole VW35 Step-Outs.** In February 2021, an initial set of step-out boreholes were advanced approximately 15 feet to the north (VW35-N), east (VW35-E), south (VW35-S), and west (VW35-W) of borehole VW35. Soil samples were collected at depths of 2 and 5 feet bgs. An additional soil sample was collected from borehole VW35-N at a depth of 7.5 feet based on XRF field measurements indicating elevated arsenic concentrations extended beyond 5 feet bgs. The soil samples were analyzed for TPH, arsenic, and lead. TPH_d was either not detected or detected at concentrations below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). $TPH_{ho/mo}$ was detected at concentrations below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High), except for the 6,000 mg/kg concentration detected in the soil sample collected from 2 feet bgs at borehole VW35-N. Arsenic was detected at concentrations exceeding the 17.53 mg/kg background concentrations in all samples except the deepest sample (either 5 or 7.5 feet bgs) collected from each borehole. Lead was detected at concentrations below the 80 mg/kg residential SL, except for the 130 mg/kg concentration detected in the soil sample collected from 2 feet bgs at borehole VW35-N. Additional step-out boreholes were advanced to the north (VW35-NN) and south (VW35-SS). Soil samples were collected at depths of 2 and 5 feet bgs and analyzed for TPH, arsenic, and lead. TPH_d was not detected. $TPH_{ho/mo}$ was either not detected or detected at concentrations below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). Arsenic was detected at concentrations below the 17.53 mg/kg background concentration, except for the 100 mg/kg concentration detected in the soil sample collected from borehole VW35-NN at 2 feet bgs. The northern step-out sampling results indicate arsenic-impacted soil extends to the vicinity of borehole VW31, which was previously discussed. Lead was detected at concentrations below the 80 mg/kg residential SL.
- **Borehole VW38.** During advancement of borehole VW38 in November 2020, the field geologist observed discolored soil from 1.5 to 3 feet bgs. PID readings taken from the soil indicated VOC concentrations ranging from 890 to 1,300 ppb. A soil sample was collected from 2 feet bgs and analyzed for VOCs, SVOCs, PCBs, TPH, and metals (including mercury). VOCs and SVOCs were not detected. Aroclor 1260 was detected at a concentration of 0.0023 mg/kg, which was below the 0.24 mg/kg residential SL. TPH_d and $TPH_{ho/mo}$ were detected at concentrations of 10 and 36 mg/kg, respectively, which are below the 2,800 mg/kg residential SL for TPH (C17-C32 Aromatic High). All detected metals concentrations were below their respective SLs, except arsenic. Arsenic was detected at a concentration of 17 mg/kg, which

exceeded its 0.11 and 0.36 mg/kg residential and commercial/industrial SLs, respectively, but did not exceed its 17.53 mg/kg background concentration. The analytical results did not indicate significant contamination; therefore, further soil investigation was not performed at this location.

5.0 Human Health Risk Assessment for the Vapor Intrusion Pathway

A focused baseline HHRA was performed for the VI exposure pathway. The HHRA results are presented in Appendix E and summarized in this section. The Site is currently used for limited commercial and industrial purposes as most activities formerly conducted at the Site have either been transferred to other SMUD facilities or are no longer conducted by SMUD. Following remedial action for VOCs in soil gas and arsenic soil, SMUD's planned Site redevelopment includes a mix of residential and commercial/industrial uses.

For current commercial/industrial workers, the inhalation of vapors in indoor air is considered a complete pathway. To address potential risk to current commercial/industrial workers, SMUD previously conducted indoor air sampling within the Tool Issue Building in December 2016 and April 2019 (AECOM, 2019). The Tool Issue Building was selected for indoor air sampling because it represented the worst-case scenario in terms of the building's proximity to the highest VOC concentrations detected in soil gas at the Site. Based on the indoor air sampling results, it was concluded that VI was not an immediate concern. Therefore, additional indoor air sampling was not performed as part of the current investigation, and indoor air risk for current receptors was not addressed in the HHRA.

Inhalation of vapors in indoor air is considered a potentially complete pathway for potential future residents and commercial/industrial workers. Future redevelopment of the Site may expose construction workers to VOCs migrating from the subsurface to outdoor air while working in an excavation trench. No well-established models are available for estimating the migration of volatiles into an excavation trench. Exposure to volatiles is expected to be *de minimus* due to mixing with outdoor air. Thus, this potentially complete, yet insignificant, exposure pathway was not quantitatively evaluated in the HHRA.

Soil vapor data collected in November and December 2020 from 5.5 feet bgs at 42 vapor monitoring wells (VW16A through VW57A) and March 2021 from 5.5 feet bgs at six vapor monitoring wells (VW24A, VW30A, VW42A, VW45A, VW48A, VW49A) and from 4.0 or 5.0 feet bgs at three SVE system vapor monitoring wells (SVM-1 through SVM-3) were used to evaluate soil vapor risk for potential future residents and commercial/industrial workers (Appendix E, Table 1). When more than one result was available for a particular sample location, the highest detected analyte concentration was used in the risk evaluation for that location. Chemicals of potential concern (COPCs) are the contaminants suspected of being site-related and are the analytes carried through the HHRA's quantitative risk calculations. A chemical was identified as a COPC if its maximum detected concentration exceeded its SVSL (Appendix E, Tables 2a and 2b). Additionally, chemicals detected at concentrations below their respective SVSLs were conservatively carried through the HHRA's quantitative risk calculations (Appendix E, Tables 2a and 2b).

The risk characterization is the presentation of the quantitative risk results with supporting definitions, context, and site applicability. Per USEPA (1991), an excess lifetime cancer risk (ELCR) of $1x10^{-6}$ or less is considered *de minimis* risk. A noncancer hazard index (HI) of less than 1 is also acceptable because the concentrations are cumulatively below harmful levels. USEPA (1991) uses the ELCR range of 10^{-4} to 10^{-6} as a "target risk management range." Risks in this range may be acceptable for risk management decisions. Consistent with the screening-level evaluation described in Section 4.2.2, two AFs (0.03 and 0.001) were utilized in the HHRA for the VI pathway.

5.1 Cumulative Risk and Hazard Evaluation

Table 5-1 provides a summary of the cumulative VI pathway risk and hazard results. The risk characterization for residential, commercial/industrial, and construction worker receptors using SVSLs derived from AFs of 0.03 and 0.001 is summarized below.

- Using an AF of 0.03, the future resident ELCR from exposure to soil vapor is $2x10^{-2}$, which is greater than the risk management range. The primary cancer risk driver is PCE ($2.1x10^{-2}$), with decreasing contributions from TCE ($9.4x10^{-4}$), chloroform ($3.4x10^{-4}$), 1,2-DBE ($3.3x10^{-5}$), naphthalene ($2.5x10^{-5}$), 1,2-DCP ($2.4x10^{-5}$), benzene ($1x10^{-5}$), BDCM ($9.5x10^{-6}$), and ethylbenzene ($1.8x10^{-6}$). The noncancer HI for soil vapor exposure is 578, which is greater than the safe dose threshold of 1. The primary hazard driver is PCE (229), with decreasing contributions from TCE (215), *cis*-1,2-DCE (127), 1,2-DCP (4.3), and toluene (0.92).
- Using an AF of 0.001, the future resident ELCR from exposure to soil vapor is $7x10^{-4}$, which is greater than the risk management range. The primary cancer risk driver is PCE ($7.0x10^{-4}$), with decreasing contributions from TCE ($3.1x10^{-5}$), chloroform ($1.1x10^{-5}$), and 1,2-DBE ($1x10^{-6}$). The noncancer HI for soil vapor exposure is 19, which is greater than the safe dose threshold of 1. The primary hazard driver is PCE (7.6), with decreasing contributions from TCE (7.2), and *cis*-1,2-DCE (4.2).
- Using an AF of 0.03, the future commercial/industrial worker ELCR from exposure to soil vapor is $5x10^{-3}$, which is greater than the risk management range. The primary cancer risk driver is PCE ($4.8x10^{-3}$), with decreasing contributions from TCE ($1.5x10^{-4}$), chloroform ($7.8x10^{-5}$), 1,2-DBE ($7.6x10^{-6}$), naphthalene ($5.8x10^{-6}$), 1,2-DCP ($5.5x10^{-6}$), benzene ($2.8x10^{-6}$), and BDCM ($2.2x10^{-6}$). The noncancer HI for soil vapor exposure is 136, which is greater than the safe dose threshold of 1. The primary hazard driver is PCE (53.3), with decreasing contributions from TCE (51.7), *cis*-1,2-DCE (29.2), and 1,2-DCP (1.0).
- Using an AF of 0.001, the future commercial/industrial worker ELCR from exposure to soil vapor is $2x10^{-4}$, which is within the risk management range. The primary cancer risk driver is chloroform, with decreasing contributions from PCE and 1,2-DBE. The noncancer HI for soil vapor exposure is 5, which is greater than the safe dose threshold of 1. The primary hazard driver is PCE (1.8), with decreasing contributions from TCE (1.7), and *cis*-1,2-DCE (1.0).

COCs are contaminants that pose unacceptable risk. Based on the HHRA, the soil gas COCs are listed below by receptor and the applicable AF.

- Future resident soil vapor exposure scenario (0.03 AF) – benzene, BDCM, chloroform, 1,2-DBE, *cis*-1,2-DCE, ethylbenzene, naphthalene, PCE, toluene, and TCE.
- Future resident soil vapor exposure scenario (0.001 AF) – chloroform, 1,2-DBE, *cis*-1,2-DCE, PCE, and TCE.
- The future commercial/industrial worker soil vapor exposure scenario (0.03 AF) – benzene, BDCM, chloroform, 1,2-DBE, *cis*-1,2-DCE, 1,2-DCP, naphthalene, PCE, and TCE.
- The future commercial/industrial worker soil vapor exposure scenario (0.001 AF) – chloroform, PCE, and TCE.

5.2 Point Risk and Hazard Evaluation

In order to limit uncertainty associated with such a large site, point risk estimates were developed for the future resident and commercial/industrial worker scenarios using the 0.03 and 0.001 AFs to evaluate if portions of the Site exhibit unacceptable risks and/or hazards.

To calculate the cumulative ELCR and HI for each receptor, the individual chemical risks and hazards were summed at each sample location. Non-detect results were not included in point risk estimates. Details of the point risk estimates are presented in Appendix E, Tables E-5A through E-5D. The magnitude of estimated risk at each sampling location is presented on Figure 5-1 (Resident Scenario, 0.03 AF), Figure 5-2 (Resident Scenario, 0.001 AF), Figure 5-3 (Commercial/Industrial Worker Scenario, 0.03 AF), and Figure 5-4 (Commercial/Industrial Worker Scenario, 0.001 AF).

For the future resident scenario based on a 0.03 AF, potentially unacceptable risks and/or hazards were calculated for the majority of sample locations distributed across the Site. The majority of unacceptable risks and hazards were driven by the presence of benzene, chloroform, 1,2-DBE, PCE, TCE, toluene, and naphthalene. Acceptable risks were limited to locations VW37, VW42, VW43, VW46, VW47, and SVM-2. In comparison, based on a 0.001 AF, potentially unacceptable risks and/or hazards were limited to locations VW19 (cancer risk), VW24 (cancer risk), VW30 (cancer risk), VW48 (cancer risk), and SVM-1 (cancer risk and noncancer hazard),which were driven by the presence of PCE, TCE, and chloroform.

For the future commercial/industrial worker scenario based on a 0.03 AF, potentially unacceptable risks and/or hazards were calculated for locations in the northern portion of the North Corporation Yard (VW16 through VW19, VW21 through VW27, VW29, VW30, VW44, VW45, VW52, and VW54. In the southern portion of the North Corporation Yard, potentially unacceptable risks and/or hazards were limited to VW34 through VW36, VW48, and SVM-1. Potentially unacceptable risks and hazards were driven by the presence of benzene, chloroform, 1,2-DBE, PCE, TCE, and naphthalene. In comparison, potentially unacceptable risks and/or hazards based on a 0.001 AF were calculated for two only locations (SVM-1 and VW30). Potentially unacceptable risks and hazards were driven by the presence of chloroform, PCE, and TCE.

6.0 Summary and Conclusions

6.1 Chemicals of Concern

6.1.1 Soil Gas

PCE in soil gas was previously identified as a COC at the Site because of the potential for unacceptable human health risk if soil gas migrated into indoor air (i.e., the VI pathway). This conclusion was based on a 0.001 soil vapor AF. After evaluating the results of the current investigation, 1,2-DBE, *cis*-1,2-DCE, chloroform, and TCE were identified as additional COCs in soil gas based on a 0.001 AF. When a more conservative 0.03 AF was applied, benzene, BDCM, ethylbenzene, naphthalene, and toluene were also identified as COCs in soil gas.

6.1.2 Soil

Arsenic in soil was previously identified as a COC at the Site because it is present in soil at concentrations exceeding its 0.11 and 0.36 mg/kg residential and commercial/industrial SLs, respectively, and the 17.53 mg/kg Site-specific background concentration. Although the primary focus of the current soil investigation was to further refine the lateral and vertical extent of arsenic-impacted soil to support remedy selection and design, evidence of suspected soil contamination was identified during advancement of vapor well boreholes VW15, VW31, VW35, and VW38. The laboratory analytical results for the soil samples collected from these boreholes, indicated arsenic-impacted soil was present in the vicinity of boreholes VW31 and VW35. Furthermore, lead and $TPH_{ho/mo}$ were identified as additional COCs in soil in the vicinity of borehole VW35. No significant contamination was identified in the soil samples collected from boreholes VW15 and VW38.

6.2 Extent of Contamination

6.2.1 Soil Gas

The lateral extent of VOC concentrations in soil gas exceeding their respective residential and commercial/industrial SVSLs based on shallow soil gas data (i.e., from 4 to 5.5 feet bgs) is shown on Figures 4-1, 4-2, and 4-4 through 4-8. The lateral extent of VOC concentrations in soil gas exceeding the SVSLs derived using a 0.03 AF extends beneath approximately 9.2 acres in the western two-thirds of the North Corporation Yard and may extend beyond the property boundary to the north, west and south. In comparison, the lateral extent of VOC concentrations in soil gas exceeding the SVSLs derived using a 0.001 AF is limited to two localized areas: in the vicinity of vapor wells SVM-1 and VW14 at the north side of the Tool Issue Building and an area encompassing vapor wells VW19, VW24, and VW30, including the area beneath the western portion of the Garage Building. These two areas comprise approximately 0.65 acre.

The maximum concentration of five soil gas COCs (chloroform, naphthalene, PCE, TCE, and *cis*-1,2-DCE) were detected in shallow soil gas samples collected from 4 to 5.5 feet bgs. The maximum concentration of five soil gas COCs (benzene, ethylbenzene, toluene, BDCM, and 1,2-DBE) were detected in samples collected from 14.5 feet bgs. The vertical extent of these COCs beyond 14.5 feet bgs is not known, except at vapor wells VW14 and VW15, which were installed to depths of 25.5 and 23.5 feet bgs, respectively. Six soil gas COCs (chloroform, ethylbenzene, toluene, PCE, TCE, and cis-1,2-DCE) were detected in the soil gas sample collected from vapor well VW14. Only chloroform, PCE, and TCE were detected at concentrations exceeding their respective SVSLs based on a 0.03 AF, and only PCE was detected at concentration exceeding its SVSL based on a 0.001 AF at this location. Only two soil gas COCs (benzene and toluene) were detected in the soil gas sample collected from vapor well VW15. Only benzene was detected at a concentration exceeding its SVSL based on a 0.03 AF, but it did not exceed its SVSL based on a 0.001 AF at this location.

6.2.2 Soil

Based on previous investigations, arsenic concentrations in soil exceeding the 17.53 mg/kg background concentration at a depth of 3 feet bgs or less was identified in four areas of the Site with an estimated combined area of approximately 2.6 acres (Figure 2-4). However, the full extent of these areas was not fully defined leading to an overestimation of the amount of arsenic-impacted soil in some areas and an underestimation in other areas. Based on the current and previous investigations, arsenic concentrations in soil exceeding the 17.53 mg/kg background concentration at a depth of 3 feet bgs or less was identified in five areas of the Site with an estimated combined area of approximately 1.7 acres (Figure 4-10).

The two largest areas of arsenic-impacted soil at a depth of 3 feet bgs or less are located south of the Warehouse Building (approximately 0.9 acre) and in the vicinity of the Salvage Building (approximately 0.6 acre). Three smaller areas of arsenic-impacted soil at a depth of 3 feet bgs or less are located in the vicinity of the Tool Issue Building, west of the Hazardous Material Building, and south of the Garage Building (approximately 0.2 acre combined).

Arsenic concentrations exceeding background in soil at a depth greater than 3 feet bgs were identified in three localized areas: south of the east end of the Warehouse Building (approximately 0.3 acre), south of the Tool Issue Building (approximately 0.03 acre) and west of the Salvage Building (approximately 0.02 acre). In the area south of the east end of the Warehouse Building, the vertical extent of arsenic concentrations exceeding background extends to a depth of at least 10 feet bgs in select sampling locations. In the area south of the Tool Issue Building, arsenic concentrations exceeding background extend to a depth between 6 and 11 feet bgs. In the area west of the Salvage Building, the vertical extent of arsenic concentrations exceeding background extend to a depth between 5 and 7.5 feet bgs.

Lead and $TPH_{ho/mo}$ concentrations exceeding their respective 80 and 2,400 mg/kg residential SLs were identified in a localized area within the area of arsenic-impacted soil west of the Salvage Building. The vertical extent of lead and $TPH_{ho/mo}$ concentrations exceeding their residential SLs extend to a depth between 2 and 5 feet bgs.

6.3 Recommendations

Based on the understanding of site conditions following the 2020-2021 site characterization effort and regulatory SLs in effect at the time, recommended next steps include:

- Conducting additional soil gas sampling at existing vapor wells in the summer for comparison to the winter sampling results from the current investigation to evaluate seasonal and temporal variations and support future risk management decisions.
- Conducting sub-slab vapor sampling beneath existing buildings overlying areas where soil gas COCs were detected at concentrations exceeding their SVSLs to evaluate soil vapor conditions beneath the buildings to further develop lines of evidence regarding soil vapor attenuation at the Site.
- Conduct ambient air sampling of onsite subsurface pipe networks (e.g., sewers, drains, etc.) in areas where detected VOC concentrations in soil gas exceed their SVSLs to assess preferential pathway VI potential.
- Conducting additional soil gas characterization to better define the vertical extent of contamination, if necessary, to support remedial design.
- Implementing a remedial action to address VOC concentrations in soil gas that could pose an unacceptable risk to human health should the vapors migrate into indoor.
- Implementing a remedial action to address arsenic concentrations in soil above background levels, and lead and $TPH_{ho/mo}$ concentrations in soil above their respective SLs.

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Tables

TABLE 2-1. PREVIOUS INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)

Analyte	Maximum Concentration (µg/m^3)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet bgs)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Acetone	350	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	1,100,000	0/7	0/6	4,700,000	0/7	0/6
Benzene	28	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	3.2	2/7	2/6	14	2/7	2/6
Carbon Disulfide	55	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	24,000	0/7	0/6	100,000	0/7	0/6
Chloroform	48	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	4.0	4/7	4/6	18	2/7	2/6
Cumene	71	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	14,000	0/7	0/6	60,000	0/7	0/6
Cyclohexane	7.2	KA-8-S-SV	KA-8	6/18/2015	4.5	2/7	2/6	210,000	0/7	0/6	870,000	0/7	0/6
Dichlorodifluoromethane (Freon 12)	37	KA-8-S-SV	KA-8	6/18/2015	4.5	2/7	2/6	3,300	0/7	0/6	15,000	0/7	0/6
Ethylbenzene	860	KA-2-S-SV	KA-2	6/18/2015	4.5	3/7	3/6	37	2/7	2/6	160	1/7	1/6
4-Ethyltoluene	1,800	KA-2-S-SV	KA-2	6/18/2015	4.5	3/7	3/6	NE	NA	NA	NE	NA	NA
Heptane	18	KA-2-S-SV	KA-2	6/18/2015	4.5	1/7	1/6	14,000	0/7	0/6	60,000	0/7	0/6
Hexane	3.5	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	24,000	0/7	0/6	100,000	0/7	0/6
Propylbenzene	340	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	33,000	0/7	0/6	150,000	0/7	0/6
Tetrachloroethene (PCE)	15,000	KA-17-H-SV	KA-17	6/19/2015	4.5	31/34	18/19	15	30/34	17/19	67	28/34	15/19
Toluene	1,200	KA-2-S-SV	KA-2	6/18/2015	4.5	5/7	5/6	10,000	0/7	0/6	43,000	0/7	0/6
1,1,1-Trichloroethane	41	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	33,000	0/7	0/6	150,000	0/7	0/6
Trichloroethene (TCE)	210	KA-17-H-SV	KA-17	6/19/2015	4.5	2/7	1/6	16	1/7	1/6	100	1/7	1/6
Trichlorofluoromethane (Freon 11)	5.2	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	43,000	0/7	0/6	180,000	0/7	0/6
1,2,4-Trimethylbenzene	1,900	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	2,100	0/7	0/6	8,700	0/7	0/6
1,3,5-Trimethylbenzene	920	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	2,100	0/7	0/6	8,700	0/7	0/6
2,2,4-Trimethylpentane	76	KA-2-S-SV	KA-2	6/18/2015	4.5	1/7	1/6	NE	NA	NA	NE	NA	NA
m,p-Xylene	2,900	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	3,300	0/7	0/6	15,000	0/7	0/6
o-Xylene	1,600	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	3,300	0/7	0/6	15,000	0/7	0/6
Total Petroleum Hydrocarbons - Gasoline	27,000	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	20,000[(b)]	1/7	1/6	83,000[(b)]	0/7	0/6

Notes:

Bold indicates analyte exceeds one or more SVSLs.
µg/m^3 = micrograms per cubic meter
bgs = below ground surface
CalEPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
ESL = Environmental Screening Level
ID = identification
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
NA = not applicable
NE = not established
No. = number
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB = California State Water Resources Control Board

Goal Compliance:

[(a)] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC, 2020) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).
[(b)] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air ESLs (SWRCB, 2019) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).

TABLE 2-2. PREVIOUS INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

Analyte	Maximum Concentration (µg/m^3)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet bgs)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Acetone	350	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	32,000,000	0/7	0/6	140,000,000	0/7	0/6
Benzene	28	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	97	0/7	0/6	420	0/7	0/6
Carbon Disulfide	55	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	730,000	0/7	0/6	3,100,000	0/7	0/6
Chloroform	48	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	120	0/7	0/6	530	0/7	0/6
Cumene	71	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	420,000	0/7	0/6	1,800,000	0/7	0/6
Cyclohexane	7.2	KA-8-S-SV	KA-8	6/18/2015	4.5	2/7	2/6	6,300,000	0/7	0/6	26,000,000	0/7	0/6
Dichlorodifluoromethane (Freon 12)	37	KA-8-S-SV	KA-8	6/18/2015	4.5	2/7	2/6	100,000	0/7	0/6	440,000	0/7	0/6
Ethylbenzene	860	KA-2-S-SV	KA-2	6/18/2015	4.5	3/7	3/6	1,100	0/7	0/6	4,900	0/7	0/6
4-Ethyltoluene	1,800	KA-2-S-SV	KA-2	6/18/2015	4.5	3/7	3/6	NE	NA	NA	NE	NA	NA
Heptane	18	KA-2-S-SV	KA-2	6/18/2015	4.5	1/7	1/6	420,000	0/7	0/6	1,800,000	0/7	0/6
Hexane	3.5	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	730,000	0/7	0/6	3,100,000	0/7	0/6
Propylbenzene	340	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	1,000,000	0/7	0/6	4,400,000	0/7	0/6
Tetrachloroethene (PCE)	15,000	KA-17-H-SV	KA-17	6/19/2015	4.5	31/34	18/19	460	13/34	9/19	2,000	6/34	5/19
Toluene	1,200	KA-2-S-SV	KA-2	6/18/2015	4.5	5/7	5/6	310,000	0/7	0/6	1,300,000	0/7	0/6
1,1,1-Trichloroethane	41	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	1,000,000	0/7	0/6	4,400,000	0/7	0/6
Trichloroethene (TCE)	210	KA-17-H-SV	KA-17	6/19/2015	4.5	2/7	1/6	480	0/7	0/6	3,000	0/7	0/6
Trichlorofluoromethane (Freon 11)	5.2	KA-19-S-SV	KA-19	6/19/2015	4.5	1/7	1/6	1,300,000	0/7	0/6	5,300,000	0/7	0/6
1,2,4-Trimethylbenzene	1,900	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	63,000	0/7	0/6	260,000	0/7	0/6
1,3,5-Trimethylbenzene	920	KA-2-S-SV	KA-2	6/18/2015	4.5	2/7	2/6	63,000	0/7	0/6	260,000	0/7	0/6
2,2,4-Trimethylpentane	76	KA-2-S-SV	KA-2	6/18/2015	4.5	1/7	1/6	NE	NA	NA	NE	NA	NA
m,p-Xylene	2,900	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	100,000	0/7	0/6	440,000	0/7	0/6
o-Xylene	1,600	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	100,000	0/7	0/6	440,000	0/7	0/6
Total Petroleum Hydrocarbons - Gasoline	27,000	KA-2-S-SV	KA-2	6/18/2015	4.5	4/7	4/6	600,000[(b)]	0/7	0/6	2,500,000[(b)]	0/7	0/6

Notes:

Bold indicates analyte exceeds one or more SVSLs.
µg/m^3 = micrograms per cubic meter
bgs = below ground surface
CalEPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
ESL = Environmental Screening Level
ID = identification
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
NA = not applicable
NE = not established
No. = number
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB = California State Water Resources Control Board

Goal Compliance:

[(a)] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC, 2020) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).
[(b)] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air ESLs (SWRCB, 2019) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).

TABLE 2-3. PREVIOUS INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL COMPARED TO REGULATORY SCREENING LEVELS AND BACKGROUND

Analyte	Maximum Concentration	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet bgs)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	California DTSC HERO HHRA Note 3 Residential SL[a]	No. Samples Exceeding SL/ Total No. Samples	No. Locations Exceeding SL/ Total No. Locations Sampled	California DTSC HERO HHRA Note 3 Commercial/ Industrial SL[a]	No. Samples Exceeding SL/ Total No. Samples	No. Locations Exceeding SL/ Total No. Locations Sampled	Site-Specific Background Concentration[b]	No. Samples Exceeding Background/ Total No. Samples	No. Locations Exceeding Background/ Total No. Locations Sampled
Volatile Organics (mg/kg)																
Methylene chloride	0.15	KA-38-S-11 D	KA-38	6/3/2015	11	6/102	4/48	2.2	0/102	0/48	26	0/102	0/48	NE	NA	NA
Semivolatile Organics (mg/kg)																
Bis(2-ethylhexyl)phthalate	0.15	PS-3-16	PS-3	7/9/2015	16	6/30	4/6	39	0/30	0/6	110	0/30	0/6	NE	NA	NA
Di-n-butyl phthalate	0.041	BK-1-11	BK-1	7/9/2015	11	1/30	1/6	6,300	0/30	0/6	53,000	0/30	0/6	NE	NA	NA
Metals (mg/kg)																
Antimony	1.8	PS-2-6	PS-2	7/10/2015	6	1/132	1/54	31	0/132	0/54	470	0/132	0/54	NE	NA	NA
Arsenic	330	SO-B17-02	B17	12/5/2018	5.0-5.5	169/169	71/71	0.11	169/169	71/71	0.36	169/169	71/71	17.53	16/169	12/71
Barium	210	KA-27-D-46	KA-27	5/22/2015	46	132/132	54/54	15,000	0/132	0/54	220,000	0/132	0/54	NE	NA	NA
Beryllium	0.58	KA-36-S-6 D	KA-36	6/3/2015	6	132/132	54/54	1,600	0/132	0/54	6,900	0/132	0/54	NE	NA	NA
Cadmium	0.11	KA-33-H-1	KA-33	5/19/2015	1	9/132	9/54	910	0/132	0/54	4,000	0/132	0/54	NE	NA	NA
Chromium	63	KA-19-S-16	KA-19	6/2/2015	16	132/132	54/54	120,000[c]	0/132	0/54	1,800,000[c]	0/132	0/54	NE	NA	NA
Cobalt	16	KA-18-S-11	KA-18	6/2/2015	11	132/132	54/54	23	0/132	0/54	350	0/132	0/54	NE	NA	NA
		KA-19-S-16	KA-19	6/2/2015	16											
		KA-19-S-16 D	KA-19	6/2/2015	16											
		PS-1-11	PS-1	7/10/2015	11											
		PS-2-1	PS-2	7/8/2015	1											
Copper	46	KA-18-S-6	KA-18	6/2/2015	6	132/132	54/54	3,100	0/132	0/54	47,000	0/132	0/54	NE	NA	NA
Lead	40	KA-33-H-1	KA-33	5/19/2015	1	132/132	54/54	80	0/132	0/54	320	0/132	0/54	NE	NA	NA
Mercury	0.10	KA-47-H-1.5	KA-47	5/18/2015	1.5	12/132	10/54	1.0	0/132	0/54	4.4	0/132	0/54	NE	NA	NA
Molybdenum	1.1	PS-2-6	PS-2	7/10/2015	6	38/132	14/48	390	0/132	0/54	5,800	0/132	0/54	NE	NA	NA
Nickel	100	KA-9-D-51	KA-9	5/22/2015	51	132/132	54/54	15,000	0/132	0/54	64,000	0/132	0/54	NE	NA	NA
Selenium	5.4	PS-2-1	PS-2	7/8/2015	1	26/132	16/54	390	0/132	0/54	5,800	0/132	0/54	NE	NA	NA
Silver	0.24	PS-1-100	PS-1	7/10/2015	6	11/132	8/54	390	0/132	0/54	5,800	0/132	0/54	NE	NA	NA
Thallium	7.3	PS-2-1	PS-2	7/8/2015	1	55/132	21/54	0.78	49/132	19/54	12	0/132	0/54	NE	NA	NA
Vanadium	79	KA-26-D-51	KA-26	5/26/2015	51	132/132	54/54	390	0/132	0/54	5,800	0/132	0/54	NE	NA	NA
Zinc	84	KA-33-H-1	KA-33	5/19/2015	1	132/132	54/54	23,000	0/132	0/54	350,000	0/132	0/54	NE	NA	NA

Notes:

Bold indicates analyte exceeds one or more regulatory screening criteria.

bgs = below ground surface

DTSC = California Department of Toxic Substances Control

HERO = Human and Ecological Risk Office

HHRA = human health risk assessment

ID = identification

mg/kg = milligrams per kilogram

NA = not applicable

NE = not established

No. = number

SL = screening level

Goal Compliance:

[a] Residential and commercial/industrial SLs from HERO HHRA Note 3, DTSC-modified SLs (DTSC, 2020).

[b] Site-specific background concentration (AECOM, 2019).

[c] Value corresponds to chromium III.

TABLE 2-4. PREVIOUS INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN GROUNDWATER COMPARED TO PRIMARY MAXIMUM CONTAMINANT LEVELS

Analyte	Maximum Concentration	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet bgs)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	California Primary MCL[a]	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Petroleum Hydrocarbons (mg/L)										
TPH as Diesel-Range Organics	0.33	42-D	KA-42	6/2/2015	34-40	2/7	2/7	NE	NA	NA
TPH as Gasoline-Range Organics	0.011	7-D	KA-7	6/1/2015	40-45	5/7	5/7	NE	NA	NA
TPH as Oil-Range Organics	0.47	42-D	KA-42	6/2/2015	34-40	1/7	1/7	NE	NA	NA
Volatile Organics (µg/L)										
Bromodichloromethane	0.30	41-D	KA-41	6/2/2015	34-40	2/9	2/9	80[b]	0/9	0/9
Chloroform	8.0	26-D	KA-26	6/2/2015	47-49	9/9	9/9	80[b]	0/9	0/9
Tetrachloroethene (PCE)	2.1	9-D	KA-9	6/2/2015	47.5-49.5	7/9	7/9	5.0	0/9	0/9
Metals - Dissolved (mg/L)										
Barium	0.27	41-D	KA-41	12/9/2015	48-50	9/9	9/9	1	0/9	0/9
Chromium, total	0.012	15-D	KA-15	12/9/2015	40-42	7/9	7/9	0.05	0/9	0/9
Cobalt	0.0078	26-D	KA-26	12/10/2015	38-42	6/9	6/9	NE	NA	NA
Copper	0.0073	15-D	KA-15	12/9/2015	40-42	6/9	6/9	1.3[c]	NA	NA
Molybdenum	0.012	26-D	KA-26	12/10/2015	38-42	9/9	9/9	NE	NA	NA
		41-D	KA-41	12/9/2015	48-50					
Nickel	0.030	15-D	KA-15	12/9/2015	40-42	9/9	9/9	0.10	0/9	0/9
Silver	0.0013	9-D	KA-9	12/11/2015	50-52	3/9	3/9	NE	NA	NA
Vanadium	0.019	15-D	KA-15	12/9/2015	40-42	9/9	9/9	NE	NA	NA
Zinc	0.042	42-D	KA-42	12/9/2015	43*-45	4/9	4/9	NE	NA	NA

Notes:
*starting depth is approximate
µg/L = micrograms per liter
bgs = below ground surface
ID = identification
MCL = maximum contaminant level
mg/L = milligrams per liter
NA = not applicable
NE = not established
No. = number
SWRCB = California State Water Resources Control Board
TPH = total petroleum hydrocarbons

Goal Compliance:
[a] California primary MCLs from *MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants* (SWRCB, 2020).
[b] Primary MCL for sum of total trihalomethanes (bromoform, bromodichloromethane, chlorodibromomethane, and chloroform).
[c] Copper Action Level from *MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants* (SWRCB, 2020).

TABLE 2-5. HISTORICAL UNDERGROUND STORAGE TANKS
(Page 1 of 2)

Facility	Tank Number	Year Installed	Contents	Capacity (gallons)	Year Removed	Comments
Garage Building (Building F)	77	1974	Hydraulic Oil	3,500	NA	Alignment machine pit; single-wall concrete
	78	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	79	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	80	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	81	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	82	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	83	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	84	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	85	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	86	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	87	1963	Hydraulic Oil	1,000	NA	Vehicle hoist pit; single-wall concrete
	88	1963	Hydraulic Oil	1,000	NA	Sump; single-wall concrete
	89	1981	Used Motor Oil	500	1986	Single-wall steel
	89D	1986	Used Motor Oil	550	2004	SWMU #8; double-wall fiberglass
	90	1963	Stoddard Solvent	500	1986	Single-wall steel
	96	1963	Used Motor Oil	500	1986	Single-wall steel
	96D	1986	Used Motor Oil	550	2004	SWMU #9; double-wall fiberglass
	97	1963	Transmission Fluid	500	1986	Single-wall steel
	98	1963	Motor Oil	500	1986	Single-wall steel; small amount of contaminated soil found at time of removal.
	99	1960	Hydraulic Oil	500	1986	Single-wall steel
Former Vehicle Fueling Station	91	1963	Regular Gasoline	10,000	1986	Single-wall steel
	91D	1986	Unleaded Gasoline	10,000	1990	Double-wall fiberglass
	91D	1990	Unleaded Gasoline	10,000	2004	Double-wall fiberglass
	91D	Unknown	Unleaded Gasoline	10,000	2014	Double-wall fiberglass
	92	1963	Unleaded Gasoline	5,000	1986	Single-wall steel
	93	1974	Regular Gasoline	10,000	1986 or 1987	Single-wall steel
	93D	1986 or 1987	Unleaded Gasoline	10,000	1991	

TABLE 2-5. HISTORICAL UNDERGROUND STORAGE TANKS
(Page 2 of 2)

Facility	Tank Number	Year Installed	Contents	Capacity (gallons)	Year Removed	Comments
Former Vehicle Fueling Station (continued)	93D	1991	Unleaded Gasoline	10,000	2004	Double-wall steel/fiberglass
	93D	Unknown	Unleaded Gasoline	10,000	2014	Double-wall fiberglass
	94	1963	Diesel Fuel	5,000	1986	Single-wall steel
	94D	1986	Diesel Fuel	10,000	1990 or 1991	Double-wall fiberglass
	94D	1990 or 1991	Diesel Fuel	10,000	2004	Double-wall fiberglass
	94D	Unknown	Diesel Fuel	10,000	2014	Single-wall steel wrapped in fiberglass
	95	1982	Unleaded Gasoline	10,000	2004	Single-wall wrapped steel
Shops Building (Building G)	1	1972	Transformer Oil	5,000	After May 1990	In 1986, SMUD submitted request to SCEMD that tanks be removed from State tank registration list because contents were non-hazardous.
	2	1972	Transformer Oil	5,000	After May 1990	
	3	Unknown	Used Transformer Oil	500	1986	
Tool Issue Building (Building H)	1	1973	Regular Gasoline	350	1986	Small hole was identified in tank when removed. Strong petroleum odor was noted originating from northwest corner of excavation. Limited amount of petroleum-contaminated soil found (URS, 1986).
	1D	1986	Unleaded Gasoline	550	2004	SWMU #15; double-wall fiberglass
	2	1973	Stoddard Solvent	350	1986	
	3	1973	Kerosene	350	1986	
Unknown Location	100	1975	Motor Oil	200	1986	Single-wall steel

Notes:

NA = not applicable
SCEMD = Sacramento County Environmental Management Department
SWMU = solid waste management unit
UST = underground storage tank

TABLE 3-1. CURRENT INVESTIGATION SOIL GAS SAMPLE SUMMARY
(Page 1 of 4)

Location ID	Sampling Date	Field Sample ID	Sample Type	Depth (feet bgs)	Pavement Thickness (feet)	Depth Below Pavement (feet)	Laboratory Sample ID	Laboratory Analyses		Investigation Phase
								VOCs (TO-15)	VOCs[a] (TO-15)	
VW14	12/30/2020	SG-VW14-01	N	26.33	0.33	26	2100036-18	X		Soil Gas Investigation
VW15	12/30/2020	SG-VW15-01	N	23.83	0.33	23.5	2100036-19	X		Soil Gas Investigation
VW16A	11/30/2020	SG-VW16A-01	N	5.83	0.33	5.5	2035147-01	X		Soil Gas Investigation
VW16B	11/30/2020	SG-VW16B-01	N	14.83	0.33	14.5	2035147-02	X		Soil Gas Investigation
VW17A	12/22/2020	SG-VW17A-01	N	5.75	0.25	5.5	2037849-01	X		Soil Gas Investigation
VW17B	12/22/2020	SG-VW17B-01	N	14.75	0.25	14.5	2037849-02	X		Soil Gas Investigation
VW17B	12/22/2020	SG-VW17B-02	FD	14.75	0.25	14.5	2037849-03	X		Soil Gas Investigation
VW18A	12/22/2020	SG-VW18A-01	N	5.71	0.21	5.5	2037849-04	X		Soil Gas Investigation
VW18B	12/22/2020	SG-VW18B-01	N	14.71	0.21	14.5	2037849-05	X		Soil Gas Investigation
VW19A	12/2/2020	SG-VW19A-01	N	5.83	0.33	5.5	2035335-12	X		Soil Gas Investigation
VW19B	12/2/2020	SG-VW19B-01	N	14.83	0.33	14.5	2035335-13	X		Soil Gas Investigation
VW20A	11/30/2020	SG-VW20A-01	N	5.67	0.17	5.5	2035147-05	X		Soil Gas Investigation
VW20B	11/30/2020	SG-VW20B-01	N	14.67	0.17	14.5	2035147-06	X		Soil Gas Investigation
VW21A	12/22/2020	SG-VW21A-01	N	5.83	0.33	5.5	2037849-12	X		Soil Gas Investigation
VW21A	12/22/2020	SG-VW21A-02	FD	5.83	0.33	5.5	2037849-13	X		Soil Gas Investigation
VW21B	12/22/2020	SG-VW21B-01	N	14.83	0.33	14.5	2037849-14	X		Soil Gas Investigation
VW22A	12/22/2020	SG-VW22A-01	N	5.79	0.29	5.5	2037849-15	X		Soil Gas Investigation
VW22B	12/22/2020	SG-VW22B-01	N	14.79	0.29	14.5	2037849-16	X		Soil Gas Investigation
VW23A	12/29/2020	SG-VW23A-01	N	5.83	0.33	5.5	2100036-05	X		Soil Gas Investigation
VW23B	12/29/2020	SG-VW23B-01	N	14.83	0.33	14.5	2100036-06	X		Soil Gas Investigation
VW24A	12/3/2020	SG-VW24A-01	N	6.04	0.54	5.5	2035587-01	X		Soil Gas Investigation
VW24A	3/3/2021	SG-VW24A-02	N	6.04	0.54	5.5	2107220-04	X		Confirmation Sampling
VW24A	3/3/2021	SG-VW24A-03	FD	6.04	0.54	5.5	2107220-05	X		Confirmation Sampling
VW24B	12/3/2020	SG-VW24B-01	N	15.04	0.54	14.5	2035587-02	X		Soil Gas Investigation
VW25A	12/3/2020	SG-VW-25A-01	N	5.75	0.25	5.5	2035539-05	X		Soil Gas Investigation
VW25B	12/3/2020	SG-VW25B-01	N	14.75	0.25	14.5	2035539-06	X		Soil Gas Investigation
VW26A	11/30/2020	SG-VW26A-01	N	6.25	0.75	5.5	2035147-03	X		Soil Gas Investigation
VW26B	11/30/2020	SG-VW26B-01	N	15.25	0.75	14.5	2035147-04	X		Soil Gas Investigation
VW27A	12/23/2020	SG-VW27A-01	N	5.92	0.42	5.5	2100036-01	X		Soil Gas Investigation
VW27B	12/23/2020	SG-VW27B-01	N	14.92	0.42	14.5	2100036-02	X		Soil Gas Investigation
VW28A	12/29/2020	SG-VW28A-01	N	5.83	0.33	5.5	2100036-03	X		Soil Gas Investigation
VW28B	12/29/2020	SG-VW28B-01	N	14.83	0.33	14.5	2100036-04	X		Soil Gas Investigation
VW29A	12/29/2020	SG-VW29A-01	N	5.83	0.33	5.5	2100036-07	X		Soil Gas Investigation
VW29B	12/29/2020	SG-VW29B-01	N	14.83	0.33	14.5	2100036-08	X		Soil Gas Investigation
VW30A	12/3/2020	SG-VW30A-01	N	5.75	0.25	5.5	2035539-07	X		Soil Gas Investigation
VW30A	3/4/2021	SG-VW30A-02	N	5.75	0.25	5.5	2107220-06	X		Confirmation Sampling

TABLE 3-1. CURRENT INVESTIGATION SOIL GAS SAMPLE SUMMARY
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Location ID	Sampling Date	Field Sample ID	Sample Type	Depth (feet bgs)	Pavement Thickness (feet)	Depth Below Pavement (feet)	Laboratory Sample ID	Laboratory Analyses		Investigation Phase
								VOCs (TO-15)	VOCs[a] (TO-15)	
VW30B	12/3/2020	SG-VW30B-01	N	14.75	0.25	14.5	2035539-08	X		Soil Gas Investigation
VW30B	3/4/2021	SG-VW30B-02	N	14.75	0.25	14.5	2107220-07	X		Confirmation Sampling
VW31A	12/1/2020	SG-VW31A-01	N	5.75	0.25	5.5	2035147-07	X		Soil Gas Investigation
VW31B	12/1/2020	SG-VW31B-01	N	14.75	0.25	14.5	2035147-08	X		Soil Gas Investigation
VW32A	12/4/2020	SG-VW32A-01	N	6.04	0.54	5.5	2035587-03	X		Soil Gas Investigation
VW32A	12/4/2020	SG-VW32A-02	FD	6.04	0.54	5.5	2035587-04	X		Soil Gas Investigation
VW32B	12/4/2020	SG-VW32B-01	N	15.04	0.54	14.5	2035587-05	X		Soil Gas Investigation
VW33A	12/29/2020	SG-VW33A-01	N	5.83	0.33	5.5	2100036-16	X		Soil Gas Investigation
VW33B	12/29/2020	SG-VW33B-01	N	14.83	0.33	14.5	2100036-17	X		Soil Gas Investigation
VW34A	12/2/2020	SG-VW34A-01	N	6.25	0.75	5.5	2035539-01	X		Soil Gas Investigation
VW34B	12/2/2020	SG-VW34B-01	N	15.25	0.75	14.5	2035539-02	X		Soil Gas Investigation
VW35A	12/1/2020	SG-VW35A-01	N	6.17	0.67	5.5	2035335-01	X		Soil Gas Investigation
VW35B	12/1/2020	SG-VW35B-01	N	15.17	0.67	14.5	2035335-02	X		Soil Gas Investigation
VW36A	12/2/2020	SG-VW36A-01	N	5.79	0.29	5.5	2035335-03	X		Soil Gas Investigation
VW36B	12/2/2020	SG-VW36B-01	N	14.79	0.29	14.5	2035335-04	X		Soil Gas Investigation
VW37A	12/2/2020	SG-VW37A-01	N	6.17	0.67	5.5	2035335-07	X		Soil Gas Investigation
VW37B	12/2/2020	SG-VW37B-01	N	15.17	0.67	14.5	2035335-08	X		Soil Gas Investigation
VW37B	12/2/2020	SG-VW37B-02	FD	15.17	0.67	14.5	2035335-09	X		Soil Gas Investigation
VW38A	12/4/2020	SG-VW38A-01	N	5.88	0.38	5.5	2035587-09	X		Soil Gas Investigation
VW38B	12/4/2020	SG-VW38B-01	N	14.88	0.38	14.5	2035587-10	X		Soil Gas Investigation
VW38B	12/4/2020	SG-VW38B-02	FD	14.88	0.38	14.5	2035587-11	X		Soil Gas Investigation
VW39A	12/3/2020	SG-VW39A-01	N	6.08	0.58	5.5	2035539-03	X		Soil Gas Investigation
VW39B	12/3/2020	SG-VW39B-01	N	15.08	0.58	14.5	2035539-04	X		Soil Gas Investigation
VW40A	12/2/2020	SG-VW40A-01	N	5.75	0.25	5.5	2035335-05	X		Soil Gas Investigation
VW40B	12/2/2020	SG-VW40B-01	N	14.75	0.25	14.5	2035335-06	X		Soil Gas Investigation
VW41A	12/4/2020	SG-VW41A-01	N	6.13	0.63	5.5	2035587-06	X		Soil Gas Investigation
VW41A	12/4/2020	SG-VW41A-02	FD	6.13	0.63	5.5	2035587-07	X		Soil Gas Investigation
VW41B	12/4/2020	SG-VW41B-01	N	15.13	0.63	14.5	2035587-08	X		Soil Gas Investigation
VW42A	12/2/2020	SG-VW42A-01	N	6.17	0.67	5.5	2035335-10	X		Soil Gas Investigation
VW42A	3/3/2021	SG-VW42A-02	N	6.17	0.67	5.5	2107220-08	X		Confirmation Sampling
VW42B	12/2/2020	SG-VW42B-01	N	15.17	0.67	14.5	2035335-11	X		Soil Gas Investigation
VW43A	12/22/2020	SG-VW43A-01	N	5.75	0.25	5.5	2037849-10	X		Soil Gas Investigation
VW43B	12/22/2020	SG-VW43B-01	N	14.75	0.25	14.5	2037849-11	X		Soil Gas Investigation
VW44A	12/22/2020	SG-VW44A-01	N	5.83	0.33	5.5	2037849-08	X		Soil Gas Investigation
VW44B	12/22/2020	SG-VW44B-01	N	14.83	0.33	14.5	2037849-09	X		Soil Gas Investigation
VW45A	12/23/2020	SG-VW45A-01	N	6.17	0.67	5.5	2037849-17	X		Soil Gas Investigation

TABLE 3-1. CURRENT INVESTIGATION SOIL GAS SAMPLE SUMMARY
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Location ID	Sampling Date	Field Sample ID	Sample Type	Depth (feet bgs)	Pavement Thickness (feet)	Depth Below Pavement (feet)	Laboratory Sample ID	Laboratory Analyses		Investigation Phase
								VOCs (TO-15)	VOCs[a] (TO-15)	
VW45A	3/3/2021	SG-VW45A-02	N	6.17	0.67	5.5	2107220-01	X		Confirmation Sampling
VW45B	12/23/2020	SG-VW45B-01	N	15.17	0.67	14.5	2037849-18	X		Soil Gas Investigation
VW46A	12/23/2020	SG-VW46A-01	N	6.25	0.75	5.5	2037849-19	X		Soil Gas Investigation
VW46B	12/23/2020	SG-VW46B-01	N	15.25	0.75	14.5	2037849-20	X		Soil Gas Investigation
VW47A	12/23/2020	SG-VW47A-01	N	6.17	0.67	5.5	2037849-21	X		Soil Gas Investigation
VW47B	12/23/2020	SG-VW47B-01	N	15.17	0.67	14.5	2037849-22	X		Soil Gas Investigation
VW48A	12/23/2020	SG-VW48A-01	N	6.25	0.75	5.5	2037849-23	X		Soil Gas Investigation
VW48A	3/3/2021	SG-VW48A-02	N	6.25	0.75	5.5	2107220-02	X		Confirmation Sampling
VW48B	12/23/2020	SG-VW48B-01	N	15.25	0.75	14.5	2037849-24	X		Soil Gas Investigation
VW49A	12/23/2020	SG-VW49A-01	N	6.25	0.75	5.5	2037849-25	X		Soil Gas Investigation
VW49A	3/3/2021	SG-VW49A-02	N	6.25	0.75	5.5	2107220-03	X		Confirmation Sampling
VW49B	12/23/2020	SG-VW49B-01	N	15.25	0.75	14.5	2037849-26	X		Soil Gas Investigation
VW50A	12/23/2020	SG-VW50A-01	N	6.17	0.67	5.5	2037849-27	X		Soil Gas Investigation
VW50A	12/23/2020	SG-VW50A-02	FD	6.17	0.67	5.5	2037849-28	X		Soil Gas Investigation
VW50B	12/23/2020	SG-VW50B-01	N	15.17	0.67	14.5	2037849-29	X		Soil Gas Investigation
VW51A	12/23/2020	SG-VW51A-01	N	5.83	0.33	5.5	2037849-30	X		Soil Gas Investigation
VW51B	12/23/2020	SG-VW51B-01	N	14.83	0.33	14.5	2037849-31	X		Soil Gas Investigation
VW52A	12/22/2020	SG-VW52A-01	N	5.83	0.33	5.5	2037849-06	X		Soil Gas Investigation
VW52B	12/22/2020	SG-VW52B-01	N	14.83	0.33	14.5	2037849-07	X		Soil Gas Investigation
VW53A	12/29/2020	SG-VW53A-01	N	5.75	0.25	5.5	2100036-09	X		Soil Gas Investigation
VW53A	12/29/2020	SG-VW53A-02	FD	5.75	0.25	5.5	2100036-10	X		Soil Gas Investigation
VW53B	12/29/2020	SG-VW53B-01	N	14.75	0.25	14.5	2100036-11	X		Soil Gas Investigation
VW54A	12/29/2020	SG-VW54A-01	N	5.75	0.25	5.5	2100036-12	X		Soil Gas Investigation
VW54B	12/29/2020	SG-VW54B-01	N	14.75	0.25	14.5	2100036-13	X		Soil Gas Investigation
VW55A	12/29/2020	SG-VW55A-01	N	5.92	0.42	5.5	2100036-14	X		Soil Gas Investigation
VW55B	12/29/2020	SG-VW55B-01	N	14.92	0.42	14.5	2100036-15	X		Soil Gas Investigation
VW56A	12/30/2020	SG-VW56A-01	N	6.17	0.67	5.5	2100036-23	X		Soil Gas Investigation
VW56B	12/30/2020	SG-VW56B-01	N	15.17	0.67	14.5	2100036-24	X		Soil Gas Investigation
VW57A	12/30/2020	SG-VW57A-01	N	6.08	0.58	5.5	2100036-20	X		Soil Gas Investigation
VW57B	12/30/2020	SG-VW57B-01	N	15.08	0.58	14.5	2100036-21	X		Soil Gas Investigation
VW57B	12/30/2020	SG-VW57B-02	FD	15.08	0.58	14.5	2100036-22	X		Soil Gas Investigation
VW57B	3/4/2021	SG-VW57B-03	N	15.08	0.58	14.5	2107220-09	X		Confirmation Sampling
SVM-1	11/16/2020	SVM-1-5	N	4.5	0.5	4	2033822-09		X	SVE System Quarterly Monitoring
SVM-1	11/16/2020	SVM-1-14	N	14.5	0.5	14	2033822-10		X	SVE System Quarterly Monitoring
SVM-1	3/3/2021	SVM-1-5	N	4.5	0.5	4	2107219-09	X		SVE System Quarterly Monitoring
SVM-1	3/3/2021	SVM-1-14	N	14.5	0.5	14	2107219-10	X		SVE System Quarterly Monitoring

TABLE 3-1. CURRENT INVESTIGATION SOIL GAS SAMPLE SUMMARY
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Location ID	Sampling Date	Field Sample ID	Sample Type	Depth (feet bgs)	Pavement Thickness (feet)	Depth Below Pavement (feet)	Laboratory Sample ID	Laboratory Analyses		Investigation Phase
								VOCs (TO-15)	VOCs[(a)] (TO-15)	
SVM-2	11/16/2020	SVM-2-5	N	5.42	0.42	5	2033822-11		X	SVE System Quarterly Monitoring
SVM-2	11/16/2020	SVM-2-14	N	14.42	0.42	14	2033822-12		X	SVE System Quarterly Monitoring
SVM-2	3/3/2021	SVM-2-5	N	5.42	0.42	5	2107219-11	X		SVE System Quarterly Monitoring
SVM-2	3/3/2021	SVM-2-14	N	14.42	0.42	14	2107219-12	X		SVE System Quarterly Monitoring
SVM-3	11/16/2020	SVM-3-5	N	4.42	0.42	4	2033822-13		X	SVE System Quarterly Monitoring
SVM-3	11/16/2020	SVM-3-15	N	14.42	0.42	14	2033822-14		X	SVE System Quarterly Monitoring
SVM-3	3/3/2021	SVM-3-5	N	4.42	0.42	4	2107219-13	X		SVE System Quarterly Monitoring
SVM-3	3/3/2021	SVM-3-14	N	14.42	0.42	14	2107219-14	X		SVE System Quarterly Monitoring

Notes:

Samples were collected using 1.4-liter passivated stainless steel canisters and analyzed by BC Laboratories of Bakersfield, California.

[(a)] VOCs analytes include chlorinated ethanes, chlorinated ethenes, and isopropyl alcohol.

bgs = below ground surface

FD = field duplicate sample

ID = identification

N = normal sample

NA = not applicable

VOC = volatile organic compound

TABLE 3-2. CURRENT INVESTIGATION SOIL SAMPLE SUMMARY
(Page 1 of 3)

Location ID	Sampling Date	Field Sample ID	Sample Type	Depth Below Top of Soil[(a)] (feet)	Laboratory Sample ID	Laboratory Analyses									Investigation Phase
						Arsenic (SW6020)	Lead (SW6020)	Metals (SW6020)	Mercury (SW6020A)	Mercury (SW7471A)	TPH (SW8015)	PCBs (SW8082)	VOCs (SW8260B)	SVOCs (SW8270C)	
B08-E	6/29/2020	B08-E-1.5	N	1.5	2018704-11	X									B08 Phase 1 Step-Out
B08-E	6/29/2020	B08-E-3	N	3.0	2018704-12	X									B08 Phase 1 Step-Out
B08-N	6/29/2020	B08-N-1.5	N	1.5	2018704-08	X									B08 Phase 1 Step-Out
B08-N	6/29/2020	B08-N-1.5-FD	FD	1.5	2018704-09	X									B08 Phase 1 Step-Out
B08-N	6/29/2020	B08-N-3	N	3.0	2018704-10	X									B08 Phase 1 Step-Out
B08-S	6/29/2020	B08-S-1.5	N	1.5	2018704-13	X									B08 Phase 1 Step-Out
B08-S	6/29/2020	B08-S-3	N	3.0	2018704-14	X									B08 Phase 1 Step-Out
B08-W	6/29/2020	B08-W-1.5	N	1.5	2018704-15	X									B08 Phase 1 Step-Out
B08-W	6/29/2020	B08-W-3	N	3.0	2018704-16	X									B08 Phase 1 Step-Out
B08-EE	7/20/2020	B08-EE-1.5	N	1.5	2020984-09	X									B08 Phase 2 Step-Out
B08-EE	7/20/2020	B08-EE-3	N	3.0	2020984-10	X									B08 Phase 2 Step-Out
B08-NN	7/20/2020	B08-NN-1.5	N	1.5	2020984-08	X									B08 Phase 2 Step-Out
B08-SS	7/20/2020	B08-SS-1.5	N	1.5	2020984-11	X									B08 Phase 2 Step-Out
B08-3-E	8/7/2020	B08-3-E-1.5	N	1.5	2022938-03	X									B08 Phase 3 Step-Out
B08-3-N	8/7/2020	B08-3-N-1.5	N	1.5	2022938-01	X									B08 Phase 3 Step-Out
B08-3-N	8/7/2020	B08-3-N-1.5-FD	FD	1.5	2022938-02	X									B08 Phase 3 Step-Out
B08-3-S	8/7/2020	B08-3-S-1.5	N	1.5	2022938-04	X									B08 Phase 3 Step-Out
KA-10-N	6/29/2020	KA-10-N-1.5	N	1.5	2018704-04	X									KA-10 Phase 1 Step-Out
KA-10-N	6/29/2020	KA-10-N-3	N	3.0	2018704-05	X									KA-10 Phase 1 Step-Out
KA-10-S	6/29/2020	KA-10-S-1.5	N	1.5	2018704-01	X									KA-10 Phase 1 Step-Out
KA-10-S	6/29/2020	KA-10-S-3	N	3	2018704-02	X									KA-10 Phase 1 Step-Out
KA-10-S	6/29/2020	KA-10-S-3-FD	FD	3	2018704-03	X									KA-10 Phase 1 Step-Out
KA-10-W	6/29/2020	KA-10-W-1.5	N	1.5	2018704-06	X									KA-10 Phase 1 Step-Out
KA-10-W	6/29/2020	KA-10-W-3	N	3.0	2018704-07	X									KA-10 Phase 1 Step-Out
KA-10-SS	7/20/2020	KA-10-SS-1.5	N	1.5	2020984-04	X									KA-10 Phase 2 Step-Out
KA-10-SW	7/20/2020	KA-10-SW-1.5	N	1.5	2020984-03	X									KA-10 Phase 2 Step-Out
KA-10-WW	7/20/2020	KA-10-WW-1.5	N	1.5	2020984-01	X									KA-10 Phase 2 Step-Out
KA-10-WW	7/20/2020	KA-10-WW-1.5-FD	FD	1.5	2020984-02	X									KA-10 Phase 2 Step-Out
KA-10-3-S	8/7/2020	KA-10-3-S	N	1.5	2022938-09	X									KA-10 Phase 3 Step-Out
KA-17-E	6/30/2020	KA-17-E-1.5	N	1.5	2018704-26	X									KA-17 Phase 1 Step-Out
KA-17-E	6/30/2020	KA-17-E-3	N	3.0	2018704-27	X									KA-17 Phase 1 Step-Out
KA-17-N	6/30/2020	KA-17-N-1.5	N	1.5	2018704-28	X									KA-17 Phase 1 Step-Out
KA-17-N	6/30/2020	KA-17-N-3	N	3.0	2018704-29	X									KA-17 Phase 1 Step-Out
KA-17-W	6/30/2020	KA-17-W-1.5	N	1.5	2018704-30	X									KA-17 Phase 1 Step-Out
KA-17-W	6/30/2020	KA-17-W-3	N	3.0	2018704-31	X									KA-17 Phase 1 Step-Out
KA-17-NN	7/20/2020	KA-17-NN-1.5	N	1.5	2020984-05	X									KA-17 Phase 2 Step-Out
KA-17-NW	7/20/2020	KA-17-NW-1.5	N	1.5	2020984-06	X									KA-17 Phase 2 Step-Out
KA-17-WW	7/20/2020	KA-17-WW-1.5	N	1.5	2020984-07	X									KA-17 Phase 2 Step-Out
KA-17-3-N	8/7/2020	KA-17-3-N-1.5	N	1.5	2022938-07	X									KA-17 Phase 3 Step-Out

TABLE 3-2. CURRENT INVESTIGATION SOIL SAMPLE SUMMARY
(Page 2 of 3)

Location ID	Sampling Date	Field Sample ID	Sample Type	Depth Below Top of Soil[a] (feet)	Laboratory Sample ID	Laboratory Analyses									Investigation Phase
						Arsenic (SW6020)	Lead (SW6020)	Metals (SW6020)	Mercury (SW6020A)	Mercury (SW7471A)	TPH (SW8015)	PCBs (SW8082)	VOCs (SW8260B)	SVOCs (SW8270C)	
KA-17-3-NE	8/7/2020	KA-17-3-NE-1.5	N	1.5	2022938-08	X									KA-17 Phase 3 Step-Out
KA-17-3-NW	8/7/2020	KA-17-3-NW-1.5	N	1.5	2022938-06	X									KA-17 Phase 3 Step-Out
KA-17-3-W	8/7/2020	KA-17-3-W-1.5	N	1.5	2022938-05	X									KA-17 Phase 3 Step-Out
KA-17-4-NE	8/28/2020	KA-17-4-NE-1.5	N	1.5	2025110-01	X									KA-17 Phase 4 Step-Out
KA-44-E	6/30/2020	KA-44-E-1.5	N	1.5	2018704-19	X									KA-44 Phase 1 Step-Out
KA-44-E	6/30/2020	KA-44-E-3	N	3.0	2018704-20	X									KA-44 Phase 1 Step-Out
KA-44-N	6/30/2020	KA-44-N-1.5	N	1.5	2018704-17	X									KA-44 Phase 1 Step-Out
KA-44-N	6/30/2020	KA-44-N-3	N	3.0	2018704-18	X									KA-44 Phase 1 Step-Out
KA-44-S	6/30/2020	KA-44-S-1.5	N	1.5	2018704-21	X									KA-44 Phase 1 Step-Out
KA-44-S	6/30/2020	KA-44-S-3	N	3.0	2018704-22	X									KA-44 Phase 1 Step-Out
KA-44-W	6/30/2020	KA-44-W-1.5	N	1.5	2018704-23	X									KA-44 Phase 1 Step-Out
KA-44-W	6/30/2020	KA-44-W-1.5-FD	FD	1.5	2018704-24	X									KA-44 Phase 1 Step-Out
KA-44-W	6/30/2020	KA-44-W-3	N	3.0	2018704-25	X									KA-44 Phase 1 Step-Out
VW15	12/15/2020	SO-VW15-01	N	2	2037036-01			X	X		X	X	X	X	Vapor Well Installation
VW31	11/23/2020	VW-31-2	N	2	2034585-02			X		X	X	X	X	X	Vapor Well Installation
VW31-S	2/23/2021	VW-31-S-2	N	2	2106339-14	X									VW31 Phase 1 Step-Out
VW31-S	2/23/2021	VW-31-S-5	N	5	2106339-11	X									VW31 Phase 1 Step-Out
VW31-S	2/23/2021	VW-31-S-5-FD	FD	5	2106339-12	X									VW31 Phase 1 Step-Out
VW35	11/23/2020	VW-35-2	N	2	2034585-01			X		X	X	X	X	X	Vapor Well Installation
VW35-E	2/22/2021	VW-35-E-2	N	2	2106339-04	X	X				X				VW35 Phase 1 Step-Out
VW35-E	2/22/2021	VW-35-E-5	N	5	2106339-05	X	X				X				VW35 Phase 1 Step-Out
VW35-N	2/22/2021	VW-35-N-2	N	2	2106339-01	X	X				X				VW35 Phase 1 Step-Out
VW35-N	2/22/2021	VW-35-N-5	N	5	2106339-02	X	X				X				VW35 Phase 1 Step-Out
VW35-N	2/22/2021	VW-35-N-7.5	N	7.5	2106339-03	X	X				X				VW35 Phase 1 Step-Out
VW35-NN	2/24/2021	VW-35-NN-2	N	2	2106339-29	X	X				X				VW35 Phase 1 Step-Out
VW35-NN	2/24/2021	VW-35-NN-5	N	5	2106339-30	X	X				X				VW35 Phase 1 Step-Out
VW35-S	2/23/2021	VW-35-S-2	N	2	2106339-08	X	X				X				VW35 Phase 1 Step-Out
VW35-S	2/23/2021	VW-35-S-5	N	5	2106339-09	X	X				X				VW35 Phase 1 Step-Out
VW35-S	2/23/2021	VW-35-S-5-FD	FD	5	2106339-10	X	X				X				VW35 Phase 1 Step-Out
VW35-SS	2/24/2021	VW-35-SS-2	N	2	2106339-26	X	X				X				VW35 Phase 1 Step-Out
VW35-SS	2/24/2021	VW-35-SS-5	N	5	2106339-27	X	X				X				VW35 Phase 1 Step-Out
VW35-SS	2/24/2021	VW-35-SS-5-FD	FD	5	2106339-28	X	X				X				VW35 Phase 1 Step-Out
VW35-W	2/22/2021	VW-35-W-2	N	2	2106339-06	X	X				X				VW35 Phase 1 Step-Out
VW35-W	2/22/2021	VW-35-W-5	N	5	2106339-07	X	X				X				VW35 Phase 1 Step-Out
VW38	11/24/2020	VW38-2	N	2	2034758-01			X		X	X	X	X	X	Vapor Well Installation
VW56	12/21/2020	VW56-1.5	N	1.5	2037454-02	X									Warehouse Phase 1 Step-Out
VW57	12/21/2020	VW57-1.5	N	1.5	2037454-01	X									Warehouse Phase 1 Step-Out
WB01	12/22/2020	WB01-0.5	N	0.5[c]	2037618-01	X									Warehouse Phase 1 Step-Out
WB01	12/22/2020	WB01-0.5-FD	FD	0.5[c]	2037618-03	X									Warehouse Phase 1 Step-Out

TABLE 3-2. CURRENT INVESTIGATION SOIL SAMPLE SUMMARY
(Page 3 of 3)

Location ID	Sampling Date	Field Sample ID	Sample Type	Depth Below Top of Soil[a] (feet)	Laboratory Sample ID	Laboratory Analyses									Investigation Phase
						Arsenic (SW6020)	Lead (SW6020)	Metals (SW6020)	Mercury (SW6020A)	Mercury (SW7471A)	TPH (SW8015)	PCBs (SW8082)	VOCs (SW8260B)	SVOCs (SW8270C)	
WB01	12/22/2020	WB01-Dock	N	1.5[b]	2037618-02	X									Warehouse Phase 1 Step-Out
WB01A	12/22/2020	WB01A-1.5	N	1.5[c]	2037618-15	X									Warehouse Phase 1 Step-Out
WB02	12/22/2020	WB02-Dock	N	1.5[b]	2037618-13	X									Warehouse Phase 1 Step-Out
WB02	12/22/2020	WB02-0.5	N	0.5[c]	2037618-14	X									Warehouse Phase 1 Step-Out
WB03	12/22/2020	WB03-1.5	N	1.5	2037618-11	X									Warehouse Phase 1 Step-Out
WB04	12/22/2020	WB04-1.5	N	1.5	2037618-12	X									Warehouse Phase 1 Step-Out
WB05	12/22/2020	WB05-1.5	N	1.5	2037618-09	X									Warehouse Phase 1 Step-Out
WB05	12/22/2020	WB05-5	N	5	2037618-10	X									Warehouse Phase 1 Step-Out
WB06	12/22/2020	WB06-1.5	N	1.5	2037618-06	X									Warehouse Phase 1 Step-Out
WB06	12/22/2020	WB06-5	N	5	2037618-07	X									Warehouse Phase 1 Step-Out
WB06	12/22/2020	WB06-5FD	FD	5	2037618-08	X									Warehouse Phase 1 Step-Out
WB07	12/22/2020	WB07-1.5-MS/MSD	N	1.5	2037618-04	X									Warehouse Phase 1 Step-Out
WB07	12/22/2020	WB07-5	N	5	2037618-05	X									Warehouse Phase 1 Step-Out
WB08	2/23/2021	WB08-DOCK	N	1.5[b]	2106339-13	X									Warehouse Phase 2 Step-Out
WB08	2/23/2021	WB08-1.5	N	1.5[c]	2106339-15	X									Warehouse Phase 2 Step-Out
WB09	2/23/2021	WB09-DOCK	N	1.5[b]	2106339-16	X									Warehouse Phase 2 Step-Out
WB09	2/23/2021	WB09-1.5	N	1.5[c]	2106339-17	X									Warehouse Phase 2 Step-Out
WB10	2/23/2021	WB10-7.5	N	7.5	2106339-18	X									Warehouse Phase 2 Step-Out
WB10	2/23/2021	WB10-10	N	10	2106339-19	X									Warehouse Phase 2 Step-Out
WB11	2/24/2021	WB11-5	N	5	2106339-20	X									Warehouse Phase 2 Step-Out
WB11	2/24/2021	WB11-5-FD	FD	5	2106339-31	X									Warehouse Phase 2 Step-Out
WB11	2/24/2021	WB11-7.5	N	7.5	2106339-21	X									Warehouse Phase 2 Step-Out
WB11	2/24/2021	WB11-10	N	10	2106339-22	X									Warehouse Phase 2 Step-Out
WB12	2/24/2021	WB12-5	N	5	2106339-23	X									Warehouse Phase 2 Step-Out
WB12	2/24/2021	WB12-7.5	N	7.5	2106339-24	X									Warehouse Phase 2 Step-Out
WB12	2/24/2021	WB12-10	N	10	2106339-25	X									Warehouse Phase 2 Step-Out

Notes:

Soil samples were collected using a hand auger. Laboratory analyses were performed by BC Laboratories, Inc. of Bakersfield, California.

[a] Depth from top of soil. In paved areas, top of soil is at the bottom of pavement unless indicated otherwise.

[b] Depth from bottom of dock/top of underlying fill material

[c] Depth from top of soil referenced to the surrounding grade.

FD = field duplicate sample
ID = identification
N = normal sample
PCB = polychlorinated biphenyl
SO = soil
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
VOC = volatile organic compound

TABLE 4-1. CURRENT INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)

Analyte	Maximum Concentration (µg/m^3)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Acetone	460	SG-VW26A-01	VW26	11/30/2020	5.5	98/110	45/47	1,100,000	0/110	0/47	4,700,000	0/110	0/47
tert-Amyl Methyl Ether (TAME)	7.9	SG-VW34B-01	VW34	12/2/2020	14.5	1/110	1/47	NE	NA	NA	NE	NA	NA
Benzene	2,500	SG-VW57B-02	VW57	12/30/2020	14.5	53/110	36/47	3.2	34/110	27/47	14	12/110	11/47
Benzyl Chloride	6.1	SG-VW32B-01	VW32	12/4/2020	14.5	1/110	1/47	1.9	1/110	1/47	8.3	0/110	0/47
Bromodichloromethane	60	SG-VW30B-01	VW30	12/3/2020	14.5	9/110	5/47	2.5	8/110	4/47	11	4/110	1/47
tert-Butyl Alcohol (TBA)	13	SG-VW34B-01	VW34	12/2/2020	14.5	17/110	11/47	NE	NA	NA	NE	NA	NA
Carbon Disulfide	300	SG-VW34A-01	VW34	12/2/2020	5.5	89/110	45/47	24,000	0/110	0/47	100,000	0/110	0/47
Carbon Tetrachloride	9.4	SG-VW17B-02	VW17	12/22/2020	14.5	5/110	3/47	16	0/110	0/47	67	0/110	0/47
Chloroform	1,400	SG-VW30A-02	VW30	3/4/2021	5.5	67/110	40/47	4.0	52/110	33/47	18	25/110	19/47
Chloromethane	1.5	SVM-3-14	SVM-3	3/3/2021	14	3/110	2/47	3,100	0/110	0/47	13,000	0/110	0/47
Cyclohexane	120,000	SG-VW57B-02	VW-57	12/30/2020	14.5	7/110	5/47	210,000	0/110	0/47	870,000	0/110	0/47
1,2-Dibromoethane	24	SG-VW24B-01	VW24	12/3/2020	14.5	8/110	8/47	0.16	8/110	8/47	0.67	8/110	8/47
Dibromomethane	13	SG-VW30B-02	VW30	3/4/2021	14.5	2/110	2/47	140	0/110	0/47	600	0/110	0/47
1,4-Dichlorobenzene	2.6	SG-VW46B-01 SG-VW56B-01	VW46 VW56	12/23/2020 12/30/2020	14.5	2/110	2/47	8.7	0/110	0/47	37	0/110	0/47
Dichlorodifluoromethane (Freon 12)	57	SG-VW52B-01	VW52	12/22/2020	14.5	84/110	40/47	3,300	0/110	0/47	15,000	0/110	0/47
1,2-Dichloroethane	7.9	SG-VW34B-01	VW34	12/2/2020	14.5	6/115	6/47	3.7	4/110	4/47	16	0/115	0/47
***cis*-1,2-Dichloroethene**	47,000	SVM-1-5	SVM-1	11/16/2020	4	7/115	4/47	280	2/115	1/47	1,200	2/115	1/47
trans-1,2-Dichloroethene	200	SVM-1-5	SVM-1	3/3/2021	4	2/115	1/47	2,800	0/115	0/47	12,000	0/115	0/47
1,2-Dichloropropane	600	SVM-1-5	SVM-1	3/3/2021	4	1/110	1/47	25	1/110	1/47	110	1/110	1/47
1,1-Difluoroethane	11	SG-VW50A-01	VW50	12/23/2020	5.5	2/110	1/47	1,400,000	0/110	0/47	6,000,000	0/110	0/47
Ethanol	160	SG-VW56B-01	VW56	12/30/2020	14.5	69/110	39/47	NE	NA	NA	NE	NA	NA
Ethylbenzene	220	SG-VW57B-02	VW57	12/30/2020	14.5	76/110	44/47	37	10/110	9/47	160	2/110	1/47
1-Ethyl-4-Methylbenzene	53	SG-VW16A-01	VW16	11/30/2020	5.5	63/110	41/47	NE	NA	NA	NE	NA	NA
Ethyl *tert*-Butyl Ether (ETBE)	7.3	SG-VW34B-01	VW34	12/2/2020	14.5	1/110	1/47	NE	NA	NA	NE	NA	NA
n-Heptane	16,000	SG-VW57B-02	VW57	12/30/2020	14.5	24/110	19/47	14,000	1/110	1/47	60,000	0/110	0/47
Hexane	76,000	SG-VW57B-02	VW57	12/30/2020	14.5	11/110	8/47	24,000	2/110	1/47	100,000	0/110	0/47
2-Hexanone	3.9	SG-VW50B-01	VW50	12/23/2020	14.5	2/110	2/47	1,000	0/110	0/47	4,300	0/110	0/47
Isooctane	89	SG-VW20B-01	VW20	11/30/2020	14.5	24/110	20/47	NE	NA	NA	NE	NA	NA
Isopropyl Alcohol (2-Propanol)	94	SG-VW56A-01	VW56	12/30/2020	5.5	27/110	20/47	7,000	0/110	0/47	29,000	0/110	0/47
Methyl Ethyl Ketone (2-Butanone)	180	SG-VW26A-01	VW26	11/30/2020	5.5	73/110	41/47	170,000	0/110	0/47	730,000	0/110	0/47
Methyl Isobutyl Ketone	95	SG-VW26A-01	VW26	11/30/2020	5.5	44/110	35/47	100,000	0/110	0/47	430,000	0/110	0/47
Methyl *tert*-Butyl Ether (MTBE)	4.4	SG-VW34B-01	VW34	12/2/2020	14.5	3/110	3/47	370	0/110	0/47	1,600	0/110	0/47
Naphthalene	70	SG-VW48A-02	VW48	3/3/2021	5.5	18/110	12/47	2.8	18/110	12/47	12	3/110	2/47
Propylene	110	SG-VW18A-01	VW18	12/22/2020	5.5	3/110	3/47	100,000	0/110	0/47	430,00	0/110	0/47
Styrene	310	SG-VW42A-01	VW42	12/2/2020	5.5	11/110	10/47	31,000	0/110	0/47	130,000	0/110	0/47
Tetrachloroethene (PCE)	1,200,000	SVM-1-5	SVM-1	11/16/2020	4	107/115	46/47	15	84/110	37/47	67	49/110	27/47
1,1,1,2-Tetrafluoroethane	23	SG-VW17A-01	VW17	12/22/2020	5.5	2/110	2/47	2,800,000	0/110	0/47	12,000,000	0/110	0/47
Tetrahydrofuran	64	SG-VW26A-01	VW26	11/30/2020	5.5	60/110	41/47	70,000	0/110	0/47	290,000	0/110	0/47
Toluene	11,000	SG-VW57B-02	VW57	12/30/2020	14.5	103/110	46/47	10,000	1/110	1/47	43,000	0/110	0/47
1,1,1-Trichloroethane	9.4	SG-VW21B-01	VW21	12/22/2020	14.5	12/115	8/47	33,000	0/110	0/47	150,000	0/110	0/47
Trichloroethene (TCE)	16,000	SVM-1-5	SVM-1	11/16/2020	4	35/115	21/47	16	5/115	2/47	100	4/115	1/47
Trichlorofluoromethane (Freon 11)	10	SG-VW52B-01	VW52	12/22/2020	14.5	61/110	33/47	43,000	0/110	0/47	180,000	0/110	0/47
1,2,3-Trichloropropane	5.3	SG-VW17B-02	VW17	12/22/2020	14.5	2/110	2/47	0.0047	2/110	2/47	0.05	2/110	2/47
1,1,2-Trichloro-1,2,2-trifluoroethane	3.1	SG-VW34A-01	VW34	12/2/2020	5.5	5/110	3/47	170,000	0/110	0/47	730,000	0/110	0/47
1,2,4-Trimethylbenzene	160	SG-VW48A-02	VW48	3/3/2021	5.5	77/110	43/47	2,100	0/110	0/47	8,700	0/110	0/47
1,3,5-Trimethylbenzene	32	SG-VW48A-02	VW48	3/3/2021	5.5	58/110	35/47	2,100	0/110	0/47	8,700	0/110	0/47
Vinyl Acetate	4.8	SG-VW24B-01	VW24	12/3/2020	14.5	2/110	2/47	7,000	0/110	0/47	29,000	0/110	0/47
m,p-Xylene	420	SG-VW57B-02	VW57	12/30/2020	14.5	91/110	45/47	3,300	0/110	0/47	15,000	0/110	0/47
o-Xylene	75	SG-VW16A-01	VW16	11/30/2020	5.5	81/110	44/47	3,300	0/110	0/47	15,000	0/110	0/47
Total Xylenes	420	SG-VW57B-02	VW57	12/30/2020	14.5	92/110	45/47	NE	NA	NA	NE	NA	NA

TABLE 4-1. CURRENT INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
(Page 2 of 2)

Analyte	Maximum Concentration ($\mu g/m^3$)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[(a)] ($\mu g/m^3$)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[(a)] ($\mu g/m^3$)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Total Petroleum Hydrocarbons - Gasoline	1,900,000	SG-VW57B-02	VW57	12/30/2020	14.5	110/110	47/47	20,000[(b)]	4/110	3/47	83,000[(b)]	3/110	2/47
Total Petroleum Hydrocarbons	1,900,000	SG-VW57B-02	VW57	12/30/2020	14.5	110/110	47/47	NE	NA	NA	NE	NA	NA

Notes:

Bold indicates analyte exceeds one or more SVSLs.
Sample depths are referenced to the top of soil (bottom of pavement).
$\mu g/m^3$ = micrograms per cubic meter
CalEPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
ESL = Environmental Screening Level
ID = identification
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
NA = not applicable
NE = not established
No. = number
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB = California State Water Resources Control Board

Goal Compliance:

[(a)] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC, 2020) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).

[(b)] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air ESLs (SWRCB, 2019) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).

TABLE 4-2. CURRENT INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)
(Page 1 of 2)

Analyte	Maximum Concentration (µg/m^3)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[(a)] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Acetone	460	SG-VW26A-01	VW26	11/30/2020	5.5	98/110	45/47	32,000,000	0/110	0/47	140,000,000	0/110	0/47
tert-Amyl Methyl Ether (TAME)	7.9	SG-VW34B-01	VW34	12/2/2020	14.5	1/110	1/47	NE	NA	NA	NE	NA	NA
Benzene	2,500	SG-VW57B-02	VW57	12/30/2020	14.5	53/110	36/47	97	2/110	1/47	420	2/110	1/47
Benzyl Chloride	6.1	SG-VW32B-01	VW32	12/4/2020	14.5	1/110	1/47	57	0/110	0/47	250	0/110	0/47
Bromodichloromethane	60	SG-VW30B-01	VW30	12/3/2020	14.5	9/110	5/47	76	0/110	0/47	330	0/110	0/47
tert-Butyl Alcohol (TBA)	13	SG-VW34B-01	VW34	12/2/2020	14.5	17/110	11/47	NE	NA	NA	NE	NA	NA
Carbon Disulfide	300	SG-VW34A-01	VW34	12/2/2020	5.5	89/110	45/47	730,000	0/110	0/47	3,100,000	0/110	0/47
Carbon Tetrachloride	9.4	SG-VW17B-02	VW17	12/22/2020	14.5	5/110	3/47	470	0/110	0/47	2,000	0/110	0/47
Chloroform	1,400	SG-VW30A-02	VW30	3/4/2021	5.5	67/110	40/47	120	11/110	7/47	530	6/110	2/47
Chloromethane	1.5	SVM-3-14	SVM-3	3/3/2021	14	3/110	2/47	94,000	0/110	0/47	390,000	0/110	0/47
Cyclohexane	120,000	SG-VW57B-02	VW-57	12/30/2020	14.5	7/110	5/47	6,300,000	0/110	0/47	26,000,000	0/110	0/47
1,2-Dibromoethane	24	SG-VW24B-01	VW24	12/3/2020	14.5	8/110	8/47	4.7	3/110	3/47	20	1/110	1/47
Dibromomethane	13	SG-VW30B-02	VW30	3/4/2021	14.5	2/110	2/47	4,200	0/110	0/47	18,000	0/110	0/47
1,4-Dichlorobenzene	2.6	SG-VW46B-01 SG-VW56B-01	VW46 VW56	12/23/2020 12/30/2020	14.5	2/110	2/47	260	0/110	0/47	1,100	0/110	0/47
Dichlorodifluoromethane (Freon 12)	57	SG-VW52B-01	VW52	12/22/2020	14.5	84/110	40/47	100,000	0/110	0/47	440,000	0/110	0/47
1,2-Dichloroethane	7.9	SG-VW34B-01	VW34	12/2/2020	14.5	6/115	6/47	110	0/115	0/47	470	0/115	0/47
***cis*-1,2-Dichloroethene**	47,000	SVM-1-5	SVM-1	11/16/2020	4	7/115	4/47	8,300	2/115	1/47	35,000	1/115	1/47
trans-1,2-Dichloroethene	200	SVM-1-5	SVM-1	3/3/2021	4	2/115	1/47	83,000	0/115	0/47	350,000	0/115	0/47
1,2-Dichloropropane	600	SVM-1-5	SVM-1	3/3/2021	4	1/110	1/47	760	0/110	0/47	3,300	0/110	0/47
1,1-Difluoroethane	11	SG-VW50A-01	VW50	12/23/2020	5.5	2/110	1/47	42,000,000	0/110	0/47	180,000,000	0/110	0/47
Ethanol	160	SG-VW56B-01	VW56	12/30/2020	14.5	69/110	39/47	NE	NA	NA	NE	NA	NA
Ethylbenzene	220	SG-VW57B-02	VW57	12/30/2020	14.5	76/110	44/47	1,100	0/110	0/47	4,900	0/110	0/47
1-Ethyl-4-methylbenzene	53	SG-VW16A-01	VW16	11/30/2020	5.5	63/110	41/47	NE	NA	NA	NE	NA	NA
Ethyl *tert*-Butyl Ether (ETBE)	7.3	SG-VW34B-01	VW34	12/2/2020	14.5	1/110	1/47	NE	NA	NA	NE	NA	NA
n-Heptane	16,000	SG-VW57B-02	VW57	12/30/2020	14.5	24/110	19/47	420,000	0/110	0/47	1,800,000	0/110	0/47
Hexane	76,000	SG-VW57B-02	VW57	12/30/2020	14.5	11/110	8/47	730,000	0/110	0/47	3,100,000	0/110	0/47
2-Hexanone	3.9	SG-VW50B-01	VW50	12/23/2020	14.5	2/110	2/47	31,000	0/110	0/47	130,000	0/110	0/47
Isooctane	89	SG-VW20B-01	VW20	11/30/2020	14.5	24/110	20/47	NE	NA	NA	NE	NA	NA
Isopropyl Alcohol (2-Propanol)	94	SG-VW56A-01	VW56	12/30/2020	5.5	27/110	20/47	210,000	0/110	0/47	880,000	0/110	0/47
Methyl Ethyl Ketone (2-Butanone)	180	SG-VW26A-01	VW26	11/30/2020	5.5	73/110	41/47	5,200,000	0/110	0/47	22,000,000	0/110	0/47
Methyl Isobutyl Ketone	95	SG-VW26A-01	VW26	11/30/2020	5.5	44/110	35/47	3,100,000	0/110	0/47	13,000,000	0/110	0/47
Methyl *tert*-Butyl Ether (MTBE)	4.4	SG-VW34B-01	VW34	12/2/2020	14.5	3/110	3/47	11,000	0/110	0/47	47,000	0/110	0/47
Naphthalene	70	SG-VW48A-02	VW48	3/3/2021	5.5	18/110	12/47	83	0/110	0/47	360	0/110	0/47
Propylene	110	SG-VW18A-01	VW18	12/22/2020	5.5	3/110	3/47	3,100,000	0/110	0/47	13,000,000	0/110	0/47
Styrene	310	SG-VW42A-01	VW42	12/2/2020	5.5	11/110	10/47	940,000	0/110	0/47	3,900,000	0/110	0/47
Tetrachloroethene (PCE)	1,200,000	SVM-1-5	SVM-1	11/16/2020	4	107/115	46/47	460	5/115	3/47	2,000	2/115	1/47
1,1,1,2-Tetrafluoroethane	23	SG-VW17A-01	VW17	12/22/2020	5.5	2/110	2/47	83,000,000	0/110	0/47	350,000,000	0/110	0/47
Tetrahydrofuran	64	SG-VW26A-01	VW26	11/30/2020	5.5	60/110	41/47	2,100,000	0/110	0/47	8,800,000	0/110	0/47
Toluene	11,000	SG-VW57B-02	VW57	12/30/2020	14.5	103/110	46/47	310,000	0/110	0/47	1,300,000	0/110	0/47
1,1,1-Trichloroethane	9.4	SG-VW21B-01	VW21	12/22/2020	14.5	12/115	8/47	1,000,000	0/115	0/47	4,400,000	0/115	0/47
Trichloroethene (TCE)	16,000	SVM-1-5	SVM-1	11/16/2020	4	35/115	21/47	480	2/115	1/47	3,000	2/115	2/47
Trichlorofluoromethane (Freon 11)	10	SG-VW52B-01	VW52	12/22/2020	14.5	61/110	33/47	1,300,000	0/110	0/47	5,300,000	0/110	0/47
1,2,3-Trichloropropane	5.3	SG-VW17B-02	VW17	12/22/2020	14.5	2/110	2/47	0.14	2/110	2/47	1.6	2/110	2/47
1,1,2-Trichloro-1,2,2-trifluoroethane	3.1	SG-VW34A-01	VW34	12/2/2020	5.5	5/110	3/47	5,200,000	0/110	0/47	22,000,000	0/110	0/47
1,2,4-Trimethylbenzene	160	SG-VW48A-02	VW48	3/3/2021	5.5	77/110	43/47	63,000	0/110	0/47	260,000	0/110	0/47
1,3,5-Trimethylbenzene	32	SG-VW48A-02	VW48	3/3/2021	5.5	58/110	35/47	63,000	0/110	0/47	260,000	0/110	0/47
Vinyl Acetate	4.8	SG-VW24B-01	VW24	12/3/2020	14.5	2/110	2/47	210,000	0/110	0/47	880,000	0/110	0/47
m,p-Xylene	420	SG-VW57B-02	VW57	12/30/2020	14.5	91/110	45/47	100,000	0/110	0/47	440,000	0/110	0/47
o-Xylene	75	SG-VW16A-01	VW16	11/30/2020	5.5	81/110	44/47	100,000	0/110	0/47	440,000	0/110	0/47
Total Xylenes	420	SG-VW57B-02	VW57	12/30/2020	14.5	92/110	45/47	NE	NA	NA	NE	NA	NA

TABLE 4-2. CURRENT INVESTIGATION MAXIMUM ANALYTE CONCENTRATIONS DETECTED IN SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)
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Analyte	Maximum Concentration (µg/m^3)	Sample ID of Maximum Concentration	Location ID of Maximum Concentration	Sampling Date of Maximum Concentration	Sample Depth (feet)	No. Detections/ Total No. Samples	No. Locations with Detections/ Total No. Locations Sampled	Residential SVSL[a] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled	Commercial/ Industrial SVSL[a] (µg/m^3)	No. Samples Exceeding Goal/ Total No. Samples	No. Locations Exceeding Goal/ Total No. Locations Sampled
Total Petroleum Hydrocarbons - Gasoline	1,900,000	SG-VW57B-02	VW57	12/30/2020	14.5	110/110	47/47	600,000[b]	2/110	1/47	2,500,000[b]	0/110	0/47
Total Petroleum Hydrocarbons	1,900,000	SG-VW57B-02	VW57	12/30/2020	14.5	110/110	47/47	NE	NA	NA	NE	NA	NA

Notes:

Bold indicates analyte exceeds one or more SVSLs.
Sample depths are referenced to the top of soil (bottom of pavement).
µg/m^3 = micrograms per cubic meter
CalEPA = California Environmental Protection Agency
DTSC = Department of Toxic Substances Control
ESL = Environmental Screening Level
ID = identification
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
NA = not applicable
NE = not established
No. = number
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB = California State Water Resources Control Board

Goal Compliance:

[a] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC, 2020) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).
[b] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air ESLs (SWRCB, 2019) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
(Page 1 of 8)

				VW16A		VW17A		VW18A		VW19A		VW20A		VW21A		VW21A		VW22A		VW23A	
			Location ID																		
			Sampling Date/Time	11/30/2020 11:07		12/22/2020 9:07		12/22/2020 10:09		12/2/2020 12:10		11/30/2020 13:51		12/22/2020 14:17		12/22/2020 14:17		12/22/2020 15:25		12/29/2020 9:40	
			Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
			Sample Type	N		N		N		N		N		N		FD		N		N	
			Field Sample ID	SG-VW16A-01		SG-VW17A-01		SG-VW18A-01		SG-VW19A-01		SG-VW20A-01		SG-VW21A-01		SG-VW21A-02		SG-VW22A-01		SG-VW23A-01	
			Lab Sample ID	2035147-01		2037849-01		2037849-04		2035335-12		2035147-05		2037849-12		2037849-13		2037849-15		2100036-05	
			Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**210**		**98**		**74**		**260**		**16**		**140**		**160**		**260**		**18**	
Benzene	3.2	14	µg/m^3	**37**		**12**		**31**		**3.2**		**8.7**		**7.6**		**7.6**		**7.5**	**J 6G**	**10**	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.68)		ND (<0.64)		ND (<0.66)		ND (<0.71)		ND (<0.70)		ND (<0.70)		ND (<0.69)		ND (<3.5)		ND (<0.69)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.0)		**10**		ND (<1.1)		**1.5**	**J 6G**	ND (<1.1)		ND (<5.4)		ND (<1.1)	
Carbon Disulfide	24,000	100,000	µg/m^3	**14**		**26**		**93**		**74**		**30**		**25**		**26**		**18**		**34**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.68)		**2.5**	**J 6G**	ND (<0.66)		ND (<0.71)		ND (<0.70)		ND (<0.70)		ND (<0.69)		ND (<3.5)		ND (<0.69)	
Chloroform	4.0	18	µg/m^3	**12**		**89**		**5.3**	**J 6G**	**10**		**0.91**	**J 6G**	**4.7**	**J 6G**	**6.3**	**J 6G**	**10**	**J 6G**	**3.2**	**J 6G**
Chloromethane	3,100	13,000	µg/m^3	ND (<0.32)		ND (<0.30)		ND (<0.31)		ND (<0.33)		ND (<0.33)		ND (<0.33)		ND (<0.32)		ND (<1.6)		ND (<0.32)	
Cyclohexane	210,000	870,000	µg/m^3	**5.9**		ND (<0.54)		ND (<0.56)		ND (<0.60)		ND (<0.59)		ND (<0.59)		ND (<0.58)		ND (<2.9)		ND (<0.58)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.88)		ND (<0.83)		ND (<0.85)		**5.1**	**J 6G**	ND (<0.90)		ND (<0.90)		ND (<0.89)		ND (<4.5)		ND (<0.89)	
Dibromomethane	140	600	µg/m^3	ND (<0.87)		ND (<0.82)		ND (<0.84)		ND (<0.90)		ND (<0.89)		ND (<0.89)		ND (<0.87)		ND (<4.4)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**3.1**	**J 6G**	**7.3**		**16**		**50**		ND (<0.70)		**3.9**	**J 6G**	**4.0**	**J 6G**	ND (<3.5)		**3.6**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.40)		ND (<0.37)		ND (<0.38)		**0.83**	**J 6G**	ND (<0.41)		ND (<0.41)		ND (<0.40)		ND (<2.0)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		ND (<0.49)		ND (<2.5)		ND (<0.49)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.41)		ND (<0.39)		ND (<0.40)		ND (<0.43)		ND (<0.42)		ND (<0.42)		ND (<0.41)		ND (<2.1)		ND (<0.41)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		ND (<0.49)		ND (<2.5)		ND (<0.49)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<3.0)		ND (<2.9)		ND (<2.9)		ND (<3.2)		ND (<3.1)		ND (<3.1)		ND (<3.1)		ND (<16)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	ND (0.64)		**7.1**		**2.7**	**J 6G**	ND (<0.66)		**25**		**4.6**		**4.2**		ND (<3.3)		**2.6**	**J 6G**
Ethylbenzene	37	160	µg/m^3	**66**		**15**		**25**		**13**		**54**		**15**		**15**		**18**	**J 6G**	**15**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**53**		**17**		**19**		**17**		**46**		**12**		**12**		**16**	**J 6G**	**9.4**	
n-Heptane	14,000	60,000	µg/m^3	**10**		**3.9**		**4.9**		ND (<0.54)		**0.77**	**J 6G**	**2.0**	**J 3D, 6G**	**4.1**	**J 3D**	ND (<2.6)		**2.1**	**J 6G**
Hexane	24,000	100,000	µg/m^3	ND (<0.30)		ND (<0.29)		**6.9**	**J 6G**	ND (<0.32)		ND (<0.31)		ND (<0.31)		ND (<0.31)		ND (<1.6)		**3.0**	**J 6G**
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.44)		ND (<0.41)		ND (<0.43)		ND (<0.46)		ND (<0.45)		ND (<0.45)		ND (<0.44)		ND (<2.2)		ND (<0.44)	
Isooctane	NE	NE	µg/m^3	**12**		**4.4**	**J 6G**	**5.9**	**J 6G**	**6.2**	**J 6G**	ND (<0.55)		**1.7**	**J 6G**	**1.4**	**J 6G**	ND (<2.7)		ND (<0.54)	
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		**3.5**		ND (<2.5)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**93**		**67**		**36**		**33**		**13**		**87**		**84**		**170**		**6.2**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	**46**		**6.6**	**J 6G**	**5.9**	**J 6G**	**31**		**12**		**4.8**	**J 6G**	**4.8**	**J 6G**	**15**	**J 6G**	**1.6**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	**0.60**	**J 6G**	ND (<0.40)		ND (<0.41)		ND (<0.44)		ND (<0.44)		ND (<0.44)		ND (<0.43)		ND (<2.2)		ND (<0.43)	
Naphthalene	2.8	12	µg/m^3	ND (<2.1)		ND (<2.0)		ND (<2.1)		**11**	**J 6G**	ND (<2.2)		ND (<2.2)		ND (<2.1)		ND (<11)		**4.3**	**J 6G**
Propylene	100,000	430,000	µg/m^3	ND (<0.38)		ND (<0.36)		**110**		ND (<0.40)		ND (<0.39)		ND (<0.39)		ND (<0.38)		ND (<1.9)		ND (<0.38)	
Styrene	31,000	130,000	µg/m^3	**2.6**	**J 6G**	ND (<0.34)		**1.3**	**J 6G**	ND (<0.38)		**1.9**	**J 6G**	ND (<0.37)		ND (<0.37)		ND (<1.9)		ND (<0.37)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**20**		**61**		**33**		**260**		**28**		**130**		**130**		**93**		**54**	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.0)		**23**		ND (<0.98)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.2)		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	**40**		**8.2**		**3.6**		**13**		**24**		**8.4**		**8.3**		**13**	**J 6G**	**2.7**	**J 6G**
Toluene	10,000	43,000	µg/m^3	**310**		**130**		**230**		**60**		**360**		**140**		**150**		**1200**		**100**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (<0.59)		ND (<0.56)		ND (<0.57)		ND (<0.62)		ND (<0.61)		**7.1**	**J 6G**	**7.8**		ND (<3.0)		ND (<0.60)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.82)		ND (<0.77)		ND (<0.79)		ND (<0.85)		**0.92**	**J 6G**	**13**		**14**		ND (<4.2)		**6.8**	**J 6G**
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	**1.7**	**J 6G**	**2.6**	**J 6G**	**2.9**	**J 6G**	**7.5**	**J 6G**	ND (<0.73)		**1.8**	**J 6G**	**2.5**	**J 6G**	ND (<3.6)		ND (<0.72)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.84)		ND (<0.79)		**2.6**	**J 6G**	ND (<0.87)		ND (<0.86)		ND (<0.86)		ND (<0.84)		ND (<4.3)		ND (<0.84)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**69**		**28**		**25**		**29**		**71**		**16**		**16**		**23**	**J 6G**	**12**	
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	**28**		**7.0**	**J 6G**	**8.2**		**7.6**	**J 6G**	**20**		**5.3**	**J 6G**	**5.1**	**J 6G**	ND (<3.1)		**4.4**	**J 6G**
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.52)		ND (<0.51)		ND (<0.51)		ND (<0.50)		ND (<2.6)		ND (<0.50)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**210**		**57**		**92**		**47**		**170**		**50**		**48**		**58**		**50**	
o-Xylene	3,300	15,000	µg/m^3	**75**		**19**		**28**		**16**		**67**		**16**		**15**		**19**	**J 6G**	**16**	
Total Xylenes	NE	NE	µg/m^3	**280**		**76**		**120**		**63**		**240**		**66**		**64**		**77**	**J 6G**	**66**	
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**3,400**		**5,700**		**2,700**		**1,300**		**2,200**		**1,400**		**1,500**		**2,800**		**1,400**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**3,400**		**5,700**		**2,700**		**1,300**		**2,200**		**1,400**		**1,500**		**2,800**		**1,400**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
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				VW24A		VW24A		VW24A		VW25A		VW26A		VW27A		VW28A		VW29A		VW30A	
			Location ID																		
			Sampling Date/Time	12/3/2020 16:30		3/3/2021 15:50		3/3/2021 15:50		12/3/2020 10:35		11/30/2020 12:28		12/23/2020 15:57		12/29/2020 8:40		12/29/2020 10:55		12/3/2020 15:03	
			Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
			Sample Type	N		N		FD		N		N		N		N		N		N	
			Field Sample ID	SG-VW24A-01		SG-VW24A-02		SG-VW24A-03		SG-VW25A-01		SG-VW26A-01		SG-VW27A-01		SG-VW28A-01		SG-VW29A-01		SG-VW30A-01	
			Lab Sample ID	2035587-01		2107220-04		2107220-05		2035539-05		2035147-03		2100036-01		2100036-03		2100036-07		2035539-07	
			Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	ND (<0.67)		**6.0**	**J 6G**	**6.7**	**J 6G**	**3.6**	**J 6G**	**460**		ND (<6.5)		ND (<6.6)		**5.5**	**J 6G**	**30**	
Benzene	3.2	14	µg/m^3	ND (<0.33)		**1.8**	**J 6G**	**1.5**	**J 6G**	ND (<0.34)		**20**		**39**		ND (<3.2)		**9.4**		**3.7**	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.70)		ND (<0.71)		ND (<0.72)		ND (<0.72)		ND (<0.68)		ND (<6.8)		ND (<6.9)		ND (<0.72)		**12**	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		**3.3**	**J 6G**	**2.7**	**J 6G**	**2.3**	**J 6G**	ND (<1.0)		ND (<11)		ND (<11)		ND (<1.1)		**1.2**	**J 6G**
Carbon Disulfide	24,000	100,000	µg/m^3	**2.5**	**J 6G**	**1.5**	**J 6G**	ND (<0.30)		**11**		**11**		**28**	**J 6G**	**26**	**J 6G**	**37**		**15**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.70)		ND (<0.71)		ND (<0.72)		ND (<0.72)		ND (<0.68)		ND (<6.8)		ND (<6.9)		ND (<0.72)		ND (<0.69)	
Chloroform	4.0	18	µg/m^3	**9.3**		ND (<0.85)		ND (<0.86)		**5.7**	**J 6G**	**0.95**	**J 6G**	ND (<8.2)		ND (<8.3)		**4.1**	**J 6G**	**650**	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.33)		ND (<0.33)		ND (<0.33)		ND (<0.34)		ND (<0.32)		ND (<3.2)		ND (<3.2)		ND (<0.34)		ND (<0.32)	
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.59)		ND (<0.60)		ND (<0.60)		ND (<0.61)		ND (<0.57)		ND (<5.8)		ND (<5.9)		ND (<0.61)		ND (<0.59)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.90)		ND (<0.91)		ND (<0.92)		ND (<0.93)		ND (<0.87)		ND (<8.8)		ND (<8.9)		ND (<0.93)		ND (<0.89)	
Dibromomethane	140	600	µg/m^3	ND (<0.88)		ND (<0.89)		ND (<0.91)		ND (<0.91)		ND (<0.86)		ND (<8.7)		ND (<8.8)		ND (<0.92)		ND (<0.88)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**18**		**7.5**	**J 6G**	**7.2**	**J 6G**	**10**		ND (<0.68)		ND (<6.8)		ND (<6.9)		**4.0**	**J 6G**	**6.5**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.42)		ND (<0.39)		ND (<4.0)		ND (<4.0)		ND (<0.42)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.51)		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		ND (<0.49)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.42)		ND (<0.42)		ND (<0.43)		ND (<0.43)		ND (<0.40)		ND (<4.1)		ND (<4.2)		ND (<0.43)		ND (<0.42)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.51)		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		ND (<0.49)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<3.1)		ND (<3.1)		ND (<3.2)		ND (<3.2)		ND (<3.0)		ND (<30)		ND (<31)		ND (<3.2)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	ND (<0.65)		**49**	**J 3D**	**7.1**	**J 3D**	ND (<0.67)		**16**		**41**		ND (<6.5)		ND (<0.68)		**4.0**	
Ethylbenzene	37	160	µg/m^3	ND (<0.50)		**5.5**	**J 6G**	**1.9**	**J 6G**	**3.0**	**J 6G**	**51**		**19**	**J 6G**	**17**	**J 6G**	**22**		**20**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	ND (<0.46)		**15**	**J 3D**	**4.1**	**J 3D, 6G**	**3.6**	**J 6G**	**46**		ND (<4.6)		ND (<4.6)		**15**		**22**	
n-Heptane	14,000	60,000	µg/m^3	ND (<0.53)		ND (<0.53)		ND (<0.54)		ND (<0.54)		**4.7**		**29**	**J 6G**	ND (<5.2)		ND (<0.55)		**2.1**	**J 6G**
Hexane	24,000	100,000	µg/m^3	ND (<0.31)		ND (<0.31)		ND (<0.32)		ND (<0.32)		ND (<0.30)		**85**		ND (<3.1)		ND (<0.32)		ND (<0.31)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.45)		ND (<0.46)		ND (<0.46)		ND (<0.46)		ND (<0.44)		ND (<4.4)		ND (<4.5)		ND (<0.47)		ND (<0.45)	
Isooctane	NE	NE	µg/m^3	ND (<0.54)		**1.6**	**J 6G**	ND (<0.56)		ND (<0.56)		**3.6**	**J 6G**	**17**	**J 6G**	ND (<5.4)		ND (<0.56)		**3.8**	**J 6G**
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	ND (<0.50)		**3.2**		**3.6**		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		**6.5**	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	ND (<0.29)		**1.0**	**J 6G**	ND (<0.30)		ND (<0.30)		**180**		**24**	**J 6G**	ND (<2.9)		**2.5**	**J 6G**	**18**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.42)		**95**		ND (<4.0)		ND (<4.0)		ND (<0.42)		**6.0**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.43)		ND (<0.44)		ND (<0.45)		ND (<0.45)		ND (<0.42)		ND (<4.3)		ND (<4.3)		ND (<0.45)		ND (<0.43)	
Naphthalene	2.8	12	µg/m^3	**9.8**	**J 6G**	**17**	**J 6G**	**6.9**	**J 6G**	ND (<2.2)		ND (<2.1)		ND (<21)		ND (<22)		ND (<2.3)		**7.5**	**J 6G**
Propylene	100,000	430,000	µg/m^3	ND (<0.39)		ND (<0.39)		ND (<0.40)		ND (<0.40)		ND (<0.38)		ND (<3.8)		**8.5**	**J 6G**	ND (<0.40)		ND (<0.38)	
Styrene	31,000	130,000	µg/m^3	ND (<0.37)		ND (<0.38)		ND (<0.38)		ND (<0.38)		**2.5**	**J 6G**	ND (<3.6)		ND (<3.7)		ND (<0.39)		ND (<0.37)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**650**		**120**		**110**		**96**		**42**		ND (<7.6)		**89**		**56**		**99**	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.0)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.0)		ND (<10)		ND (<10)		ND (<1.1)		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	ND (<0.42)		ND (<0.42)		ND (<0.43)		**2.5**	**J 6G**	**64**		ND (<4.1)		ND (<4.2)		**3.0**	**J 6G**	**21**	
Toluene	10,000	43,000	µg/m^3	**1.2**	**J 6G**	**14**	**J 3D**	**6.0**	**J 3D**	**7.0**		**210**		**2,500**		**3,500**		**120**		**72**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	**0.93**	**J 6G**	ND (<0.61)		ND (<0.62)		ND (<0.62)		ND (<0.58)		ND (<5.9)		ND (<6.0)		ND (<0.63)		ND (<0.60)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.84)		ND (<0.85)		ND (<0.86)		ND (<0.86)		ND (<0.81)		ND (<8.2)		ND (<8.3)		ND (<0.87)		**2.7**	**J 6G**
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	**3.4**	**J 6G**	**2.3**	**J 6G**	**2.1**	**J 6G**	**1.9**	**J 6G**	**1.5**	**J 6G**	ND (<7.1)		ND (<7.2)		ND (<0.76)		**1.8**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	**2.0**	**J 6G**	**3.0**	**J 6G**	ND (<0.87)		ND (<0.88)		ND (<0.82)		ND (<8.4)		ND (<8.5)		ND (<0.89)		ND (<0.85)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**0.84**	**J 6G**	**33**	**J 3D**	**8.2**	**J 3D**	**7.7**	**J 6G**	**69**		**20**	**J 6G**	**16**	**J 6G**	**18**		**32**	
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	ND (<0.62)		**6.8**	**J 6G**	**1.9**	**J 6G**	**2.5**	**J 6G**	**22**		ND (<6.1)		ND (<6.2)		**7.0**	**J 6G**	**9.9**	
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.51)		ND (<0.52)		ND (<0.52)		ND (<0.53)		ND (<0.50)		ND (<5.0)		ND (<5.1)		ND (<0.53)		ND (<0.51)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	ND (<0.95)		**29**	**J 3D**	**8.4**	**J 3D**	**12**		**170**		**64**	**J 6G**	**56**	**J 6G**	**75**		**75**	
o-Xylene	3,300	15,000	µg/m^3	ND (<0.46)		**13**	**J 3D**	**3.7**	**J 3D, 6G**	**5.2**	**J 6G**	**63**		**21**	**J 6G**	**18**	**J 6G**	**23**		**29**	
Total Xylenes	NE	NE	µg/m^3	ND (<1.4)		**42**	**J 3D**	**12**	**J 3D, 6G**	**17**		**230**		**85**	**J 6G**	**74**	**J 6G**	**98**		**100**	
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**810**		**860**	**J 3D**	**580**	**J 3D**	**420**		**2,700**		**5,400**		**6,900**		**1,600**		**1,800**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**810**		**860**	**J 3D**	**580**	**J 3D**	**420**		**2,700**		**5,400**		**6,900**		**1,600**		**1,800**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
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				VW30A		VW31A		VW32A		VW32A		VW33A		VW34A		VW35A		VW36A		VW37A	
Location ID				VW30A		VW31A		VW32A		VW32A		VW33A		VW34A		VW35A		VW36A		VW37A	
Sampling Date/Time				3/4/2021 12:40		12/1/2020 14:32		12/4/2020 9:42		12/4/2020 9:42		12/29/2020 16:00		12/2/2020 15:30		12/1/2020 16:09		12/2/2020 7:50		12/2/2020 9:44	
Sample Depth (feet)				5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
Sample Type				N		N		N		FD		N		N		N		N		N	
Field Sample ID				SG-VW30A-02		SG-VW31A-01		SG-VW32A-01		SG-VW32A-02		SG-VW33A-01		SG-VW34A-01		SG-VW35A-01		SG-VW36A-01		SG-VW37A-01	
Lab Sample ID				2107220-06		2035147-07		2035587-03		2035587-04		2100036-16		2035539-01		2035335-01		2035335-03		2035335-07	
Status				*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**5.0**	**J 6G**	**38**		**110**	**J 6G**	**120**	**J- 4A, 6G**	**64**		**330**		**11**		**75**		**10**	
Benzene	3.2	14	µg/m^3	ND (<0.34)		**1.5**	**J 6G**	ND (<6.3)		ND (<5.7)	UJ 4A	**4.3**		**19**		**1.4**	**J 6G**	**23**		ND (<0.33)	
Bromodichloromethane	2.5	11	µg/m^3	**24**		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	ND (<0.70)		ND (<0.66)		ND (<0.68)		ND (<0.68)		ND (<0.72)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	**1.3**	**J 6G**	ND (<1.1)		ND (<21)		ND (<19)	UJ 4A	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)	
Carbon Disulfide	24,000	100,000	µg/m^3	**3.6**		**7.9**		ND (<5.7)		ND (<5.2)	UJ 4A	**11**		**300**		**12**		**11**		**3.7**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.72)		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	ND (<0.70)		ND (<0.66)		ND (<0.68)		ND (<0.68)		ND (<0.72)	
Chloroform	4.0	18	µg/m^3	**1,400**		ND (<0.86)		ND (<16)		ND (<15)	UJ 4A	ND (<0.84)		**2.8**	**J 6G**	ND (<0.82)		ND (<0.81)		ND (<0.86)	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.34)		ND (<0.33)		ND (<6.3)		ND (<5.7)	UJ 4A	ND (<0.33)		**0.71**	**J 6G**	ND (<0.32)		ND (<0.32)		ND (<0.33)	
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.61)		ND (<0.60)		ND (<11)		ND (<10)	UJ 4A	ND (<0.59)		**6.3**		ND (<0.58)		ND (<0.57)		ND (<0.60)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.93)		ND (<0.92)		ND (<17)		ND (<16)	UJ 4A	ND (<0.90)		ND (<0.85)		ND (<0.88)		ND (<0.87)		ND (<0.92)	
Dibromomethane	140	600	µg/m^3	ND (<0.91)		ND (<0.91)		ND (<17)		ND (<16)	UJ 4A	ND (<0.88)		ND (<0.83)		ND (<0.87)		**2.7**	**J 6G**	ND (<0.91)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**8.9**		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	**2.8**	**J 6G**	**2.8**	**J 6G**	ND (<0.68)		ND (<0.68)		**2.6**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.42)		ND (<0.41)		ND (<7.8)		ND (<7.1)	UJ 4A	ND (<0.40)		ND (<0.38)		ND (<0.40)		ND (<0.39)		ND (<0.41)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.51)		ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.43)		ND (<0.43)		ND (<8.1)		ND (<7.3)	UJ 4A	ND (<0.42)		ND (<0.39)		ND (<0.41)		ND (<0.40)		ND (<0.43)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.51)		ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<3.2)		ND (<3.2)		ND (<60)		ND (<54)	UJ 4A	ND (<3.1)		ND (<2.9)		ND (<3.0)		ND (<3.0)		ND (<3.2)	
Ethanol	NE	NE	µg/m^3	**4.1**		**22**		ND (<13)		ND (<11)	UJ 4A	**5.2**		**15**		**56**		ND (<0.63)		ND (<0.67)	
Ethylbenzene	37	160	µg/m^3	**1.8**	**J 6G**	**7.0**	**J 6G**	**23**	**J 6G**	**26**	**J- 4A, 6G**	**6.7**	**J 6G**	**27**		**7.4**	**J 6G**	**48**		**2.3**	**J 6G**
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	ND (<0.48)		**4.9**	**J 6G**	ND (<9.0)		**17**	**J- 4A, 6G**	**5.2**	**J 6G**	**22**		**11**		**37**		**2.7**	**J 6G**
n-Heptane	14,000	60,000	µg/m^3	ND (<0.54)		**0.85**	**J 6G**	ND (<10)		ND (<9.2)	UJ 4A	ND (<0.53)		**10**		ND (<0.52)		**12**		ND (<0.54)	
Hexane	24,000	100,000	µg/m^3	ND (<0.32)		ND (<0.32)		ND (<6.0)		ND (<5.4)	UJ 4A	ND (<0.31)		**7.7**		ND (<0.30)		ND (<0.30)		ND (<0.32)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.46)		ND (<0.46)		ND (<8.7)		ND (<7.9)	UJ 4A	ND (<0.45)		ND (<0.42)		ND (<0.44)		ND (<0.44)		ND (<0.46)	
Isooctane	NE	NE	µg/m^3	ND (<0.56)		**0.97**	**J 6G**	ND (<10)		ND (<9.5)	UJ 4A	ND (<0.54)		**27**		**1.9**	**J 6G**	**9.8**		ND (<0.56)	
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	**1.2**	**J 6G**	ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**1.0**	**J 6G**	**17**		**26**	**J 6G**	**28**	**J- 4A, 6G**	**37**		**45**		ND (<0.29)		**42**		**6.4**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	ND (<0.42)		**2.3**	**J 6G**	ND (<7.8)		**14**	**J- 4A, 6G**	**3.3**	**J 6G**	**21**		**1.9**	**J 6G**	**46**		ND (<0.41)	
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.45)		ND (<0.45)		ND (<8.4)		ND (<7.6)	UJ 4A	ND (<0.43)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.45)	
Naphthalene	2.8	12	µg/m^3	ND (<2.2)		ND (<2.2)		ND (<42)		ND (<38)	UJ 4A	ND (<2.2)		ND (<2.0)		ND (<2.1)		ND (<2.1)		ND (<2.2)	
Propylene	100,000	430,000	µg/m^3	ND (<0.40)		ND (<0.40)		ND (<7.5)		ND (<6.8)	UJ 4A	ND (<0.39)		ND (<0.36)		ND (<0.38)		ND (<0.38)		ND (<0.40)	
Styrene	31,000	130,000	µg/m^3	ND (<0.38)		ND (<0.38)		ND (<7.2)		ND (<6.5)	UJ 4A	ND (<0.37)		ND (<0.35)		ND (<0.36)		**1.7**	**J 6G**	ND (<0.38)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**210**		**64**		**83**	**J 6G**	**57**	**J- 4A, 6G**	**2.9**	**J 6G**	**19**		**250**		**78**		ND (<0.80)	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.1)		ND (<1.1)		ND (<20)		ND (<18)	UJ 4A	ND (<1.0)		ND (<0.98)		ND (<1.0)		ND (<1.0)		ND (<1.1)	
Tetrahydrofuran	70,000	290,000	µg/m^3	**1.2**	**J 6G**	**4.4**		**17**	**J 6G**	**21**	**J- 4A, 6G**	**4.1**		**15**		**1.2**	**J 6G**	**38**		**0.75**	**J 6G**
Toluene	10,000	43,000	µg/m^3	**7.6**		**89**		**9,300**		**9,700**	**J- 4A**	**42**		**180**		**140**		**280**		**8.9**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (0.62)		ND (<0.62)		ND (<12)		ND (<11)	UJ 4A	ND (<0.60)		ND (<0.57)		**1.1**	**J 6G**	ND (<0.58)		ND (<0.62)	
Trichloroethene (TCE)	16	100	µg/m^3	**2.5**	**J 6G**	ND (<0.86)		ND (<16)		ND (<15)	UJ 4A	ND (<0.84)		ND (<0.79)		ND (<0.82)		ND (<0.81)		ND (<0.86)	
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	ND (<0.75)		**2.6**	**J 6G**	ND (<14)		ND (<13)	UJ 4A	ND (<0.73)		**2.8**	**J 6G**	**1.2**	**J 6G**	**1.3**	**J 6G**	**1.4**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.88)		ND (<0.87)		ND (<16)		ND (<15)	UJ 4A	ND (<0.85)		**3.1**	**J 6G**	ND (<0.84)		ND (<0.82)		ND (<0.87)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**1.8**	**J 6G**	**9.8**		**32**	**J 6G**	**32**	**J- 4A, 6G**	**7.0**	**J 6G**	**29**		**20**		**50**		**5.2**	**J 6G**
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	ND (<0.64)		**2.4**	**J 6G**	ND (<12)		ND (<11)	UJ 4A	**2.2**	**J 6G**	**9.3**		**4.3**	**J 6G**	**19**		**1.4**	**J 6G**
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.53)		ND (<0.52)		ND (<9.9)		ND (<9.0)	UJ 4A	ND (<0.51)		ND (<0.48)		ND (<0.50)		ND (<0.50)		ND (<0.52)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**4.7**	**J 6G**	**22**		**110**	**J 6G**	**120**	**J- 4A, 6G**	**22**		**99**		**29**		**150**		**9.5**	
o-Xylene	3,300	15,000	µg/m^3	**1.9**	**J 6G**	**9.5**		**31**	**J 6G**	**34**	**J- 4A, 6G**	**7.3**	**J 6G**	**29**		**12**		**56**		**3.9**	**J 6G**
Total Xylenes	NE	NE	µg/m^3	**6.6**	**J 6G**	**32**		**140**	**J 6G**	**160**	**J- 4A, 6G**	**30**		**130**		**41**		**210**		**13**	**J 6G**
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**1,800**		**610**		**9,500**		**10,000**	**J- 4A**	**380**		**3,400**		**810**		**2,700**		**350**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**1,800**		**610**		**9,500**		**10,000**	**J- 4A**	**380**		**3,400**		**810**		**2,700**		**350**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
(Page 4 of 8)

				VW38A		VW39A		VW40A		VW41A		VW41A		VW42A		VW42A		VW43A		VW44A	
Location ID				VW38A		VW39A		VW40A		VW41A		VW41A		VW42A		VW42A		VW43A		VW44A	
Sampling Date/Time				12/4/2020 13:45		12/3/2020 9:14		12/2/2020 8:55		12/4/2020 11:10		12/4/2020 11:10		12/2/2020 10:59		3/4/2021 13:55		12/22/2020 13:08		12/22/2020 12:08	
Sample Depth (feet)				5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
Sample Type				N		N		N		N		N		N		N		N		N	
Field Sample ID				SG-VW38A-01		SG-VW39A-01		SG-VW40A-01		SG-VW41A-01		SG-VW41A-02		SG-VW42A-01		SG-VW42A-02		SG-VW43A-01		SG-VW44A-01	
Lab Sample ID				2035587-09		2035539-03		2035335-05		2035587-06		2035587-07		2035335-10		2107220-08		2037849-10		2037849-08	
Status				*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**6.2**	**J 6G**	**5.2**	**J 6G**	**5.3**	**J 6G**	**99**		**93**		ND (<64)		**2.1**	**J 6G**	**4.3**	**J 6G**	**140**	
Benzene	3.2	14	µg/m^3	ND (<0.34)		ND (<0.33)		**6.0**		**3.2**		**3.4**		ND (<31)		ND (<0.31)		**1.8**	**J 6G**	**7.6**	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.74)		ND (<0.70)		ND (<0.73)		ND (<0.70)		ND (<0.70)		ND (<67)		ND (<0.72)		ND (<0.69)		ND (<0.67)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<100)		ND (<1.1)		ND (<1.1)		ND (<1.0)	
Carbon Disulfide	24,000	100,000	µg/m^3	**1.6**	**J 6G**	**2.2**	**J 6G**	**1.4**	**J 6G**	**5.5**		**5.9**		ND (<28)		ND (<0.30)		**4.5**		**13**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.74)		ND (<0.70)		ND (<0.73)		ND (<0.70)		ND (<0.70)		ND (<67)		ND (<0.72)		ND (<0.69)		ND (<0.67)	
Chloroform	4.0	18	µg/m^3	ND (<0.89)		**3.0**	**J 6G**	ND (<0.87)		ND (<0.84)		ND (<0.84)		ND (<80)		ND (<0.86)		ND (<0.83)		**20**	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.34)		ND (<0.33)		ND (<0.34)		ND (<0.33)		ND (<0.33)		ND (<31)		ND (<0.34)		ND (<0.32)		ND (<0.31)	
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.62)		ND (<0.59)		ND (<0.62)		ND (<0.59)		ND (<0.59)		ND (<56)		ND (<0.61)		ND (<0.58)		ND (<0.57)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.95)		ND (<0.90)		ND (<0.94)		ND (<0.90)		ND (<0.90)		ND (<86)		ND (<0.93)		ND (<0.89)		ND (<0.86)	
Dibromomethane	140	600	µg/m^3	ND (<0.93)		ND (<0.88)		ND(<0.92)		ND (<0.88)		ND (<0.88)		ND (<84)		ND (<0.91)		ND (<0.87)		ND (<0.85)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**2.7**	**J 6G**	ND (<0.70)		**2.5**	**J 6G**	**2.6**	**J 6G**	**2.7**	**J 6G**	ND (<67)		**3.0**	**J 6G**	**3.1**	**J 6G**	**4.3**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.43)		ND (<0.40)		ND (<0.42)		ND (<0.40)		ND (<0.40)		ND (<38)		ND (<0.42)		ND (<0.40)		ND (<0.39)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		ND (<0.51)		ND (<0.49)		ND (<0.48)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.44)		ND (<0.42)		ND (<0.44)		ND (<0.42)		ND (<0.42)		ND (<40)		ND (<0.43)		ND (<0.41)		ND (<0.40)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		ND (<0.51)		ND (<0.49)		ND (<0.48)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<3.3)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.1)		ND (<300)		ND (<3.2)		ND (<3.1)		ND (<3.0)	
Ethanol	NE	NE	µg/m^3	ND (<0.69)	UJ 3D	**2.0**	**J 6G**	ND (<0.68)		**11**	**J 3D**	**7.4**	**J 3D**	ND (<62)		**1.4**	**J 6G**	ND (<0.64)		**3.8**	
Ethylbenzene	37	160	µg/m^3	**3.8**	**J 6G**	**4.0**	**J 6G**	**42**		**8.1**		**7.7**	**J 6G**	ND (<47)		ND (<0.51)		**3.6**	**J 6G**	**9.4**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**3.0**	**J 6G**	**2.7**	**J 6G**	**25**		**7.4**	**J 6G**	**6.7**	**J 6G**	ND (<44)		ND (<0.48)		**4.9**	**J 6G**	**8.2**	
n-Heptane	14,000	60,000	µg/m^3	ND (<0.56)		ND (<0.53)		**3.9**		ND (<0.53)		**1.1**	**J 6G**	ND (<50)		ND (<0.54)		ND (<0.52)		**2.1**	**J 6G**
Hexane	24,000	100,000	µg/m^3	ND (<0.33)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.31)		**2,300**		ND (<0.32)		ND (<0.31)		ND (<0.30)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.48)		ND (<0.45)		ND (<0.47)		ND (<0.45)		ND (<0.45)		ND (<43)		ND (<0.46)		ND (<0.44)		ND (<0.43)	
Isooctane	NE	NE	µg/m^3	ND (<0.57)		ND (<0.54)		**1.2**	**J 6G**	ND (<0.54)		ND (<0.54)		ND (<52)		ND (<0.56)		ND (<0.54)		**2.4**	**J 6G**
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		**0.87**	**J 6G**	ND (<0.49)		ND (<0.48)	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**2.1**	**J 6G**	**1.3**	**J 6G**	**1.6**	**J 6G**	**99**		**100**		ND (<28)		ND (<0.30)		**2.0**	**J 6G**	**80**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	ND (<0.43)		ND (<0.40)		ND (<0.42)		**6.7**	**J 6G**	**7.4**	**J 6G**	ND (<38)		ND (<0.42)		ND (<0.40)		**5.6**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.46)		ND (<0.43)		ND (<0.45)		ND (<0.43)		ND (<0.43)		ND (<41)		ND (<0.45)		ND (<0.43)		ND (<0.42)	
Naphthalene	2.8	12	µg/m^3	**9.7**	**J 6G**	ND (<2.2)		ND (<2.3)		**9.6**	**J 6G**	**9.4**	**J 6G**	ND (<210)		ND (<2.2)		ND (<2.1)		ND (<2.1)	
Propylene	100,000	430,000	µg/m^3	ND (<0.41)		ND (<0.39)		ND (<0.40)		ND (<0.39)		ND (<0.39)		ND (<37)		ND (<0.40)		ND (<0.38)		ND (<0.37)	
Styrene	31,000	130,000	µg/m^3	ND (<0.39)		ND (<0.37)		ND (<0.39)		ND (<0.37)		ND (<0.37)		**310**	**J 6G**	ND (<0.38)		ND (<0.37)		ND (<0.36)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**37**		**30**		**3.3**	**J 6G**	**12**		**12**		ND (<74)		**6.7**	**J 6G**	**5.5**	**J 6G**	**9.1**	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<99)		ND (<1.1)		ND (<1.0)		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	**0.77**	**J 6G**	**1.4**	**J 6G**	ND (<0.44)		**5.9**		**6.9**		ND (<40)		ND (<0.43)		**2.3**	**J 6G**	**8.1**	
Toluene	10,000	43,000	µg/m^3	**27**		**570**		**130**		**710**		**720**		**5,700**		**5.1**		**12**		**69**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (<0.64)		ND (<0.60)		ND (<0.63)		ND (<0.60)		ND (<0.60)		ND (<58)		ND (<0.62)		ND (<0.60)		ND (<0.58)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.89)		ND (<0.84)		ND (<0.87)		**0.92**	**J 6G**	**0.92**	**J 6G**	ND (<80)		ND (<0.86)		ND (<0.83)		**5.5**	**J 6G**
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	**1.4**	**J 6G**	ND (<0.73)		**1.3**	**J 6G**	**1.3**	**J 6G**	**1.4**	**J 6G**	ND (<70)		ND (<0.75)		ND (<0.72)		**2.3**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.90)		ND (<0.85)		ND (<0.89)		ND (<0.85)		ND (<0.85)		ND (<81)		ND (<0.88)		ND (<0.84)		ND (<0.82)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**5.6**	**J 6G**	**4.0**	**J 6G**	**27**		**12**		**12**		ND (<59)		ND (<0.64)		**7.2**	**J 6G**	**11**	
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	**1.6**	**J 6G**	**1.8**	**J 6G**	**6.8**	**J 6G**	**2.7**	**J 6G**	**3.1**	**J 6G**	ND (<59)		ND (<0.64)		**2.2**	**J 6G**	**3.9**	**J 6G**
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.54)		ND (<0.51)		ND (<0.53)		**1.4**	**J 6G**	ND (<0.51)		ND (<49)		ND (<0.53)		ND (<0.50)		ND (<0.49)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**17**		**15**		**84**		**35**		**29**		ND (<90)		ND (<0.98)		**14**		**35**	
o-Xylene	3,300	15,000	µg/m^3	**7.0**	**J 6G**	**7.0**	**J 6G**	**18**		**11**		**9.8**		ND (<44)		ND (<0.48)		**4.3**	**J 6G**	**11**	
Total Xylenes	NE	NE	µg/m^3	**24**		**22**		**100**		**47**		**39**		ND (<130)		ND (<1.5)		**19**		**46**	
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**280**	**J 6G**	**1,000**		**560**		**960**		**990**		**63,000**		**91**	**J 6G**	**220**	**J 6G**	**810**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**280**	**J 6G**	**1,000**		**560**		**960**		**990**		**63,000**		**91**	**J 6G**	**220**	**J 6G**	**810**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
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				VW45A		VW45A		VW46A		VW47A		VW48A		VW48A		VW49A		VW49A	
Location ID				VW45A		VW45A		VW46A		VW47A		VW48A		VW48A		VW49A		VW49A	
Sampling Date/Time				12/23/2020 8:54		3/3/2021 12:40		12/23/2020 9:59		12/23/2020 10:49		12/23/2020 12:07		3/3/2021 13:50		12/23/2020 12:59		3/3/2021 14:45	
Sample Depth (feet)				5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
Sample Type				N		N		N		N		N		N		N		N	
Field Sample ID				SG-VW45A-01		SG-VW45A-02		SG-VW46A-01		SG-VW47A-01		SG-VW48A-01		SG-VW48A-02		SG-VW49A-01		SG-VW49A-02	
Lab Sample ID				2037849-17		2107220-01		2037849-19		2037849-21		2037849-23		2107220-02		2037849-25		2107220-03	
Status				*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**250**		**2.1**	**J 6G**	**56**		**6.4**	**J 6G**	**14**		**2.1**	**J 6G**	**18**		**1.7**	**J 6G**
Benzene	3.2	14	µg/m^3	**17**		ND (<0.35)		**1.8**	**J 6G**	ND (<0.32)		ND (<0.32)		ND (<0.33)		**1.0**	**J 6G**	ND (<0.32)	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.70)		ND (<0.75)		ND (<0.68)		ND (<0.68)		ND (<0.69)		ND (<0.71)		ND (<0.70)		ND (<0.68)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		**3.9**	**J 6G**	ND (<1.0		ND (<1.0		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)	
Carbon Disulfide	24,000	100,000	µg/m^3	**20**		ND (<0.32)		**8.1**		**4.4**		**4.5**		**1.3**	**J 6G**	**4.1**		**1.1**	**J 6G**
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.70)		ND (<0.75)		ND (<0.68)		ND (<0.68)		ND (<0.69)		ND (<0.71)		ND (<0.70)		ND (<0.68)	
Chloroform	4.0	18	µg/m^3	**2.4**	**J 6G**	ND (<0.90)		ND (<0.81)		ND (<0.81)		**3.5**	**J 6G**	**5.4**	**J 6G**	**4.7**	**J 6G**	**7.6**	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.33)		ND(<0.35)		ND (<0.32)		ND (<0.32)		ND (<0.32)		ND (<0.33)		ND (<0.33)		ND (<0.32)	
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.59)		ND (<0.63)		ND (<0.57)		ND (<0.57)		ND (<0.58)		ND (<0.60)		ND (<0.59)		ND (<0.58)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.90)		**4.0**	**J 6G**	ND (<0.87)		ND (<0.87)		ND (<0.89)		**2.8**	**J 6G**	ND (<0.90)		ND (<0.88)	
Dibromomethane	140	600	µg/m^3	ND (<0.88)		ND (<0.95)		ND (<0.86)		ND (<0.86)		ND (<0.87)		ND (<0.90)		ND (<0.89)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**2.9**	**J 6G**	**2.8**	**J 6G**	**2.8**	**J 6G**	**2.7**	**J 6G**	**2.9**	**J 6G**	**2.7**	**J 6G**	**3.0**	**J 6G**	**2.8**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.40)		ND (<0.43)		ND (<0.39)		ND (<0.39)		ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.50)		ND (<0.53)		ND (<0.48)		ND (<0.48)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.49)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.42)		ND (<0.45)		ND (<0.40)		ND (<0.40)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.41)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.50)		ND (<0.53)		ND (<0.48)		ND (<0.48)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.49)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<3.1)		ND (<3.3)		ND (<3.0)		ND (<3.0)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.0)	
Ethanol	NE	NE	µg/m^3	**3.5**		**4.6**		**2.0**	**J 6G**	**2.0**	**J 6G**	**2.8**	**J 6G**	**2.2**	**J 6G**	**3.9**		**2.6**	**J 6G**
Ethylbenzene	37	160	µg/m^3	**24**		ND (<0.53)		**5.6**	**J 6G**	ND (<0.48)		**5.2**	**J 6G**	ND (<0.51)		**3.3**	**J 6G**	ND (<0.49)	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**25**		ND (<0.50)		**5.6**	**J 6G**	ND (<0.45)		**6.4**	**J 6G**	**29**		**2.0**	**J 6G**	ND (<0.46)	
n-Heptane	14,000	60,000	µg/m^3	**5.0**		ND (<0.56)		ND (<0.51)		ND (<0.51)		ND (<0.52)		ND (<0.54)		ND (<0.53)		ND (<0.52)	
Hexane	24,000	100,000	µg/m^3	ND (<0.31)		ND (<0.33)		ND (<0.30)		ND (<0.30)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.30)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.45)		ND (<0.48)		ND (<0.44)		ND (<0.44)		ND (<0.44)		ND (<0.46)		**2.5**	**J 6G**	ND (<0.44)	
Isooctane	NE	NE	µg/m^3	**5.0**	**J 6G**	ND (<0.58)		ND (<0.52)		ND (<0.52)		ND (<0.54)		ND (<0.55)		ND (<0.55)		ND (<0.53)	
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	ND (<0.50)		**0.84**	**J 6G**	ND (<0.48)		ND (<0.48)		**1.4**	**J 6G**	ND (<0.51)		ND (<0.50)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**160**		ND (<0.32)		**43**		**2.8**	**J 6G**	**19**		ND (<0.30)		**13**		ND (<0.29)	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	**6.1**	**J 6G**	ND (<0.43)		**3.4**	**J 6G**	ND (<0.39)		**4.8**	**J 6G**	ND (<0.41)		**2.4**	**J 6G**	ND (<0.40)	
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.43)		ND (<0.46)		ND (<0.42)		ND (<0.42)		ND (<0.43)		ND (<0.44)		ND (<0.44)		ND (<0.43)	
Naphthalene	2.8	12	µg/m^3	ND (<2.2)		ND (<2.3)		ND (<2.1)		ND (<2.1)		ND (<2.1)		**70**		ND (<2.2)		ND (<2.1)	
Propylene	100,000	430,000	µg/m^3	ND (<0.39)		ND (<0.42)		ND (<0.38)		ND (<0.38)		ND (<0.38)		ND (<0.40)		ND (<0.39)		ND (<0.38)	
Styrene	31,000	130,000	µg/m^3	**2.6**	**J 6G**	ND (<0.40)		ND (<0.36)		ND (<0.36)		ND (<0.37)		ND (<0.38)		ND (<0.37)		ND (<0.36)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**5.1**	**J 6G**	**8.6**		**5.3**	**J 6G**	**9.5**		**35**		**29**		**54**		**55**	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	**8.7**		ND (<0.45)		**4.2**		ND (<0.40)		**5.8**		ND (<0.43)		**3.5**		ND (<0.41)	
Toluene	10,000	43,000	µg/m^3	**130**		**2.0**	**J 6G**	**33**		**7.0**		**18**		**1.9**	**J 6G**	**14**		ND (<0.41)	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (<0.60)		ND (<0.65)		ND (<0.58)		ND (<0.58)		ND (<0.60)		ND (<0.62)		ND (<0.61)		ND (<0.59)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.84)		**2.0**	**J 6G**	ND (<0.81)		ND (<0.81)		ND (<0.83)		ND (<0.85)		ND (<0.84)		ND (<0.82)	
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	**1.7**	**J 6G**	ND (<0.78)		ND (<0.70)		ND (<0.70)		ND (<0.72)		ND (<0.74)		ND (<0.73)		ND (<0.71)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.85)		ND (<0.91)		ND (<0.82)		ND (<0.82)		ND (<0.84)		ND (<0.87)		ND (<0.86)		ND (<0.84)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**35**		ND (<0.66)		**8.3**		ND (<0.60)		**10**		**160**		**3.5**	**J 6G**	ND (<0.61)	
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	**11**		ND (<0.66)		**2.9**	**J 6G**	ND (<0.60)		**3.0**	**J 6G**	**32**		ND (<0.62)		ND (<0.61)	
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.51)		ND (<0.55)		ND (<0.50)		ND (<0.50)		ND (<0.50)		ND (<0.52)		ND (<0.51)		ND (<0.50)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**94**		**3.2**	**J 6G**	**23**		ND (<0.92)		**20**		**2.8**	**J 6G**	**7.6**	**J 6G**	ND (<0.93)	
o-Xylene	3,300	15,000	µg/m^3	**29**		ND (<0.50)		**7.9**		**1.7**	**J 6G**	**7.5**	**J 6G**	**1.6**	**J 6G**	**4.7**	**J 6G**	ND (<0.46)	
Total Xylenes	NE	NE	µg/m^3	**120**		**3.2**	**J 6G**	**31**		**1.7**	**J 6G**	**27**		**4.4**	**J 6G**	**12**	**J 6G**	ND (<1.4)	
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**2,800**		**94**	**J 6G**	**510**		**130**	**J 6G**	**410**		**2,800**		**190**	**J 6G**	**120**	**J 6G**
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**2,800**		**94**	**J 6G**	**510**		**130**	**J 6G**	**410**		**2,800**		**190**	**J 6G**	**120**	**J 6G**

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)
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				VW50A		VW50A		VW51A		VW52A		VW53A		VW53A		VW54A		VW55A	
Location ID				VW50A		VW50A		VW51A		VW52A		VW53A		VW53A		VW54A		VW55A	
Sampling Date/Time				12/23/2020 13:55		12/23/2020 13:55		12/23/2020 15:07		12/22/2020 11:13		12/29/2020 12:00		12/29/2020 12:00		12/29/2020 13:35		12/29/2020 14:55	
Sample Depth (feet)				5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
Sample Type				N		FD		N		N		N		FD		N		N	
Field Sample ID				SG-VW50A-01		SG-VW50A-02		SG-VW51A-01		SG-VW52A-01		SG-VW53A-01		SG-VW53A-02		SG-VW54A-01		SG-VW55A-01	
Lab Sample ID				2037849-27		2037849-28		2037849-30		2037849-06		2100036-09		2100036-10		2100036-12		2100036-14	
Status				*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**110**		**100**		**320**		**64**		**13**	J 3D	**34**	J 3D	**15**		**180**	
Benzene	3.2	14	µg/m^3	**2.0**	J 6G	**1.9**	J 6G	**4.2**		**1.5**	J 6G	ND (<0.34)		**1.7**	J 6G	**37**		**5.2**	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.68)		ND (<0.68)		ND (<0.73)		ND (<0.69)		ND (<0.72)		ND (<0.70)		ND (<0.72)		ND (<0.69)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)	
Carbon Disulfide	24,000	100,000	µg/m^3	**5.6**		**5.8**		**4.4**		**10**		**11**		**12**		**72**		**7.4**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.68)		ND (<0.68)		ND (<0.73)		ND (<0.69)		ND (<0.72)		ND (<0.70)		ND (<0.72)		ND (<0.69)	
Chloroform	4.0	18	µg/m^3	**2.6**	J 6G	**1.7**	J 6G	ND (<0.88)		**9.0**		ND (<0.86)		ND (<0.84)		**6.7**	J 6G	ND (<0.83)	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.32)		ND (<0.32)		ND (<0.34)		ND (<0.32)		ND (<0.34)		ND (<0.33)		ND (<0.34)		ND (<0.32)	
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.58)		ND (<0.57)		ND (<0.62)		ND (<0.58)		ND (<0.61)		ND (<0.59)		**5.8**		ND (<0.58)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.88)		ND (<0.87)		ND (<0.95)		ND (<0.89)		ND (<0.93)		ND (<0.90)		ND (<0.93)		ND (<0.89)	
Dibromomethane	140	600	µg/m^3	ND (<0.87)		ND (<0.86)		ND (<0.93)		ND (<0.87)		ND (<0.91)		ND (<0.88)		ND (<0.91)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**2.9**	J 6G	**3.0**	J 6G	**2.9**	J 6G	**46**		**26**		**28**		**43**		**2.8**	J 6G
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.40)		ND (<0.39)		ND (<0.42)		ND (<0.40)		ND (<0.42)		ND (<0.40)		**1.3**	J 6G	ND (<0.40)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.49)		ND (<0.48)		ND (<0.52)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.51)		ND (<0.49)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.41)		ND (<0.40)		ND (<0.44)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.43)		ND (<0.41)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.49)		ND (<0.48)		ND (<0.52)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.51)		ND (<0.49)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	**11**		**8.1**		ND (<3.3)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.2)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	**11**		**8.6**		**28**		**6.5**		**6.1**	J 3D	**49**	J 3D	ND		**2.1**	J 6G
Ethylbenzene	37	160	µg/m^3	**8.3**		**8.2**		**9.9**		**5.0**	J 6G	**4.3**	J 6G	**7.3**	J 6G	**38**		**6.7**	J 6G
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**8.9**		**8.9**		**8.6**		**7.6**		**4.9**	J 6G	**6.2**	J 6G	**32**		**6.1**	J 6G
n-Heptane	14,000	60,000	µg/m^3	ND (<0.52)		ND (<0.51)		ND (<0.55)		ND (<0.52)		ND (<0.54)		ND (<0.53)		ND (<0.54)		ND (<0.52)	
Hexane	24,000	100,000	µg/m^3	ND (<0.30)		ND (<0.30)		ND (<0.33)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.32)		ND (<0.31)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.44)		ND (<0.44)		ND (<0.47)		ND (<0.44)		ND (<0.46)		ND (<0.45)		ND (<0.46)		ND (<0.44)	
Isooctane	NE	NE	µg/m^3	ND (<0.53)		ND (<0.52)		ND (<0.57)		ND (<0.54)		ND (<0.56)		ND (<0.54)		**9.2**		ND (<0.54)	
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	ND (<0.49)		**2.8**	J 6G	ND (<0.52)		ND (<0.49)		ND (<0.51)	UJ 3D	**10**	J 3D	ND (<0.51)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**100**		**99**		**130**		**40**		**6.8**	J 3D	**26**	J 3D	**13**		**100**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	**8.8**		**8.9**		**4.2**	J 6G	**3.8**	J 6G	ND (<0.42)		**2.1**	J 6G	**2.5**	J 6G	**4.7**	J 6G
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.43)		ND (<0.42)		ND (<0.46)		ND (<0.43)		ND (<0.45)		ND (<0.43)		ND (<0.45)		ND (<0.43)	
Naphthalene	2.8	12	µg/m^3	ND (<2.1)		ND (<2.1)		ND (<2.3)		ND (<2.1)		ND (<2.2)		**4.9**	J 6G	ND (<2.2)		ND (<2.1)	
Propylene	100,000	430,000	µg/m^3	ND (<0.38)		ND (<0.38)		ND (<0.41)		ND (<0.38)		ND (<0.40)		ND (<0.39)		**100**		ND (<0.38)	
Styrene	31,000	130,000	µg/m^3	ND (<0.36)		ND (<0.36)		ND (<0.39)		ND (<0.37)		ND (<0.38)		ND (<0.37)		ND (<0.38)		ND (<0.37)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**71**		**71**		**23**		**140**		**42**		**45**		**29**		ND (<0.76)	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<1.0)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	**10**		**11**		**9.5**		**2.9**	J 6G	**1.8**	J 3D, 6G	**4.9**	J 3D	**5.0**		**7.8**	
Toluene	10,000	43,000	µg/m^3	**39**		**39**		**51**		**19**		**13**	J 3D	**22**	J 3D	**280**		**46**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (<0.59)		ND (<0.58)		ND (<0.64)		ND (<0.60)		ND (<0.62)		ND (<0.60)		ND (<0.62)		ND (<0.60)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.82)		ND (<0.81)		ND (<0.88)		ND (<0.83)		ND (<0.86)		ND (<0.84)		ND (<0.86)		ND (<0.83)	
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	ND (<0.71)		ND (<0.70)		ND (<0.77)		**7.6**		ND (<0.75)		**1.9**	J 6G	**2.5**	J 6G	ND (<0.72)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.84)		ND (<0.82)		ND (<0.90)		ND (<0.84)		ND (<0.88)		ND (<0.85)		ND (<0.88)		ND (<0.84)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**14**		**14**		**12**		**11**		**7.4**	J 6G	**9.1**		**41**		**9.3**	
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	**4.0**	J 6G	**4.3**	J 6G	**3.7**	J 6G	**3.1**	J 6G	**2.3**	J 6G	**2.8**	J 6G	**14**		**2.8**	J 6G
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.54)		ND (<0.50)		ND (<0.53)		ND (<0.51)		ND (<0.53)		ND (<0.50)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**32**		**32**		**37**		**20**		**15**	J 3D	**22**	J 3D	**150**		**26**	
o-Xylene	3,300	15,000	µg/m^3	**12**		**12**		**12**		**7.0**	J 6G	**5.6**	J 3D, 6G	**7.7**	J 3D, 6G	**42**		**8.6**	
Total Xylenes	NE	NE	µg/m^3	**44**		**43**		**49**		**27**		**21**	J 3D	**29**	J 3D	**190**		**34**	
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**710**		**730**		**870**		**620**		**330**	J 3D	**490**	J 3D	**3,000**		**610**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**710**		**730**		**870**		**620**		**330**	J 3D	**490**	J 3D	**3,000**		**610**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)

			Location ID	VW56A		VW57A		SVM-1		SVM-1		SVM-2		SVM-2		SVM-3		SVM-3	
			Sampling Date/Time	12/30/2020 12:50		12/30/2020 11:40		11/16/2020 12:40		3/3/2021 9:45		11/16/2020 12:55		3/3/2021 10:05		11/16/2020 13:10		3/3/2021 10:20	
			Sample Depth (feet)	5.5		5.5		4		4		5		5		4		4	
			Sample Type	N		N		N		N		N		N		N		N	
			Field Sample ID	SG-VW56A-01		SG-VW57A-01		SVM-1-5		SVM-1-5		SVM-2-5		SVM-2-5		SVM-3-5		SVM-3-5	
			Lab Sample ID	2100036-23		2100036-20		2033822-09		2107219-09		2033822-11		2107219-11		2033822-13		2107219-13	
			Status	*Validated*		*Validated*		*Not Validated*		*Validated*		*Not Validated*		*Validated*		*Not Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	1,100,000	4,700,000	µg/m^3	**5.9**	**J- 4D, 6G**	**9.1**		NA		ND (<65)		NA		**3.3**	**J 6G**	NA		**25**	
Benzene	3.2	14	µg/m^3	**13**	**J- 4D**	**2.0**	**J 6G**	NA		ND (<32)		NA		ND (<0.32)		NA		ND (<0.33)	
Bromodichloromethane	2.5	11	µg/m^3	ND (<0.66)	UJ 4D	ND (<0.70)		NA		ND (<68)		NA		ND (<0.69)		NA		ND (<0.70)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.0)	UJ 4D	ND (<1.1)		NA		ND (<110)		NA		**1.4**	**J 6G**	NA		**2.1**	**J 6G**
Carbon Disulfide	24,000	100,000	µg/m^3	**3.4**	**J- 4D**	**4.9**		NA		ND (<29)		NA		ND (<0.29)		NA		**3.3**	
Carbon Tetrachloride	16	67	µg/m^3	ND (<0.66)	UJ 4D	ND (<0.70)		NA		ND (<68)		NA		ND (<0.69)		NA		ND (<0.70)	
Chloroform	4.0	18	µg/m^3	ND (<0.79)	UJ 4D	ND (<0.84)		NA		ND (<82)		NA		ND (<0.83)		NA		ND (<0.84)	
Chloromethane	3,100	13,000	µg/m^3	ND (<0.31)	UJ 4D	ND (<0.33)		NA		ND (<32)		NA		ND (<0.32)		NA		**1.0**	**J 6G**
Cyclohexane	210,000	870,000	µg/m^3	ND (<0.56)	UJ 4D	**9.8**		NA		ND (<58)		NA		ND (<0.58)		NA		ND (<0.59)	
1,2-Dibromoethane	0.16	0.67	µg/m^3	ND (<0.85)	UJ 4D	ND (<0.90)		NA		ND (<88)		NA		ND (<0.89)		NA		ND (<0.90)	
Dibromomethane	140	600	µg/m^3	ND (<0.84)	UJ 4D	ND (<0.89)		NA		ND (<87)		NA		ND (<0.87)		NA		ND (<0.89)	
Dichlorodifluoromethane (Freon 12)	3,300	15,000	µg/m^3	**3.1**	**J- 4D, 6G**	ND (<0.70)		NA		ND (<68)		NA		**3.4**	**J 6G**	NA		**3.2**	**J 6G**
1,2-Dichloroethane	3.7	16	µg/m^3	ND (<0.38)	UJ 4D	ND (<0.41)		NA		ND (<40)		NA		ND (<0.40)		NA		ND (<0.41)	
***cis*-1,2-Dichloroethene**	280	1,200	µg/m^3	ND (<0.47)	UJ 4D	ND (<0.50)		**47,000**		**35,000**		ND (<5.2)		ND (<0.49)		ND (<5.1)		ND (<0.50)	
trans-1,2-Dichloroethene	2,800	12,000	µg/m^3	ND (<0.40)	UJ 4D	ND (<0.42)		ND (<430)		**200**	**J 6G**	ND (<4.4)		ND (<0.41)		ND (<4.3)		ND (<0.42)	
1,2-Dichloropropane	25	110	µg/m^3	ND (<0.47)	UJ 4D	ND (<0.50)		NA		**600**	**J 6G**	NA		ND (<0.49)		NA		ND (<0.50)	
1,1-Difluoroethane	1,400,000	6,000,000	µg/m^3	ND (<2.9)	UJ 4D	ND (<3.1)		NA		ND (<300)		NA		ND (<3.1)		NA		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	**3.5**	**J- 4D**	**13**		NA		ND (<64)		NA		**4.5**		NA		**87**	
Ethylbenzene	37	160	µg/m^3	**9.7**	**J- 4D**	**5.0**	**J 6G**	NA		ND (<49)		NA		ND (<0.49)		NA		**3.8**	**J 6G**
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**1.9**	**J- 4D, 6G**	**3.1**	**J 6G**	NA		ND (<46)		NA		ND (<0.46)		NA		ND (<0.47)	
n-Heptane	14,000	60,000	µg/m^3	**3.8**	**J- 4D**	**1.8**	**J 6G**	NA		ND (<52)		NA		ND (<0.52)		NA		ND (<0.53)	
Hexane	24,000	100,000	µg/m^3	ND (<0.29)	UJ 4D	**7.0**	**J 6G**	NA		ND (<30)		NA		ND (<0.31)		NA		ND (<0.31)	
2-Hexanone	1,000	4,300	µg/m^3	ND (<0.43)	UJ 4D	ND (<0.45)		NA		ND (<44)		NA		ND (<0.44)		NA		ND (<0.45)	
Isooctane	NE	NE	µg/m^3	ND (<0.51)	UJ 4D	ND (<0.55)		NA		ND (<53)		NA		ND (<0.54)		NA		ND (<0.55)	
Isopropyl Alcohol (2-Propanol)	7,000	29,000	µg/m^3	**94**	**J- 4D**	ND (<0.50)		ND (<510)		ND (<49)		ND (<5.2)		**0.81**	**J 6G**	ND (<5.1)		**30**	
Methyl Ethyl Ketone (2-Butanone)	170,000	730,000	µg/m^3	**1.7**	**J- 4D, 6G**	**6.9**		NA		ND (<29)		NA		ND (<0.29)		NA		**32**	
Methyl Isobutyl Ketone	100,000	430,000	µg/m^3	ND (<0.38)	UJ 4D	ND (<0.41)		NA		ND (<40)		NA		ND (<0.40)		NA		**3.1**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	370	1,600	µg/m^3	ND (<0.41)	UJ 4D	ND (<0.44)		NA		ND (<43)		NA		ND (<0.43)		NA		ND (<0.44)	
Naphthalene	2.8	12	µg/m^3	ND (<2.1)	UJ 4D	ND (<2.2)		NA		ND (<210)		NA		ND (<2.1)		NA		ND (<2.2)	
Propylene	100,000	430,000	µg/m^3	ND (<0.37)	UJ 4D	ND (<0.39)		NA		ND (<38)		NA		ND (<0.38)		NA		ND (<0.39)	
Styrene	31,000	130,000	µg/m^3	ND (<0.35)	UJ 4D	ND (<0.37)		NA		ND (<36)		NA		ND (<0.37)		NA		ND (<0.37)	
Tetrachloroethene (PCE)	15	67	µg/m^3	**8.6**	**J- 4D**	**18**		**1,200,000**		**320,000**		ND (<8.2)		**15**		**110**		**39**	
1,1,1,2-Tetrafluoroethane	2,800,000	12,000,000	µg/m^3	ND (<0.98)	UJ 4D	ND (<1.0)		NA		ND (<100)		NA		ND (<1.0)		NA		ND (<1.0)	
Tetrahydrofuran	70,000	290,000	µg/m^3	ND (<0.40)	UJ 4D	**1.2**	**J 6G**	NA		ND (<41)		NA		ND (<0.41)		NA		**10**	
Toluene	10,000	43,000	µg/m^3	**14**	**J- 4D**	**13**		NA		ND (<41)		NA		ND (<0.41)		NA		**7.9**	
1,1,1-Trichloroethane	33,000	150,000	µg/m^3	ND (<0.57)	UJ 4D	ND (<0.61)		ND (<620)		ND (<59)		ND (<6.4)		ND (<0.60)		ND (<6.2)		ND (<0.61)	
Trichloroethene (TCE)	16	100	µg/m^3	ND (<0.79)	UJ 4D	ND (<0.84)		**16,000**		**15,000**		ND (<8.9)		ND (<0.83)		ND (<8.6)		ND (<0.84)	
Trichlorofluoromethane (Freon 11)	43,000	180,000	µg/m^3	ND (<0.69)	UJ 4D	ND (<0.73)		NA		ND (<71)		NA		**1.8**	**J 6G**	NA		ND (<0.73)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	170,000	730,000	µg/m^3	ND (<0.81)	UJ 4D	ND (<0.86)		NA		ND (<84)		NA		ND (<0.84)		NA		ND (<0.86)	
1,2,4-Trimethylbenzene	2,100	8,700	µg/m^3	**2.7**	**J- 4D, 6G**	**4.0**	**J 6G**	NA		ND (<61)		NA		ND (<0.61)		NA		**2.3**	**J 6G**
1,3,5-Trimethylbenzene	2,100	8,700	µg/m^3	ND (<0.59)	UJ 4D	ND (<0.62)		NA		ND (<61)		NA		ND (<0.61)		NA		ND (<0.62)	
Vinyl Acetate	7,000	29,000	µg/m^3	ND (<0.49)	UJ 4D	ND (<0.51)		NA		ND (<50)		NA		ND (<0.50)		NA		ND (<0.51)	
p- & *m*-Xylenes	3,300	15,000	µg/m^3	**14**	**J- 4D**	**13**		NA		ND (<93)		NA		ND (<0.93)		NA		**9.0**	
o-Xylene	3,300	15,000	µg/m^3	**3.3**	**J- 4D, 6G**	**4.1**	**J 6G**	NA		ND (<46)		NA		ND (<0.46)		NA		**2.9**	**J 6G**
Total Xylenes	NE	NE	µg/m^3	**17**	**J- 4D**	**17**		NA		ND (<140)		NA		ND (<1.4)		NA		**12**	**J 6G**
TPH - Gasoline	20,000[b]	83,000[b]	µg/m^3	**200**	**J- 4D, 6G**	**400**		NA		**500,000**		NA		**51**	**J 6G**	NA		**520**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**200**	**J- 4D, 6G**	**400**		NA		**500,000**		NA		**51**	**J 6G**	NA		**520**	

TABLE 4-3. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.03 ATTENUATION FACTOR)

Notes:

Only analytes detected in one or more samples are shown.
Analytes detected above one or both SVSLs are shown in **bold**.
Concentrations detected above the laboratory MDL are shown in **bold**.
For non-detects, the value in parentheses corresponds to the laboratory MDL.
Sample depths are referenced to the top of soil (bottom of pavement).
Concentration exceeds residential SVSL.
Concentration exceeds residential and commercial/industrial SVSL.
ND (<MDL) Black inversed cell indicates a non-detect with a laboratory MDL exceeding the commercial/industrial SVSL and/or residential SVSL.
[a] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC 2020) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).
[b] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air screening levels (SWRCB, 2019) by a 0.03 soil vapor attenuation factor (CalEPA, 2020).
< = less than
µg/m^3 = micrograms per cubic meter
CalEPA = California Environmental Protection Agency
DTSC = California Department of Toxic Substances Control
FD = field duplicate sample
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
ID = identification
MDL = method detection limit
N = normal sample
ND = not detected above the laboratory MDL
PQL = practical quantitation limit
QA = quality assurance data validation qualifier
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB= California State Water Resources Control Board

Data Validation Qualifier Definitions:

J = estimated result
J- = estimated result; potential low bias
UJ = estimated result; analyte not detected at the indicated value

Data Validation Reason Code Definitions:

3D = field duplicate imprecision
4A = canister received at ambient pressure
4D = leak check compound greater than 10 times the lowest PQL; potential leak
6G = reported between the laboratory MDL and PQL

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

			Location ID	VW16A		VW17A		VW18A		VW19A		VW20A		VW21A		VW21A		VW22A		VW23A	
			Sampling Date/Time	11/30/2020 11:07		12/22/2020 9:07		12/22/2020 10:09		12/2/2020 12:10		11/30/2020 13:51		12/22/2020 14:17		12/22/2020 14:17		12/22/2020 15:25		12/29/2020 9:40	
			Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
			Sample Type	N		N		N		N		N		N		FD		N		N	
			Field Sample ID	SG-VW16A-01		SG-VW17A-01		SG-VW18A-01		SG-VW19A-01		SG-VW20A-01		SG-VW21A-01		SG-VW21A-02		SG-VW22A-01		SG-VW23A-01	
			Lab Sample ID	2035147-01		2037849-01		2037849-04		2035335-12		2035147-05		2037849-12		2037849-13		2037849-15		2100036-05	
			Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[(a)]	Commercial/ Industrial SVSL[(a)]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**210**		**98**		**74**		**260**		**16**		**140**		**160**		**260**		**18**	
Benzene	97	420	µg/m^3	**37**		**12**		**31**		**3.2**		**8.7**		**7.6**		**7.6**		**7.5**	**J 6G**	**10**	
Bromodichloromethane	76	330	µg/m^3	ND (<0.68)		ND (<0.64)		ND (<0.66)		ND (<0.71)		ND (<0.70)		ND (<0.70)		ND (<0.69)		ND (<3.5)		ND (<0.69)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.0)		**10**		ND (<1.1)		**1.5**	**J 6G**	ND (<1.1)		ND (<5.4)		ND (<1.1)	
Carbon Disulfide	730,000	3,100,000	µg/m^3	**14**		**26**		**93**		**74**		**30**		**25**		**26**		**18**		**34**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.68)		**2.5**	**J 6G**	ND (<0.66)		ND (<0.71)		ND (<0.70)		ND (<0.70)		ND (<0.69)		ND (<3.5)		ND (<0.69)	
Chloroform	120	530	µg/m^3	**12**		**89**		**5.3**	**J 6G**	**10**		**0.91**	**J 6G**	**4.7**	**J 6G**	**6.3**	**J 6G**	**10**	**J 6G**	**3.2**	**J 6G**
Chloromethane	94,000	390,000	µg/m^3	ND (<0.32)		ND (<0.30)		ND (<0.31)		ND (<0.33)		ND (<0.33)		ND (<0.33)		ND (<0.32)		ND (<1.6)		ND (<0.32)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	**5.9**		ND (<0.54)		ND (<0.56)		ND (<0.60)		ND (<0.59)		ND (<0.59)		ND (<0.58)		ND (<2.9)		ND (<0.58)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.88)		ND (<0.83)		ND (<0.85)		**5.1**	**J 6G**	ND (<0.90)		ND (<0.90)		ND (<0.89)		ND (<4.5)		ND (<0.89)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.87)		ND (<0.82)		ND (<0.84)		ND (<0.90)		ND (<0.89)		ND (<0.89)		ND (<0.87)		ND (<4.4)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**3.1**	**J 6G**	**7.3**		**16**		**50**		ND (<0.70)		**3.9**	**J 6G**	**4.0**	**J 6G**	ND (<3.5)		**3.6**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.40)		ND (<0.37)		ND (<0.38)		**0.83**	**J 6G**	ND (<0.41)		ND (<0.41)		ND (<0.40)		ND (<2.0)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		ND (<0.49)		ND (<2.5)		ND (<0.49)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.41)		ND (<0.39)		ND (<0.40)		ND (<0.43)		ND (<0.42)		ND (<0.42)		ND (<0.41)		ND (<2.1)		ND (<0.41)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		ND (<0.49)		ND (<2.5)		ND (<0.49)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<3.0)		ND (<2.9)		ND (<2.9)		ND (<3.2)		ND (<3.1)		ND (<3.1)		ND (<3.1)		ND (<16)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	ND (0.64)		**7.1**		**2.7**	**J 6G**	ND (<0.66)		**25**		**4.6**		**4.2**		ND (<3.3)		**2.6**	**J 6G**
Ethylbenzene	1,100	4,900	µg/m^3	**66**		**15**		**25**		**13**		**54**		**15**		**15**		**18**	**J 6G**	**15**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**53**		**17**		**19**		**17**		**46**		**12**		**12**		**16**	**J 6G**	**9.4**	
n-Heptane	420,000	1,800,000	µg/m^3	**10**		**3.9**		**4.9**		ND (<0.54)		**0.77**	**J 6G**	**2.0**	**J 3D, 6G**	**4.1**	**J 3D**	ND (<2.6)		**2.1**	**J 6G**
Hexane	730,000	3,100,000	µg/m^3	ND (<0.30)		ND (<0.29)		**6.9**	**J 6G**	ND (<0.32)		ND (<0.31)		ND (<0.31)		ND (<0.31)		ND (<1.6)		**3.0**	**J 6G**
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.44)		ND (<0.41)		ND (<0.43)		ND (<0.46)		ND (<0.45)		ND (<0.45)		ND (<0.44)		ND (<2.2)		ND (<0.44)	
Isooctane	NE	NE	µg/m^3	**12**		**4.4**	**J 6G**	**5.9**	**J 6G**	**6.2**	**J 6G**	ND (<0.55)		**1.7**	**J 6G**	**1.4**	**J 6G**	ND (<2.7)		ND (<0.54)	
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	ND (<0.49)		ND (<0.46)		ND (<0.47)		ND (<0.51)		ND (<0.50)		ND (<0.50)		**3.5**		ND (<2.5)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**93**		**67**		**36**		**33**		**13**		**87**		**84**		**170**		**6.2**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	**46**		**6.6**	**J 6G**	**5.9**	**J 6G**	**31**		**12**		**4.8**	**J 6G**	**4.8**	**J 6G**	**15**	**J 6G**	**1.6**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	**0.60**	**J 6G**	ND (<0.40)		ND (<0.41)		ND (<0.44)		ND (<0.44)		ND (<0.44)		ND (<0.43)		ND (<2.2)		ND (<0.43)	
Naphthalene	83	360	µg/m^3	ND (<2.1)		ND (<2.0)		ND (<2.1)		**11**	**J 6G**	ND (<2.2)		ND (<2.2)		ND (<2.1)		ND (<11)		**4.3**	**J 6G**
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.38)		ND (<0.36)		**110**		ND (<0.40)		ND (<0.39)		ND (<0.39)		ND (<0.38)		ND (<1.9)		ND (<0.38)	
Styrene	940,000	3,900,000	µg/m^3	**2.6**	**J 6G**	ND (<0.34)		**1.3**	**J 6G**	ND (<0.38)		**1.9**	**J 6G**	ND (<0.37)		ND (<0.37)		ND (<1.9)		ND (<0.37)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**20**		**61**		**33**		**260**		**28**		**130**		**130**		**93**		**54**	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.0)		**23**		ND (<0.98)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<5.2)		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	**40**		**8.2**		**3.6**		**13**		**24**		**8.4**		**8.3**		**13**	**J 6G**	**2.7**	**J 6G**
Toluene	310,000	1,300,000	µg/m^3	**310**		**130**		**230**		**60**		**360**		**140**		**150**		**1,200**		**100**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (<0.59)		ND (<0.56)		ND (<0.57)		ND (<0.62)		ND (<0.61)		**7.1**	**J 6G**	**7.8**		ND (<3.0)		ND (<0.60)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.82)		ND (<0.77)		ND (<0.79)		ND (<0.85)		**0.92**	**J 6G**	**13**		**14**		ND (<4.2)		**6.8**	**J 6G**
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	**1.7**	**J 6G**	**2.6**	**J 6G**	**2.9**	**J 6G**	**7.5**	**J 6G**	ND (<0.73)		**1.8**	**J 6G**	**2.5**	**J 6G**	ND (<3.6)		ND (<0.72)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.84)		ND (<0.79)		**2.6**	**J 6G**	ND (<0.87)		ND (<0.86)		ND (<0.86)		ND (<0.84)		ND (<4.3)		ND (<0.84)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**69**		**28**		**25**		**29**		**71**		**16**		**16**		**23**	**J 6G**	**12**	
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	**28**		**7.0**	**J 6G**	**8.2**		**7.6**	**J 6G**	**20**		**5.3**	**J 6G**	**5.1**	**J 6G**	ND (<3.1)		**4.4**	**J 6G**
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.52)		ND (<0.51)		ND (<0.51)		ND (<0.50)		ND (<2.6)		ND (<0.50)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**210**		**57**		**92**		**47**		**170**		**50**		**48**		**58**		**50**	
o-Xylene	100,000	440,000	µg/m^3	**75**		**19**		**28**		**16**		**67**		**16**		**15**		**19**	**J 6G**	**16**	
Total Xylenes	NE	NE	µg/m^3	**280**		**76**		**120**		**63**		**240**		**66**		**64**		**77**	**J 6G**	**66**	
TPH - Gasoline	600,000[(b)]	2,500,000[(b)]	µg/m^3	**3,400**		**5,700**		**2,700**		**1,300**		**2,200**		**1,400**		**1,500**		**2,800**		**1,400**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**3,400**		**5,700**		**2,700**		**1,300**		**2,200**		**1,400**		**1,500**		**2,800**		**1,400**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)
(Page 2 of 8)

			Location ID	VW24A		VW24A		VW24A		VW25A		VW26A		VW27A		VW28A		VW29A		VW30A	
			Sampling Date/Time	12/3/2020 16:30		3/3/2021 15:50		3/3/2021 15:50		12/3/2020 10:35		11/30/2020 12:28		12/23/2020 15:57		12/29/2020 8:40		12/29/2020 10:55		12/3/2020 15:03	
			Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
			Sample Type	N		N		FD		N		N		N		N		N		N	
			Field Sample ID	SG-VW24A-01		SG-VW24A-02		SG-VW24A-03		SG-VW25A-01		SG-VW26A-01		SG-VW27A-01		SG-VW28A-01		SG-VW29A-01		SG-VW30A-01	
			Lab Sample ID	2035587-01		2107220-04		2107220-05		2035539-05		2035147-03		2100036-01		2100036-03		2100036-07		2035539-07	
			Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	ND (<0.67)		**6.0**	**J 6G**	**6.7**	**J 6G**	**3.6**	**J 6G**	**460**		ND (<6.5)		ND (<6.6)		**5.5**	**J 6G**	**30**	
Benzene	97	420	µg/m^3	ND (<0.33)		**1.8**	**J 6G**	**1.5**	**J 6G**	ND (<0.34)		**20**		**39**		ND (<3.2)		**9.4**		**3.7**	
Bromodichloromethane	76	330	µg/m^3	ND (<0.70)		ND (<0.71)		ND (<0.72)		ND (<0.72)		ND (<0.68)		ND (<6.8)		ND (<6.9)		ND (<0.72)		**12**	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		**3.3**	**J 6G**	**2.7**	**J 6G**	**2.3**	**J 6G**	ND (<1.0)		ND (<11)		ND (<11)		ND (<1.1)		**1.2**	**J 6G**
Carbon Disulfide	730,000	3,100,000	µg/m^3	**2.5**	**J 6G**	**1.5**	**J 6G**	ND (<0.30)		**11**		**11**		**28**	**J 6G**	**26**	**J 6G**	**37**		**15**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.70)		ND (<0.71)		ND (<0.72)		ND (<0.72)		ND (<0.68)		ND (<6.8)		ND (<6.9)		ND (<0.72)		ND (<0.69)	
Chloroform	120	530	µg/m^3	**9.3**		ND (<0.85)		ND (<0.86)		**5.7**	**J 6G**	**0.95**	**J 6G**	ND (<8.2)		ND (<8.3)		**4.1**	**J 6G**	**650**	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.33)		ND (<0.33)		ND (<0.33)		ND (<0.34)		ND (<0.32)		ND (<3.2)		ND (<3.2)		ND (<0.34)		ND (<0.32)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.59)		ND (<0.60)		ND (<0.60)		ND (<0.61)		ND (<0.57)		ND (<5.8)		ND (<5.9)		ND (<0.61)		ND (<0.59)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.90)		ND (<0.91)		ND (<0.92)		ND (<0.93)		ND (<0.87)		ND (<8.8)		ND (<8.9)		ND (<0.93)		ND (<0.89)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.88)		ND (<0.89)		ND (<0.91)		ND (<0.91)		ND (<0.86)		ND (<8.7)		ND (<8.8)		ND (<0.92)		ND (<0.88)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**18**		**7.5**	**J 6G**	**7.2**	**J 6G**	**10**		ND (<0.68)		ND (<6.8)		ND (<6.9)		**4.0**	**J 6G**	**6.5**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.42)		ND (<0.39)		ND (<4.0)		ND (<4.0)		ND (<0.42)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.51)		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		ND (<0.49)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.42)		ND (<0.42)		ND (<0.43)		ND (<0.43)		ND (<0.40)		ND (<4.1)		ND (<4.2)		ND (<0.43)		ND (<0.42)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.51)		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		ND (<0.49)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<3.1)		ND (<3.1)		ND (<3.2)		ND (<3.2)		ND (<3.0)		ND (<30)		ND (<31)		ND (<3.2)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	ND (<0.65)		**49**	**J 3D**	**7.1**	**J 3D**	ND (<0.67)		**16**		**41**		ND (<6.5)		ND (<0.68)		**4.0**	
Ethylbenzene	1,100	4,900	µg/m^3	ND (<0.50)		**5.5**	**J 6G**	**1.9**	**J 6G**	**3.0**	**J 6G**	**51**		**19**	**J 6G**	**17**	**J 6G**	**22**		**20**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	ND (<0.46)		**15**	**J 3D**	**4.1**	**J 3D, 6G**	**3.6**	**J 6G**	**46**		ND (<4.6)		ND (<4.6)		**15**		**22**	
n-Heptane	420,000	1,800,000	µg/m^3	ND (<0.53)		ND (<0.53)		ND (<0.54)		ND (<0.54)		**4.7**		**29**	**J 6G**	ND (<5.2)		ND (<0.55)		**2.1**	**J 6G**
Hexane	730,000	3,100,000	µg/m^3	ND (<0.31)		ND (<0.31)		ND (<0.32)		ND (<0.32)		ND (<0.30)		**85**		ND (<3.1)		ND (<0.32)		ND (<0.31)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.45)		ND (<0.46)		ND (<0.46)		ND (<0.46)		ND (<0.44)		ND (<4.4)		ND (<4.5)		ND (<0.47)		ND (<0.45)	
Isooctane	NE	NE	µg/m^3	ND (<0.54)		**1.6**	**J 6G**	ND (<0.56)		ND (<0.56)		**3.6**	**J 6G**	**17**	**J 6G**	ND (<5.4)		ND (<0.56)		**3.8**	**J 6G**
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	ND (<0.50)		**3.2**		**3.6**		ND (<0.51)		ND (<0.48)		ND (<4.9)		ND (<4.9)		ND (<0.52)		**6.5**	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	ND (<0.29)		**1.0**	**J 6G**	ND (<0.30)		ND (<0.30)		**180**		**24**	**J 6G**	ND (<2.9)		**2.5**	**J 6G**	**18**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.42)		**95**		ND (<4.0)		ND (<4.0)		ND (<0.42)		**6.0**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.43)		ND (<0.44)		ND (<0.45)		ND (<0.45)		ND (<0.42)		ND (<4.3)		ND (<4.3)		ND (<0.45)		ND (<0.43)	
Naphthalene	83	360	µg/m^3	**9.8**	**J 6G**	**17**	**J 6G**	**6.9**	**J 6G**	ND (<2.2)		ND (<2.1)		ND (<21)		ND (<22)		ND (<2.3)		**7.5**	**J 6G**
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.39)		ND (<0.39)		ND (<0.40)		ND (<0.40)		ND (<0.38)		ND (<3.8)		**8.5**	**J 6G**	ND (<0.40)		ND (<0.38)	
Styrene	940,000	3,900,000	µg/m^3	ND (<0.37)		ND (<0.38)		ND (<0.38)		ND (<0.38)		**2.5**	**J 6G**	ND (<3.6)		ND (<3.7)		ND (<0.39)		ND (<0.37)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**650**		**120**		**110**		**96**		**42**		ND (<7.6)		**89**		**56**		**99**	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.0)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.0)		ND (<10)		ND (<10)		ND (<1.1)		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	ND (<0.42)		ND (<0.42)		ND (<0.43)		**2.5**	**J 6G**	**64**		ND (<4.1)		ND (<4.2)		**3.0**	**J 6G**	**21**	
Toluene	310,000	1,300,000	µg/m^3	**1.2**	**J 6G**	**14**	**J 3D**	**6.0**	**J 3D**	**7.0**		**210**		**2500**		**3500**		**120**		**72**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	**0.93**	**J 6G**	ND (<0.61)		ND (<0.62)		ND (<0.62)		ND (<0.58)		ND (<5.9)		ND (<6.0)		ND (<0.63)		ND (<0.60)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.84)		ND (<0.85)		ND (<0.86)		ND (<0.86)		ND (<0.81)		ND (<8.2)		ND (<8.3)		ND (<0.87)		**2.7**	**J 6G**
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	**3.4**	**J 6G**	**2.3**	**J 6G**	**2.1**	**J 6G**	**1.9**	**J 6G**	**1.5**	**J 6G**	ND (<7.1)		ND (<7.2)		ND (<0.76)		**1.8**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	**2.0**	**J 6G**	**3.0**	**J 6G**	ND (<0.87)		ND (<0.88)		ND (<0.82)		ND (<8.4)		ND (<8.5)		ND (<0.89)		ND (<0.85)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**0.84**	**J 6G**	**33**	**J 3D**	**8.2**	**J 3D**	**7.7**	**J 6G**	**69**		**20**	**J 6G**	**16**	**J 6G**	**18**		**32**	
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	ND (<0.62)		**6.8**	**J 6G**	**1.9**	**J 6G**	**2.5**	**J 6G**	**22**		ND (<6.1)		ND (<6.2)		**7.0**	**J 6G**	**9.9**	
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.51)		ND (<0.52)		ND (<0.52)		ND (<0.53)		ND (<0.50)		ND (<5.0)		ND (<5.1)		ND (<0.53)		ND (<0.51)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	ND (<0.95)		**29**	**J 3D**	**8.4**	**J 3D**	**12**		**170**		**64**	**J 6G**	**56**	**J 6G**	**75**		**75**	
o-Xylene	100,000	440,000	µg/m^3	ND (<0.46)		**13**	**J 3D**	**3.7**	**J 3D, 6G**	**5.2**	**J 6G**	**63**		**21**	**J 6G**	**18**	**J 6G**	**23**		**29**	
Total Xylenes	NE	NE	µg/m^3	ND (<1.4)		**42**	**J 3D**	**12**	**J 3D, 6G**	**17**		**230**		**85**	**J 6G**	**74**	**J 6G**	**98**		**100**	
TPH - Gasoline	600,000[b]	2,500,000[b]	µg/m^3	**810**		**860**	**J 3D**	**580**	**J 3D**	**420**		**2,700**		**5,400**		**6,900**		**1,600**		**1,800**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**810**		**860**	**J 3D**	**580**	**J 3D**	**420**		**2,700**		**5,400**		**6,900**		**1,600**		**1,800**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

				Location ID	VW30A		VW31A		VW32A		VW32A		VW33A		VW34A		VW35A		VW36A		VW37A	
				Sampling Date/Time	3/4/2021 12:40		12/1/2020 14:32		12/4/2020 9:42		12/4/2020 9:42		12/29/2020 16:00		12/2/2020 15:30		12/1/2020 16:09		12/2/2020 7:50		12/2/2020 9:44	
				Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
				Sample Type	N		N		N		FD		N		N		N		N		N	
				Field Sample ID	SG-VW30A-02		SG-VW31A-01		SG-VW32A-01		SG-VW32A-02		SG-VW33A-01		SG-VW34A-01		SG-VW35A-01		SG-VW36A-01		SG-VW37A-01	
				Lab Sample ID	2107220-06		2035147-07		2035587-03		2035587-04		2100036-16		2035539-01		2035335-01		2035335-03		2035335-07	
				Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**5.0**	**J 6G**	**38**		**110**	**J 6G**	**120**	**J- 4A, 6G**	**64**		**330**		**11**		**75**		**10**	
Benzene	97	420	µg/m^3	ND (<0.34)		**1.5**	**J 6G**	ND (<6.3)	**J 6G**	ND (<5.7)	UJ 4A	**4.3**		**19**		**1.4**	**J 6G**	**23**		ND (<0.33)	
Bromodichloromethane	76	330	µg/m^3	**24**		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	ND (<0.70)		ND (<0.66)		ND (<0.68)		ND (<0.68)		ND (<0.72)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	**1.3**	**J 6G**	ND (<1.1)		ND (<21)		ND (<19)	UJ 4A	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)	
Carbon Disulfide	730,000	3,100,000	µg/m^3	**3.6**		**7.9**		ND (<5.7)		ND (<5.2)	UJ 4A	**11**		**300**		**12**		**11**		**3.7**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.72)		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	ND (<0.70)		ND (<0.66)		ND (<0.68)		ND (<0.68)		ND (<0.72)	
Chloroform	120	530	µg/m^3	**1,400**		ND (<0.86)		ND (<16)		ND (<15)	UJ 4A	ND (<0.84)		**2.8**	**J 6G**	ND (<0.82)		ND (<0.81)		ND (<0.86)	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.34)		ND (<0.33)		ND (<6.3)		ND (<5.7)	UJ 4A	ND (<0.33)		**0.71**	**J 6G**	ND (<0.32)		ND (<0.32)		ND (<0.33)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.61)		ND (<0.60)		ND (<11)		ND (<10)	UJ 4A	ND (<0.59)		**6.3**		ND (<0.58)		ND (<0.57)		ND (<0.60)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.93)		ND (<0.92)		ND (<17)		ND (<16)	UJ 4A	ND (<0.90)		ND (<0.85)		ND (<0.88)		ND (<0.87)		ND (<0.92)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.91)		ND (<0.91)		ND (<17)		ND (<16)	UJ 4A	ND (<0.88)		ND (<0.83)		ND (<0.87)		**2.7**	**J 6G**	ND (<0.91)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**8.9**		ND (<0.72)		ND (<14)		ND (<12)	UJ 4A	**2.8**	**J 6G**	**2.8**	**J 6G**	ND (<0.68)		ND (<0.68)		**2.6**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.42)		ND (<0.41)		ND (<7.8)		ND (<7.1)	UJ 4A	ND (<0.40)		ND (<0.38)		ND (<0.40)		ND (<0.39)		ND (<0.41)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.51)		ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.43)		ND (<0.43)		ND (<8.1)		ND (<7.3)	UJ 4A	ND (<0.42)		ND (<0.39)		ND (<0.41)		ND (<0.40)		ND (<0.43)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.51)		ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<3.2)		ND (<3.2)		ND (<60)		ND (<54)	UJ 4A	ND (<3.1)		ND (<2.9)		ND (<3.0)		ND (<3.0)		ND (<3.2)	
Ethanol	NE	NE	µg/m^3	**4.1**		**22**		ND (<13)		ND (<11)	UJ 4A	**5.2**		**15**		**56**		ND (<0.63)		ND (<0.67)	
Ethylbenzene	1,100	4,900	µg/m^3	**1.8**	**J 6G**	**7.0**	**J 6G**	**23**	**J 6G**	**26**	**J- 4A, 6G**	**6.7**	**J 6G**	**27**		**7.4**	**J 6G**	**48**		**2.3**	**J 6G**
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	ND (<0.48)		**4.9**	**J 6G**	ND (<9.0)		**17**	**J- 4A, 6G**	**5.2**	**J 6G**	**22**		**11**		**37**		**2.7**	**J 6G**
n-Heptane	420,000	1,800,000	µg/m^3	ND (<0.54)		**0.85**	**J 6G**	ND (<10)		ND (<9.2)	UJ 4A	ND (<0.53)		**10**		ND (<0.52)		**12**		ND (<0.54)	
Hexane	730,000	3,100,000	µg/m^3	ND (<0.32)		ND (<0.32)		ND (<6.0)		ND (<5.4)	UJ 4A	ND (<0.31)		**7.7**		ND (<0.30)		ND (<0.30)		ND (<0.32)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.46)		ND (<0.46)		ND (<8.7)		ND (<7.9)	UJ 4A	ND (<0.45)		ND (<0.42)		ND (<0.44)		ND (<0.44)		ND (<0.46)	
Isooctane	NE	NE	µg/m^3	ND (<0.56)		**0.97**	**J 6G**	ND (<10)		ND (<9.5)	UJ 4A	ND (<0.54)		**27**		**1.9**	**J 6G**	**9.8**		ND (<0.56)	
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	**1.2**	**J 6G**	ND (<0.51)		ND (<9.6)		ND (<8.7)	UJ 4A	ND (<0.50)		ND (<0.47)		ND (<0.49)		ND (<0.48)		ND (<0.51)	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**1.0**	**J 6G**	**17**		**26**	**J 6G**	**28**	**J- 4A, 6G**	**37**		**45**		ND (<0.29)		**42**		**6.4**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	ND (<0.42)		**2.3**	**J 6G**	ND (<7.8)		**14**	**J- 4A, 6G**	**3.3**	**J 6G**	**21**		**1.9**	**J 6G**	**46**		ND (<0.41)	
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.45)		ND (<0.45)		ND (<8.4)		ND (<7.6)	UJ 4A	ND (<0.43)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.45)	
Naphthalene	83	360	µg/m^3	ND (<2.2)		ND (<2.2)		ND (<42)		ND (<38)	UJ 4A	ND (<2.2)		ND (<2.0)		ND (<2.1)		ND (<2.1)		ND (<2.2)	
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.40)		ND (<0.40)		ND (<7.5)		ND (<6.8)	UJ 4A	ND (<0.39)		ND (<0.36)		ND (<0.38)		ND (<0.38)		ND (<0.40)	
Styrene	940,000	3,900,000	µg/m^3	ND (<0.38)		ND (<0.38)		ND (<7.2)		ND (<6.5)	UJ 4A	ND (<0.37)		ND (<0.35)		ND (<0.36)		**1.7**	**J 6G**	ND (<0.38)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**210**		**64**		**83**	**J 6G**	**57**	**J- 4A, 6G**	**2.9**	**J 6G**	**19**		**250**		**78**		ND (<0.80)	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.1)		ND (<1.1)		ND (<20)		ND (<18)	UJ 4A	ND (<1.0)		ND (<0.98)		ND (<1.0)		ND (<1.0)		ND (<1.1)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	**1.2**	**J 6G**	**4.4**		**17**	**J 6G**	**21**	**J- 4A, 6G**	**4.1**		**15**		**1.2**	**J 6G**	**38**		**0.75**	**J 6G**
Toluene	310,000	1,300,000	µg/m^3	**7.6**		**89**		**9,300**		**9,700**	**J- 4A**	**42**		**180**		**140**		**280**		**8.9**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (0.62)		ND (<0.62)		ND (<12)		ND (<11)	UJ 4A	ND (<0.60)		ND (<0.57)		**1.1**	**J 6G**	ND (<0.58)		ND (<0.62)	
Trichloroethene (TCE)	480	3,000	µg/m^3	**2.5**	**J 6G**	ND (<0.86)		ND (<16)		ND (<15)	UJ 4A	ND (<0.84)		ND (<0.79)		ND (<0.82)		ND (<0.81)		ND (<0.86)	
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	ND (<0.75)		**2.6**	**J 6G**	ND (<14)		ND (<13)	UJ 4A	ND (<0.73)		**2.8**	**J 6G**	**1.2**	**J 6G**	**1.3**	**J 6G**	**1.4**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.88)		ND (<0.87)		ND (<16)		ND (<15)	UJ 4A	ND (<0.85)		**3.1**	**J 6G**	ND (<0.84)		ND (<0.82)		ND (<0.87)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**1.8**	**J 6G**	**9.8**		**32**	**J 6G**	**32**	**J- 4A, 6G**	**7.0**	**J 6G**	**29**		**20**		**50**		**5.2**	**J 6G**
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	ND (<0.64)		**2.4**	**J 6G**	ND (<12)		ND (<11)	UJ 4A	**2.2**	**J 6G**	**9.3**		**4.3**	**J 6G**	**19**		**1.4**	**J 6G**
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.53)		ND (<0.52)		ND (<9.9)		ND (<9.0)	UJ 4A	ND (<0.51)		ND (<0.48)		ND (<0.50)		ND (<0.50)		ND (<0.52)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**4.7**	**J 6G**	**22**		**110**	**J 6G**	**120**	**J- 4A, 6G**	**22**		**99**		**29**		**150**		**9.5**	
o-Xylene	100,000	440,000	µg/m^3	**1.9**	**J 6G**	**9.5**		**31**	**J 6G**	**34**	**J- 4A, 6G**	**7.3**	**J 6G**	**29**		**12**		**56**		**3.9**	**J 6G**
Total Xylenes	NE	NE	µg/m^3	**6.6**	**J 6G**	**32**		**140**	**J 6G**	**160**	**J- 4A, 6G**	**30**		**130**		**41**		**210**		**13**	**J 6G**
TPH - Gasoline	600,000[b]	2,500,000[b]	µg/m^3	**1,800**		**610**		**9,500**		**10,000**	**J- 4A**	**380**		**3,400**		**810**		**2,700**		**350**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**1,800**		**610**		**9,500**		**10,000**	**J- 4A**	**380**		**3,400**		**810**		**2,700**		**350**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

				Location ID	VW38A		VW39A		VW40A		VW41A		VW41A		VW42A		VW42A		VW43A		VW44A	
				Sampling Date/Time	12/4/2020 13:45		12/3/2020 9:14		12/2/2020 8:55		12/4/2020 11:10		12/4/2020 11:10		12/2/2020 10:59		3/4/2021 13:55		12/22/2020 13:08		12/22/2020 12:08	
				Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
				Sample Type	N		N		N		N		N		N		N		N		N	
				Field Sample ID	SG-VW38A-01		SG-VW39A-01		SG-VW40A-01		SG-VW41A-01		SG-VW41A-02		SG-VW42A-01		SG-VW42A-02		SG-VW43A-01		SG-VW44A-01	
				Lab Sample ID	2035587-09		2035539-03		2035335-05		2035587-06		2035587-07		2035335-10		2107220-08		2037849-10		2037849-08	
				Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[(a)]	Commercial/ Industrial SVSL[(a)]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**6.2**	**J 6G**	**5.2**	**J 6G**	**5.3**	**J 6G**	**99**		**93**		ND (<64)		**2.1**	**J 6G**	**4.3**	**J 6G**	**140**	
Benzene	97	420	µg/m^3	ND (<0.34)		ND (<0.33)		**6.0**		**3.2**		**3.4**		ND (<31)		ND (<0.31)		**1.8**	**J 6G**	**7.6**	
Bromodichloromethane	76	330	µg/m^3	ND (<0.74)		ND (<0.70)		ND (<0.73)		ND (<0.70)		ND (<0.70)		ND (<67)		ND (<0.72)		ND (<0.69)		ND (<0.67)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<100)		ND (<1.1)		ND (<1.1)		ND (<1.0)	
Carbon Disulfide	730,000	3,100,000	µg/m^3	**1.6**	**J 6G**	**2.2**	**J 6G**	**1.4**	**J 6G**	**5.5**		**5.9**		ND (<28)		ND (<0.30)		**4.5**		**13**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.74)		ND (<0.70)		ND (<0.73)		ND (<0.70)		ND (<0.70)		ND (<67)		ND (<0.72)		ND (<0.69)		ND (<0.67)	
Chloroform	120	530	µg/m^3	ND (<0.89)		**3.0**	**J 6G**	ND (<0.87)		ND (<0.84)		ND (<0.84)		ND (<80)		ND (<0.86)		ND (<0.83)		**20**	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.34)		ND (<0.33)		ND (<0.34)		ND (<0.33)		ND (<0.33)		ND (<31)		ND (<0.34)		ND (<0.32)		ND (<0.31)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.62)		ND (<0.59)		ND (<0.62)		ND (<0.59)		ND (<0.59)		ND (<56)		ND (<0.61)		ND (<0.58)		ND (<0.57)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.95)		ND (<0.90)		ND (<0.94)		ND (<0.90)		ND (<0.90)		ND (<86)		ND (<0.93)		ND (<0.89)		ND (<0.86)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.93)		ND (<0.88)		ND(<0.92)		ND (<0.88)		ND (<0.88)		ND (<84)		ND (<0.91)		ND (<0.87)		ND (<0.85)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**2.7**	**J 6G**	ND (<0.70)		**2.5**	**J 6G**	**2.6**	**J 6G**	**2.7**	**J 6G**	ND (<67)		**3.0**	**J 6G**	**3.1**	**J 6G**	**4.3**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.43)		ND (<0.40)		ND (<0.42)		ND (<0.40)		ND (<0.40)		ND (<38)		ND (<0.42)		ND (<0.40)		ND (<0.39)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		ND (<0.51)		ND (<0.49)		ND (<0.48)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.44)		ND (<0.42)		ND (<0.44)		ND (<0.42)		ND (<0.42)		ND (<40)		ND (<0.43)		ND (<0.41)		ND (<0.40)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		ND (<0.51)		ND (<0.49)		ND (<0.48)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<3.3)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.1)		ND (<300)		ND (<3.2)		ND (<3.1)		ND (<3.0)	
Ethanol	NE	NE	µg/m^3	ND (<0.69)	UJ 3D	**2.0**	**J 6G**	ND (<0.68)		**11**	**J 3D**	**7.4**	**J 3D**	ND (<62)		**1.4**	**J 6G**	ND (<0.64)		**3.8**	
Ethylbenzene	1,100	4,900	µg/m^3	**3.8**	**J 6G**	**4.0**	**J 6G**	**42**		**8.1**		**7.7**	**J 6G**	ND (<47)		ND (<0.51)		**3.6**	**J 6G**	**9.4**	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**3.0**	**J 6G**	**2.7**	**J 6G**	**25**		**7.4**	**J 6G**	**6.7**	**J 6G**	ND (<44)		ND (<0.48)		**4.9**	**J 6G**	**8.2**	
n-Heptane	420,000	1,800,000	µg/m^3	ND (<0.56)		ND (<0.53)		**3.9**		ND (<0.53)		**1.1**	**J 6G**	ND (<50)		ND (<0.54)		ND (<0.52)		**2.1**	**J 6G**
Hexane	730,000	3,100,000	µg/m^3	ND (<0.33)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.31)		**2,300**		ND (<0.32)		ND (<0.31)		ND (<0.30)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.48)		ND (<0.45)		ND (<0.47)		ND (<0.45)		ND (<0.45)		ND (<43)		ND (<0.46)		ND (<0.44)		ND (<0.43)	
Isooctane	NE	NE	µg/m^3	ND (<0.57)		ND (<0.54)		**1.2**	**J 6G**	ND (<0.54)		ND (<0.54)		ND (<52)		ND (<0.56)		ND (<0.54)		**2.4**	**J 6G**
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	ND (<0.52)		ND (<0.50)		ND (<0.52)		ND (<0.50)		ND (<0.50)		ND (<47)		**0.87**	**J 6G**	ND (<0.49)		ND (<0.48)	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**2.1**	**J 6G**	**1.3**	**J 6G**	**1.6**	**J 6G**	**99**		**100**		ND (<28)		ND (<0.30)		**2.0**	**J 6G**	**80**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	ND (<0.43)		ND (<0.40)		ND (<0.42)		**6.7**	**J 6G**	**7.4**	**J 6G**	ND (<38)		ND (<0.42)		ND (<0.40)		**5.6**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.46)		ND (<0.43)		ND (<0.45)		ND (<0.43)		ND (<0.43)		ND (<41)		ND (<0.45)		ND (<0.43)		ND (<0.42)	
Naphthalene	83	360	µg/m^3	**9.7**	**J 6G**	ND (<2.2)		ND (<2.3)		**9.6**	**J 6G**	**9.4**	**J 6G**	ND (<210)		ND (<2.2)		ND (<2.1)		ND (<2.1)	
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.41)		ND (<0.39)		ND (<0.40)		ND (<0.39)		ND (<0.39)		ND (<37)		ND (<0.40)		ND (<0.38)		ND (<0.37)	
Styrene	940,000	3,900,000	µg/m^3	ND (<0.39)		ND (<0.37)		ND (<0.39)		ND (<0.37)		ND (<0.37)		**310**	**J 6G**	ND (<0.38)		ND (<0.37)		ND (<0.36)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**37**		**30**		**3.3**	**J 6G**	**12**		**12**		ND (<74)		**6.7**	**J 6G**	**5.5**	**J 6G**	**9.1**	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<99)		ND (<1.1)		ND (<1.0)		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	**0.77**	**J 6G**	**1.4**	**J 6G**	ND (<0.44)		**5.9**		**6.9**		ND (<40)		ND (<0.43)		**2.3**	**J 6G**	**8.1**	
Toluene	310,000	1,300,000	µg/m^3	**27**		**570**		**130**		**710**		**720**		**5,700**		**5.1**		**12**		**69**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (<0.64)		ND (<0.60)		ND (<0.63)		ND (<0.60)		ND (<0.60)		ND (<58)		ND (<0.62)		ND (<0.60)		ND (<0.58)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.89)		ND (<0.84)		ND (<0.87)		**0.92**	**J 6G**	**0.92**	**J 6G**	ND (<80)		ND (<0.86)		ND (<0.83)		**5.5**	**J 6G**
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	**1.4**	**J 6G**	ND (<0.73)		**1.3**	**J 6G**	**1.3**	**J 6G**	**1.4**	**J 6G**	ND (<70)		ND (<0.75)		ND (<0.72)		**2.3**	**J 6G**
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.90)		ND (<0.85)		ND (<0.89)		ND (<0.85)		ND (<0.85)		ND (<81)		ND (<0.88)		ND (<0.84)		ND (<0.82)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**5.6**	**J 6G**	**4.0**	**J 6G**	**27**		**12**		**12**		ND (<59)		ND (<0.64)		**7.2**	**J 6G**	**11**	
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	**1.6**	**J 6G**	**1.8**	**J 6G**	**6.8**	**J 6G**	**2.7**	**J 6G**	**3.1**	**J 6G**	ND (<59)		ND (<0.64)		**2.2**	**J 6G**	**3.9**	**J 6G**
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.54)		ND (<0.51)		ND (<0.53)		**1.4**	**J 6G**	ND (<0.51)		ND (<49)		ND (<0.53)		ND (<0.50)		ND (<0.49)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**17**		**15**		**84**		**35**		**29**		ND (<90)		ND (<0.98)		**14**		**35**	
o-Xylene	100,000	440,000	µg/m^3	**7.0**	**J 6G**	**7.0**	**J 6G**	**18**		**11**		**9.8**		ND (<44)		ND (<0.48)		**4.3**	**J 6G**	**11**	
Total Xylenes	NE	NE	µg/m^3	**24**		**22**		**100**		**47**		**39**		ND (<130)		ND (<1.5)		**19**		**46**	
TPH - Gasoline	600,000[(b)]	2,500,000[(b)]	µg/m^3	**280**	**J 6G**	**1,000**		**560**		**960**		**990**		**63,000**		**91**	**J 6G**	**220**	**J 6G**	**810**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**280**	**J 6G**	**1,000**		**560**		**960**		**990**		**63,000**		**91**	**J 6G**	**220**	**J 6G**	**810**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

				Location ID	VW45A		VW45A		VW46A		VW47A		VW48A		VW48A		VW49A		VW49A	
				Sampling Date/Time	12/23/2020 8:54		3/3/2021 12:40		12/23/2020 9:59		12/23/2020 10:49		12/23/2020 12:07		3/3/2021 13:50		12/23/2020 12:59		3/3/2021 14:45	
				Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
				Sample Type	N		N		N		N		N		N		N		N	
				Field Sample ID	SG-VW45A-01		SG-VW45A-02		SG-VW46A-01		SG-VW47A-01		SG-VW48A-01		SG-VW48A-02		SG-VW49A-01		SG-VW49A-02	
				Lab Sample ID	2037849-17		2107220-01		2037849-19		2037849-21		2037849-23		2107220-02		2037849-25		2107220-03	
				Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[(a)]	Commercial/ Industrial SVSL[(a)]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**250**		**2.1**	**J 6G**	**56**		**6.4**	**J 6G**	**14**		**2.1**	**J 6G**	**18**		**1.7**	**J 6G**
Benzene	97	420	µg/m^3	**17**		ND (<0.35)		**1.8**	**J 6G**	ND (<0.32)		ND (<0.32)		ND (<0.33)		**1.0**	**J 6G**	ND (<0.32)	
Bromodichloromethane	76	330	µg/m^3	ND (<0.70)		ND (<0.75)		ND (<0.68)		ND (<0.68)		ND (<0.69)		ND (<0.71)		ND (<0.70)		ND (<0.68)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		**3.9**	**J 6G**	ND (<1.0		ND (<1.0		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)	
Carbon Disulfide	730,000	3,100,000	µg/m^3	**20**		ND (<0.32)		**8.1**		**4.4**		**4.5**		**1.3**	**J 6G**	**4.1**		**1.1**	**J 6G**
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.70)		ND (<0.75)		ND (<0.68)		ND (<0.68)		ND (<0.69)		ND (<0.71)		ND (<0.70)		ND (<0.68)	
Chloroform	120	530	µg/m^3	**2.4**	**J 6G**	ND (<0.90)		ND (<0.81)		ND (<0.81)		**3.5**	**J 6G**	**5.4**	**J 6G**	**4.7**	**J 6G**	**7.6**	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.33)		ND(<0.35)		ND (<0.32)		ND (<0.32)		ND (<0.32)		ND (<0.33)		ND (<0.33)		ND (<0.32)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.59)		ND (<0.63)		ND (<0.57)		ND (<0.57)		ND (<0.58)		ND (<0.60)		ND (<0.59)		ND (<0.58)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.90)		**4.0**	**J 6G**	ND (<0.87)		ND (<0.87)		ND (<0.89)		**2.8**	**J 6G**	ND (<0.90)		ND (<0.88)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.88)		ND (<0.95)		ND (<0.86)		ND (<0.86)		ND (<0.87)		ND (<0.90)		ND (<0.89)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**2.9**	**J 6G**	**2.8**	**J 6G**	**2.8**	**J 6G**	**2.7**	**J 6G**	**2.9**	**J 6G**	**2.7**	**J 6G**	**3.0**	**J 6G**	**2.8**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.40)		ND (<0.43)		ND (<0.39)		ND (<0.39)		ND (<0.40)		ND (<0.41)		ND (<0.41)		ND (<0.40)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.50)		ND (<0.53)		ND (<0.48)		ND (<0.48)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.49)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.42)		ND (<0.45)		ND (<0.40)		ND (<0.40)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.41)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.50)		ND (<0.53)		ND (<0.48)		ND (<0.48)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.49)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<3.1)		ND (<3.3)		ND (<3.0)		ND (<3.0)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.0)	
Ethanol	NE	NE	µg/m^3	**3.5**		**4.6**		**2.0**	**J 6G**	**2.0**	**J 6G**	**2.8**	**J 6G**	**2.2**	**J 6G**	**3.9**		**2.6**	**J 6G**
Ethylbenzene	1,100	4,900	µg/m^3	**24**		ND (<0.53)		**5.6**	**J 6G**	ND (<0.48)		**5.2**	**J 6G**	ND (<0.51)		**3.3**	**J 6G**	ND (<0.49)	
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**25**		ND (<0.50)		**5.6**	**J 6G**	ND (<0.45)		**6.4**	**J 6G**	**29**		**2.0**	**J 6G**	ND (<0.46)	
n-Heptane	420,000	1,800,000	µg/m^3	**5.0**		ND (<0.56)		ND (<0.51)		ND (<0.51)		ND (<0.52)		ND (<0.54)		ND (<0.53)		ND (<0.52)	
Hexane	730,000	3,100,000	µg/m^3	ND (<0.31)		ND (<0.33)		ND (<0.30)		ND (<0.30)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.30)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.45)		ND (<0.48)		ND (<0.44)		ND (<0.44)		ND (<0.44)		ND (<0.46)		**2.5**	**J 6G**	ND (<0.44)	
Isooctane	NE	NE	µg/m^3	**5.0**	**J 6G**	ND (<0.58)		ND (<0.52)		ND (<0.52)		ND (<0.54)		ND (<0.55)		ND (<0.55)		ND (<0.53)	
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	ND (<0.50)		**0.84**	**J 6G**	ND (<0.48)		ND (<0.48)		**1.4**	**J 6G**	ND (<0.51)		ND (<0.50)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**160**		ND (<0.32)		**43**		**2.8**	**J 6G**	**19**		ND (<0.30)		**13**		ND (<0.29)	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	**6.1**	**J 6G**	ND (<0.43)		**3.4**	**J 6G**	ND (<0.39)		**4.8**	**J 6G**	ND (<0.41)		**2.4**	**J 6G**	ND (<0.40)	
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.43)		ND (<0.46)		ND (<0.42)		ND (<0.42)		ND (<0.43)		ND (<0.44)		ND (<0.44)		ND (<0.43)	
Naphthalene	83	360	µg/m^3	ND (<2.2)		ND (<2.3)		ND (<2.1)		ND (<2.1)		ND (<2.1)		**70**		ND (<2.2)		ND (<2.1)	
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.39)		ND (<0.42)		ND (<0.38)		ND (<0.38)		ND (<0.38)		ND (<0.40)		ND (<0.39)		ND (<0.38)	
Styrene	940,000	3,900,000	µg/m^3	**2.6**	**J 6G**	ND (<0.40)		ND (<0.36)		ND (<0.36)		ND (<0.37)		ND (<0.38)		ND (<0.37)		ND (<0.36)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**5.1**	**J 6G**	**8.6**		**5.3**	**J 6G**	**9.5**		**35**		**29**		**54**		**55**	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	**8.7**		ND (<0.45)		**4.2**		ND (<0.40)		**5.8**		ND (<0.43)		**3.5**		ND (<0.41)	
Toluene	310,000	1,300,000	µg/m^3	**130**		**2.0**	**J 6G**	**33**		**7.0**		**18**		**1.9**	**J 6G**	**14**		ND (<0.41)	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (<0.60)		ND (<0.65)		ND (<0.58)		ND (<0.58)		ND (<0.60)		ND (<0.62)		ND (<0.61)		ND (<0.59)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.84)		**2.0**	**J 6G**	ND (<0.81)		ND (<0.81)		ND (<0.83)		ND (<0.85)		ND (<0.84)		ND (<0.82)	
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	**1.7**	**J 6G**	ND (<0.78)		ND (<0.70)		ND (<0.70)		ND (<0.72)		ND (<0.74)		ND (<0.73)		ND (<0.71)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.85)		ND (<0.91)		ND (<0.82)		ND (<0.82)		ND (<0.84)		ND (<0.87)		ND (<0.86)		ND (<0.84)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**35**		ND (<0.66)		**8.3**		ND (<0.60)		**10**		**160**		**3.5**	**J 6G**	ND (<0.61)	
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	**11**		ND (<0.66)		**2.9**	**J 6G**	ND (<0.60)		**3.0**	**J 6G**	**32**		ND (<0.62)		ND (<0.61)	
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.51)		ND (<0.55)		ND (<0.50)		ND (<0.50)		ND (<0.50)		ND (<0.52)		ND (<0.51)		ND (<0.50)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**94**		**3.2**	**J 6G**	**23**		ND (<0.92)		**20**		**2.8**	**J 6G**	**7.6**	**J 6G**	ND (<0.93)	
o-Xylene	100,000	440,000	µg/m^3	**29**		ND (<0.50)		**7.9**		**1.7**	**J 6G**	**7.5**	**J 6G**	**1.6**	**J 6G**	**4.7**	**J 6G**	ND (<0.46)	
Total Xylenes	NE	NE	µg/m^3	**120**		**3.2**	**J 6G**	**31**		**1.7**	**J 6G**	**27**		**4.4**	**J 6G**	**12**	**J 6G**	ND (<1.4)	
TPH - Gasoline	600,000[(b)]	2,500,000[(b)]	µg/m^3	**2,800**		**94**	**J 6G**	**510**		**130**	**J 6G**	**410**		**2,800**		**190**	**J 6G**	**120**	**J 6G**
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**2,800**		**94**	**J 6G**	**510**		**130**	**J 6G**	**410**		**2,800**		**190**	**J 6G**	**120**	**J 6G**

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

				VW50A		VW50A		VW51A		VW52A		VW53A		VW53A		VW54A		VW55A	
			Location ID																
			Sampling Date/Time	12/23/2020 13:55		12/23/2020 13:55		12/23/2020 15:07		12/22/2020 11:13		12/29/2020 12:00		12/29/2020 12:00		12/29/2020 13:35		12/29/2020 14:55	
			Sample Depth (feet)	5.5		5.5		5.5		5.5		5.5		5.5		5.5		5.5	
			Sample Type	N		FD		N		N		N		FD		N		N	
			Field Sample ID	SG-VW50A-01		SG-VW50A-02		SG-VW51A-01		SG-VW52A-01		SG-VW53A-01		SG-VW53A-02		SG-VW54A-01		SG-VW55A-01	
			Lab Sample ID	2037849-27		2037849-28		2037849-30		2037849-06		2100036-09		2100036-10		2100036-12		2100036-14	
			Status	*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*		*Validated*	
Analyte	Residential SVSL[(a)]	Commercial/ Industrial SVSL[(a)]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**110**		**100**		**320**		**64**		**13**	**J 3D**	**34**	**J 3D**	**15**		**180**	
Benzene	97	420	µg/m^3	**2.0**	**J 6G**	**1.9**	**J 6G**	**4.2**		**1.5**	**J 6G**	ND (<0.34)		**1.7**	**J 6G**	**37**		**5.2**	
Bromodichloromethane	76	330	µg/m^3	ND (<0.68)		ND (<0.68)		ND (<0.73)		ND (<0.69)		ND (<0.72)		ND (<0.70)		ND (<0.72)		ND (<0.69)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)		ND (<1.1)	
Carbon Disulfide	730,000	3,100,000	µg/m^3	**5.6**		**5.8**		**4.4**		**10**		**11**		**12**		**72**		**7.4**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.68)		ND (<0.68)		ND (<0.73)		ND (<0.69)		ND (<0.72)		ND (<0.70)		ND (<0.72)		ND (<0.69)	
Chloroform	120	530	µg/m^3	**2.6**	**J 6G**	**1.7**	**J 6G**	ND (<0.88)		**9.0**		ND (<0.86)		ND (<0.84)		**6.7**	**J 6G**	ND (<0.83)	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.32)		ND (<0.32)		ND (<0.34)		ND (<0.32)		ND (<0.34)		ND (<0.33)		ND (<0.34)		ND (<0.32)	
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.58)		ND (<0.57)		ND (<0.62)		ND (<0.58)		ND (<0.61)		ND (<0.59)		**5.8**		ND (<0.58)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.88)		ND (<0.87)		ND (<0.95)		ND (<0.89)		ND (<0.93)		ND (<0.90)		ND (<0.93)		ND (<0.89)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.87)		ND (<0.86)		ND (<0.93)		ND (<0.87)		ND (<0.91)		ND (<0.88)		ND (<0.91)		ND (<0.87)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**2.9**	**J 6G**	**3.0**	**J 6G**	**2.9**	**J 6G**	**46**		**26**		**28**		**43**		**2.8**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.40)		ND (<0.39)		ND (<0.42)		ND (<0.40)		ND (<0.42)		ND (<0.40)		**1.3**	**J 6G**	ND (<0.40)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.49)		ND (<0.48)		ND (<0.52)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.51)		ND (<0.49)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.41)		ND (<0.40)		ND (<0.44)		ND (<0.41)		ND (<0.43)		ND (<0.42)		ND (<0.43)		ND (<0.41)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.49)		ND (<0.48)		ND (<0.52)		ND (<0.49)		ND (<0.51)		ND (<0.50)		ND (<0.51)		ND (<0.49)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	**11**		**8.1**		ND (<3.3)		ND (<3.1)		ND (<3.2)		ND (<3.1)		ND (<3.2)		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	**11**		**8.6**		**28**		**6.5**		**6.1**	**J 3D**	**49**	**J 3D**	ND		**2.1**	**J 6G**
Ethylbenzene	1,100	4,900	µg/m^3	**8.3**		**8.2**		**9.9**		**5.0**	**J 6G**	**4.3**	**J 6G**	**7.3**	**J 6G**	**38**		**6.7**	**J 6G**
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**8.9**		**8.9**		**8.6**		**7.6**		**4.9**	**J 6G**	**6.2**	**J 6G**	**32**		**6.1**	**J 6G**
n-Heptane	420,000	1,800,000	µg/m^3	ND (<0.52)		ND (<0.51)		ND (<0.55)		ND (<0.52)		ND (<0.54)		ND (<0.53)		ND (<0.54)		ND (<0.52)	
Hexane	730,000	3,100,000	µg/m^3	ND (<0.30)		ND (<0.30)		ND (<0.33)		ND (<0.31)		ND (<0.32)		ND (<0.31)		ND (<0.32)		ND (<0.31)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.44)		ND (<0.44)		ND (<0.47)		ND (<0.44)		ND (<0.46)		ND (<0.45)		ND (<0.46)		ND (<0.44)	
Isooctane	NE	NE	µg/m^3	ND (<0.53)		ND (<0.52)		ND (<0.57)		ND (<0.54)		ND (<0.56)		ND (<0.54)		**9.2**		ND (<0.54)	
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	ND (<0.49)		**2.8**	**J 6G**	ND (<0.52)		ND (<0.49)		ND (<0.51)	UJ 3D	**10**	**J 3D**	ND (<0.51)		ND (<0.49)	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**100**		**99**		**130**		**40**		**6.8**	**J 3D**	**26**	**J 3D**	**13**		**100**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	**8.8**		**8.9**		**4.2**	**J 6G**	**3.8**	**J 6G**	ND (<0.42)		**2.1**	**J 6G**	**2.5**	**J 6G**	**4.7**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.43)		ND (<0.42)		ND (<0.46)		ND (<0.43)		ND (<0.45)		ND (<0.43)		ND (<0.45)		ND (<0.43)	
Naphthalene	83	360	µg/m^3	ND (<2.1)		ND (<2.1)		ND (<2.3)		ND (<2.1)		ND (<2.2)		**4.9**	**J 6G**	ND (<2.2)		ND (<2.1)	
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.38)		ND (<0.38)		ND (<0.41)		ND (<0.38)		ND (<0.40)		ND (<0.39)		**100**		ND (<0.38)	
Styrene	940,000	3,900,000	µg/m^3	ND (<0.36)		ND (<0.36)		ND (<0.39)		ND (<0.37)		ND (<0.38)		ND (<0.37)		ND (<0.38)		ND (<0.37)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**71**		**71**		**23**		**140**		**42**		**45**		**29**		ND (<0.76)	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<1.0)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)		ND (<1.1)		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	**10**		**11**		**9.5**		**2.9**	**J 6G**	**1.8**	**J 3D, 6G**	**4.9**	**J 3D**	**5.0**		**7.8**	
Toluene	310,000	1,300,000	µg/m^3	**39**		**39**		**51**		**19**		**13**	**J 3D**	**22**	**J 3D**	**280**		**46**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (<0.59)		ND (<0.58)		ND (<0.64)		ND (<0.60)		ND (<0.62)		ND (<0.60)		ND (<0.62)		ND (<0.60)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.82)		ND (<0.81)		ND (<0.88)		ND (<0.83)		ND (<0.86)		ND (<0.84)		ND (<0.86)		ND (<0.83)	
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	ND (<0.71)		ND (<0.70)		ND (<0.77)		**7.6**		ND (<0.75)		**1.9**	**J 6G**	**2.5**	**J 6G**	ND (<0.72)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.84)		ND (<0.82)		ND (<0.90)		ND (<0.84)		ND (<0.88)		ND (<0.85)		ND (<0.88)		ND (<0.84)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**14**		**14**		**12**		**11**		**7.4**	**J 6G**	**9.1**		**41**		**9.3**	
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	**4.0**	**J 6G**	**4.3**	**J 6G**	**3.7**	**J 6G**	**3.1**	**J 6G**	**2.3**	**J 6G**	**2.8**	**J 6G**	**14**		**2.8**	**J 6G**
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.50)		ND (<0.50)		ND (<0.54)		ND (<0.50)		ND (<0.53)		ND (<0.51)		ND (<0.53)		ND (<0.50)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**32**		**32**		**37**		**20**		**15**	**J 3D**	**22**	**J 3D**	**150**		**26**	
o-Xylene	100,000	440,000	µg/m^3	**12**		**12**		**12**		**7.0**	**J 6G**	**5.6**	**J 3D, 6G**	**7.7**	**J 3D, 6G**	**42**		**8.6**	
Total Xylenes	NE	NE	µg/m^3	**44**		**43**		**49**		**27**		**21**	**J 3D**	**29**	**J 3D**	**190**		**34**	
TPH - Gasoline	600,000[(b)]	2,500,000[(b)]	µg/m^3	**710**		**730**		**870**		**620**		**330**	**J 3D**	**490**	**J 3D**	**3,000**		**610**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**710**		**730**		**870**		**620**		**330**	**J 3D**	**490**	**J 3D**	**3,000**		**610**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

				VW56A		VW57A		SVM-1		SVM-1		SVM-2		SVM-2		SVM-3		SVM-3	
Location ID				VW56A		VW57A		SVM-1		SVM-1		SVM-2		SVM-2		SVM-3		SVM-3	
Sampling Date/Time				12/30/2020 12:50		12/30/2020 11:40		11/16/2020 12:40		3/3/2021 9:45		11/16/2020 12:55		3/3/2021 10:05		11/16/2020 13:10		3/3/2021 10:20	
Sample Depth (feet)				5.5		5.5		4		4		5		5		4		4	
Sample Type				N		N		N		N		N		N		N		N	
Field Sample ID				SG-VW56A-01		SG-VW57A-01		SVM-1-5		SVM-1-5		SVM-2-5		SVM-2-5		SVM-3-5		SVM-3-5	
Lab Sample ID				2100036-23		2100036-20		2033822-09		2107219-09		2033822-11		2107219-11		2033822-13		2107219-13	
Status				*Validated*		*Validated*		*Not Validated*		*Validated*		*Not Validated*		*Validated*		*Not Validated*		*Validated*	
Analyte	Residential SVSL[a]	Commercial/ Industrial SVSL[a]	Units	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason	Result	QA Reason
Acetone	32,000,000	140,000,000	µg/m^3	**5.9**	**J- 4D, 6G**	**9.1**		NA		ND (<65)		NA		**3.3**	**J 6G**	NA		**25**	
Benzene	97	420	µg/m^3	**13**	**J- 4D**	**2.0**	**J 6G**	NA		ND (<32)		NA		ND (<0.32)		NA		ND (<0.33)	
Bromodichloromethane	76	330	µg/m^3	ND (<0.66)	UJ 4D	ND (<0.70)		NA		ND (<68)		NA		ND (<0.69)		NA		ND (<0.70)	
tert-Butyl Alcohol (TBA)	NE	NE	µg/m^3	ND (<1.0)	UJ 4D	ND (<1.1)		NA		ND (<110)		NA		**1.4**	**J 6G**	NA		**2.1**	**J 6G**
Carbon Disulfide	730,000	3,100,000	µg/m^3	**3.4**	**J- 4D**	**4.9**		NA		ND (<29)		NA		ND (<0.29)		NA		**3.3**	
Carbon Tetrachloride	470	2,000	µg/m^3	ND (<0.66)	UJ 4D	ND (<0.70)		NA		ND (<68)		NA		ND (<0.69)		NA		ND (<0.70)	
Chloroform	120	530	µg/m^3	ND (<0.79)	UJ 4D	ND (<0.84)		NA		ND (<82)		NA		ND (<0.83)		NA		ND (<0.84)	
Chloromethane	94,000	390,000	µg/m^3	ND (<0.31)	UJ 4D	ND (<0.33)		NA		ND (<32)		NA		ND (<0.32)		NA		**1.0**	**J 6G**
Cyclohexane	6,300,000	26,000,000	µg/m^3	ND (<0.56)	UJ 4D	**9.8**		NA		ND (<58)		NA		ND (<0.58)		NA		ND (<0.59)	
1,2-Dibromoethane	4.7	20	µg/m^3	ND (<0.85)	UJ 4D	ND (<0.90)		NA		ND (<88)		NA		ND (<0.89)		NA		ND (<0.90)	
Dibromomethane	4,200	18,000	µg/m^3	ND (<0.84)	UJ 4D	ND (<0.89)		NA		ND (<87)		NA		ND (<0.87)		NA		ND (<0.89)	
Dichlorodifluoromethane (Freon 12)	100,000	440,000	µg/m^3	**3.1**	**J- 4D, 6G**	ND (<0.70)		NA		ND (<68)		NA		**3.4**	**J 6G**	NA		**3.2**	**J 6G**
1,2-Dichloroethane	110	470	µg/m^3	ND (<0.38)	UJ 4D	ND (<0.41)		NA		ND (<40)		NA		ND (<0.40)		NA		ND (<0.41)	
***cis*-1,2-Dichloroethene**	8,300	35,000	µg/m^3	ND (<0.47)	UJ 4D	ND (<0.50)		**47,000**		**35,000**		ND (<5.2)		ND (<0.49)		ND (<5.1)		ND (<0.50)	
trans-1,2-Dichloroethene	83,000	350,000	µg/m^3	ND (<0.40)	UJ 4D	ND (<0.42)		ND (<430)		**200**	**J 6G**	ND (<4.4)		ND (<0.41)		ND (<4.3)		ND (<0.42)	
1,2-Dichloropropane	760	3,300	µg/m^3	ND (<0.47)	UJ 4D	ND (<0.50)		NA		**600**	**J 6G**	NA		ND (<0.49)		NA		ND (<0.50)	
1,1-Difluoroethane	42,000,000	180,000,000	µg/m^3	ND (<2.9)	UJ 4D	ND (<3.1)		NA		ND (<300)		NA		ND (<3.1)		NA		ND (<3.1)	
Ethanol	NE	NE	µg/m^3	**3.5**	**J- 4D**	**13**		NA		ND (<64)		NA		**4.5**		NA		**87**	
Ethylbenzene	1,100	4,900	µg/m^3	**9.7**	**J- 4D**	**5.0**	**J 6G**	NA		ND (<49)		NA		ND (<0.49)		NA		**3.8**	**J 6G**
1-Ethyl-4-Methylbenzene	NE	NE	µg/m^3	**1.9**	**J- 4D, 6G**	**3.1**	**J 6G**	NA		ND (<46)		NA		ND (<0.46)		NA		ND (<0.47)	
n-Heptane	420,000	1,800,000	µg/m^3	**3.8**	**J- 4D**	**1.8**	**J 6G**	NA		ND (<52)		NA		ND (<0.52)		NA		ND (<0.53)	
Hexane	730,000	3,100,000	µg/m^3	ND (<0.29)	UJ 4D	**7.0**	**J 6G**	NA		ND (<30)		NA		ND (<0.31)		NA		ND (<0.31)	
2-Hexanone	31,000	130,000	µg/m^3	ND (<0.43)	UJ 4D	ND (<0.45)		NA		ND (<44)		NA		ND (<0.44)		NA		ND (<0.45)	
Isooctane	NE	NE	µg/m^3	ND (<0.51)	UJ 4D	ND (<0.55)		NA		ND (<53)		NA		ND (<0.54)		NA		ND (<0.55)	
Isopropyl Alcohol (2-Propanol)	210,000	880,000	µg/m^3	**94**	**J- 4D**	ND (<0.50)		ND (<510)		ND (<49)		ND (<5.2)		**0.81**	**J 6G**	ND (<5.1)		**30**	
Methyl Ethyl Ketone (2-Butanone)	5,200,000	22,000,000	µg/m^3	**1.7**	**J- 4D, 6G**	**6.9**		NA		ND (<29)		NA		ND (<0.29)		NA		**32**	
Methyl Isobutyl Ketone	3,100,000	13,000,000	µg/m^3	ND (<0.38)	UJ 4D	ND (<0.41)		NA		ND (<40)		NA		ND (<0.40)		NA		**3.1**	**J 6G**
Methyl *tert*-Butyl Ether (MTBE)	11,000	47,000	µg/m^3	ND (<0.41)	UJ 4D	ND (<0.44)		NA		ND (<43)		NA		ND (<0.43)		NA		ND (<0.44)	
Naphthalene	83	360	µg/m^3	ND (<2.1)	UJ 4D	ND (<2.2)		NA		ND (<210)		NA		ND (<2.1)		NA		ND (<2.2)	
Propylene	3,100,000	13,000,000	µg/m^3	ND (<0.37)	UJ 4D	ND (<0.39)		NA		ND (<38)		NA		ND (<0.38)		NA		ND (<0.39)	
Styrene	940,000	3,900,000	µg/m^3	ND (<0.35)	UJ 4D	ND (<0.37)		NA		ND (<36)		NA		ND (<0.37)		NA		ND (<0.37)	
Tetrachloroethene (PCE)	460	2,000	µg/m^3	**8.6**	**J- 4D**	**18**		**1,200,000**		**320,000**		ND (<8.2)		**15**		**110**		**39**	
1,1,1,2-Tetrafluoroethane	83,000,000	350,000,000	µg/m^3	ND (<0.98)	UJ 4D	ND (<1.0)		NA		ND (<100)		NA		ND (<1.0)		NA		ND (<1.0)	
Tetrahydrofuran	2,100,000	8,800,000	µg/m^3	ND (<0.40)	UJ 4D	**1.2**	**J 6G**	NA		ND (<41)		NA		ND (<0.41)		NA		**10**	
Toluene	310,000	1,300,000	µg/m^3	**14**	**J- 4D**	**13**		NA		ND (<41)		NA		ND (<0.41)		NA		**7.9**	
1,1,1-Trichloroethane	1,000,000	4,400,000	µg/m^3	ND (<0.57)	UJ 4D	ND (<0.61)		ND (<620)		ND (<59)		ND (<6.4)		ND (<0.60)		ND (<6.2)		ND (<0.61)	
Trichloroethene (TCE)	480	3,000	µg/m^3	ND (<0.79)	UJ 4D	ND (<0.84)		**16,000**		**15,000**		ND (<8.9)		ND (<0.83)		ND (<8.6)		ND (<0.84)	
Trichlorofluoromethane (Freon 11)	1,300,000	5,300,000	µg/m^3	ND (<0.69)	UJ 4D	ND (<0.73)		NA		ND (<71)		NA		**1.8**	**J 6G**	NA		ND (<0.73)	
1,1,2-Trichloro-1,2,2-Trifluoroethane	5,200,000	22,000,000	µg/m^3	ND (<0.81)	UJ 4D	ND (<0.86)		NA		ND (<84)		NA		ND (<0.84)		NA		ND (<0.86)	
1,2,4-Trimethylbenzene	63,000	260,000	µg/m^3	**2.7**	**J- 4D, 6G**	**4.0**	**J 6G**	NA		ND (<61)		NA		ND (<0.61)		NA		**2.3**	**J 6G**
1,3,5-Trimethylbenzene	63,000	260,000	µg/m^3	ND (<0.59)	UJ 4D	ND (<0.62)		NA		ND (<61)		NA		ND (<0.61)		NA		ND (<0.62)	
Vinyl Acetate	210,000	880,000	µg/m^3	ND (<0.49)	UJ 4D	ND (<0.51)		NA		ND (<50)		NA		ND (<0.50)		NA		ND (<0.51)	
p- & *m*-Xylenes	100,000	440,000	µg/m^3	**14**	**J- 4D**	**13**		NA		ND (<93)		NA		ND (<0.93)		NA		**9.0**	
o-Xylene	100,000	440,000	µg/m^3	**3.3**	**J- 4D, 6G**	**4.1**	**J 6G**	NA		ND (<46)		NA		ND (<0.46)		NA		**2.9**	**J 6G**
Total Xylenes	NE	NE	µg/m^3	**17**	**J- 4D**	**17**		NA		ND (<140)		NA		ND (<1.4)		NA		**12**	**J 6G**
TPH - Gasoline	600,000[b]	2,500,000[b]	µg/m^3	**200**	**J- 4D, 6G**	**400**		NA		**500,000**		NA		**51**	**J 6G**	NA		**520**	
Total Petroleum Hydrocarbons	NE	NE	µg/m^3	**200**	**J- 4D, 6G**	**400**		NA		**500,000**		NA		**51**	**J 6G**	NA		**520**	

TABLE 4-4. CURRENT INVESTIGATION ANALYTES DETECTED IN SHALLOW SOIL GAS COMPARED TO SOIL VAPOR SCREENING LEVELS (0.001 ATTENUATION FACTOR)

Notes:

Only analytes detected in one or more samples are shown.
Analytes detected above one or both SVSLs are shown in **bold**.
Concentrations detected above the laboratory MDL are shown in **bold**.
For non-detects, the value in parentheses corresponds to the laboratory MDL.
Sample depths are referenced to the top of soil (bottom of pavement).
Concentration exceeds residential SVSL.
Concentration exceeds residential and commercial/industrial SVSL.
ND (<MDL) Black inversed cell indicates a non-detect with a laboratory MDL exceeding the commercial/industrial SVSL and/or residential SVSL.
[a] Unless noted otherwise, SVSLs were derived by dividing the HERO HHRA Note 3 residential and commercial/industrial ambient air screening levels (DTSC 2020) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).
[b] SVSL derived by dividing the SF RWQCB residential or commercial/industrial indoor air screening levels (SWRCB, 2019) by a 0.001 soil vapor attenuation factor (CalEPA, 2020).
< = less than
µg/m^3 = micrograms per cubic meter
CalEPA = California Environmental Protection Agency
DTSC = California Department of Toxic Substances Control
FD = field duplicate sample
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
ID = identification
MDL = method detection limit
N = normal sample
ND = not detected above the laboratory MDL
PQL = practical quantitation limit
QA = quality assurance data validation qualifier
SF RWQCB = San Francisco Bay Regional Water Quality Control Board
SVSL = soil vapor screening level
SWRCB = California State Water Resources Control Board

Data Validation Qualifier Definitions:

J = estimated result
J- = estimated result; potential low bias
UJ = estimated result; analyte not detected at the indicated value

Data Validation Reason Code Definitions:

3D = field duplicate Imprecision
4A = canister received at ambient pressure
4D = leak check compound greater than 10 times the lowest PQL; potential leak
6G = reported between the laboratory MDL and PQL

TABLE 4-5. CURRENT INVESTIGATION ARSENIC CONCENTRATIONS DETECTED IN SOIL COMPARED TO BACKGROUND
(Page 1 of 4)

				Arsenic
			Units	mg/kg
			Background Concentration[a]	17.53
Location ID	Field Sample ID	Sample Date	Sample Depth (feet bgs)[b]	
Borehole B08 Step-Outs				
B08-E	B08-E-1.5	6/29/2020	1.5	**29**
B08-E	B08-E-3	6/29/2020	3.0	**40**
B08-N	B08-N-1.5	6/29/2020	1.5	**28**
B08-N	B08-N-1.5-FD	6/29/2020	1.5	**29[c]**
B08-N	B08-N-3	6/29/2020	3.0	**5.7**
B08-S	B08-S-1.5	6/29/2020	1.5	**54**
B08-S	B08-S-3	6/29/2020	3.0	**9.1**
B08-W	B08-W-1.5	6/29/2020	1.5	**19**
B08-W	B08-W-3	6/29/2020	3.0	**12**
B08-EE	B08-EE-1.5	7/20/2020	1.5	**99**
B08-EE	B08-EE-3	7/20/2020	3.0	**13**
B08-NN	B08-NN-1.5	7/20/2020	1.5	**30**
B08-SS	B08-SS-1.5	7/20/2020	1.5	**24**
B08-3-E	B08-3-E-1.5	8/7/2020	1.5	**9.1**
B08-3-N	B08-3-N-1.5	8/7/2020	1.5	**39**
B08-3-N	B08-3-N-1.5-FD	8/7/2020	1.5	**42[c]**
B08-3-S	B08-3-S-1.5	8/7/2020	1.5	**48**
Borehole KA-10 Step-Outs				
KA-10-N	KA-10-N-1.5	6/29/2020	1.5	**16**
KA-10-N	KA-10-N-3	6/29/2020	3.0	**8.0**
KA-10-S	KA-10-S-1.5	6/29/2020	1.5	**110**
KA-10-S	KA-10-S-3	6/29/2020	3	**6.2**
KA-10-S	KA-10-S-3-FD	6/29/2020	3	**5.5[c]**
KA-10-W	KA-10-W-1.5	6/29/2020	1.5	**35**
KA-10-W	KA-10-W-3	6/29/2020	3.0	**3.9**
KA-10-SS	KA-10-SS-1.5	7/20/2020	1.5	**38**
KA-10-SW	KA-10-SW-1.5	7/20/2020	1.5	**21**
KA-10-WW	KA-10-WW-1.5	7/20/2020	1.5	**14**
KA-10-WW	KA-10-WW-1.5-FD	7/20/2020	1.5	**11[c]**
KA-10-3-S	KA-10-3-S-1.5	8/7/2020	1.5	**16**
Borehole KA-17 Step-Outs				
KA-17-E	KA-17-E-1.5	6/30/2020	1.5	**17**
KA-17-E	KA-17-E-3	6/30/2020	3.0	**3.6**
KA-17-N	KA-17-N-1.5	6/30/2020	1.5	**78**
KA-17-N	KA-17-N-3	6/30/2020	3.0	**3.6**
KA-17-W	KA-17-W-1.5	6/30/2020	1.5	**150**
KA-17-W	KA-17-W-3	6/30/2020	3.0	**4.1**

TABLE 4-5. CURRENT INVESTIGATION ARSENIC CONCENTRATIONS DETECTED IN SOIL COMPARED TO BACKGROUND
(Page 2 of 4)

				Arsenic
			Units	mg/kg
			Background Concentration[a]	17.53
Location ID	Field Sample ID	Sample Date	Sample Depth (feet bgs)[b]	
Borehole KA-17 Step-Outs (continued)				
KA-17-NN	KA-17-NN-1.5	7/20/2020	1.5	**59**
KA-17-NW	KA-17-NW-1.5	7/20/2020	1.5	**37**
KA-17-WW	KA-17-WW-1.5	7/20/2020	1.5	**44**
KA-17-3-N	KA-17-3-N-1.5	8/7/2020	1.5	**3.4**
KA-17-3-NE	KA-17-3-NE-1.5	8/7/2020	1.5	**140**
KA-17-3-NW	KA-17-3-NW-1.5	8/7/2020	1.5	**3.9**
KA-17-3-W	KA-17-3-W-1.5	8/7/2020	1.5	**60**
KA-17-4-NE	KA-17-4-NE-1.5	8/28/2020	1.5	**14**
Borehole KA-44 Step-Outs				
KA-44-E	KA-44-E-1.5	6/30/2020	1.5	**6.3**
KA-44-E	KA-44-E-3	6/30/2020	3.0	**8.5**
KA-44-N	KA-44-N-1.5	6/30/2020	1.5	**5.0**
KA-44-N	KA-44-N-3	6/30/2020	3.0	**8.8**
KA-44-S	KA-44-S-1.5	6/30/2020	1.5	**14**
KA-44-S	KA-44-S-3	6/30/2020	3.0	**6.6**
KA-44-W	KA-44-W-1.5	6/30/2020	1.5	**4.4**
KA-44-W	KA-44-W-1.5-FD	6/30/2020	1.5	**4.6**[c]
KA-44-W	KA-44-W-3	6/30/2020	3.0	**9.5**
Warehouse Building Step-Outs				
VW56	VW56-1.5	12/21/2020	1.5	**5.7**
VW57	VW57-1.5	12/21/2020	1.5	**30**
WB01	WB01-Dock	12/22/2020	1.5[d]	**19**
WB01	WB01-0.5	12/22/2020	0.5[e]	**8.2 J**
WB01	WB01-0.5-FD	12/22/2020	0.5[e]	**12 J**[c]
WB01A	WB01A-1.5	12/22/2020	1.5[e]	**8.8**
WB02	WB02-Dock	12/22/2020	1.5[d]	**4.3**
WB02	WB02-0.5	12/22/2020	0.5[e]	**3.7**
WB03	WB03-1.5	12/22/2020	1.5	**4.2**
WB04	WB04-1.5	12/22/2020	1.5	**3.9**
WB05	WB05-1.5	12/22/2020	1.5	**4.4**
WB05	WB05-5	12/22/2020	5	**4.0**
WB06	WB06-1.5	12/22/2020	1.5	**9.2**
WB06	WB06-5	12/22/2020	5	**70 J**
WB06	WB06-5FD	12/22/2020	5	**39 J**[c]
WB07	WB07-1.5-MS/MSD	12/22/2020	1.5	**7.2**
WB07	WB07-5	12/22/2020	5	**170**

TABLE 4-5. CURRENT INVESTIGATION ARSENIC CONCENTRATIONS DETECTED IN SOIL COMPARED TO BACKGROUND
(Page 3 of 4)

				Arsenic
			Units	mg/kg
			Background Concentration[a]	17.53
Location ID	Field Sample ID	Sample Date	Sample Depth (feet bgs)[b]	
Warehouse Building Step-Outs (continued)				
WB08	WB08-DOCK	2/23/2021	1.5[d]	**6.4**
WB08	WB08-1.5	2/23/2021	1.5[e]	**12**
WB09	WB09-DOCK	2/23/2021	1.5[d]	**4.2**
WB09	WB09-1.5	2/23/2021	1.5[e]	**4.4**
WB10	WB10-7.5	2/23/2021	7.5	**65**
WB10	WB10-10	2/23/2021	10	**55**
WB11	WB11-5	2/24/2021	5	**4.3**
WB11	WB11-5-FD	2/24/2021	5	**4.1**
WB11	WB11-7.5	2/24/2021	7.5	**5.8**
WB11	WB11-10	2/24/2021	10	**3.1**
WB12	WB12-5	2/24/2021	5	**15**
WB12	WB12-7.5	2/24/2021	7.5	**6.7**
WB12	WB12-10	2/24/2021	10	**3.6**
Borehole VW15				
VW15	SO-VW15-01	12/15/2020	2	**7.3**
Borehole VW31 and Associated Step-Outs				
VW31	VW-31-2	11/23/2020	2	**26**
VW-31-S	VW-31-S-2	2/23/2021	2	**150**
VW-31-S	VW-31-S-5	2/23/2021	5	**6.0**
VW-31-S	VW-31-S-5-FD	2/23/2021	5	**6.0**
Borehole VW35 and Associated Step-Outs				
VW35	VW-35-2	11/23/2020	2	**46**
VW35-E	VW-35-E-2	2/22/2021	2	**50**
VW35-E	VW-35-E-5	2/22/2021	5	**8.1**
VW35-N	VW-35-N-2	2/22/2021	2	**44**
VW35-N	VW-35-N-5	2/22/2021	5	**180**
VW35-N	VW-35-N-7.5	2/22/2021	7.5	**8.4**
VW35-NN	VW-35-NN-2	2/24/2021	2	**100**
VW35-NN	VW-35-NN-5	2/24/2021	5	**4.4**
VW35-S	VW-35-S-2	2/23/2021	2	**280**
VW35-S	VW-35-S-5	2/23/2021	5	**8.5**
VW35-S	VW-35-S-5-FD	2/23/2021	5	**6.6**
VW35-SS	VW-35-SS-2	2/24/2021	2	**94**
VW35-SS	VW-35-SS-5	2/24/2021	5	**4.3**
VW35-SS	VW-35-SS-5-FD	2/24/2021	5	**4.1**
VW35-W	VW-35-W-2	2/22/2021	2	**61 J+**
VW35-W	VW-35-W-5	2/22/2021	5	**4.4**

TABLE 4-5. CURRENT INVESTIGATION ARSENIC CONCENTRATIONS DETECTED IN SOIL COMPARED TO BACKGROUND
(Page 4 of 4)

				Arsenic
			Units	mg/kg
			Background Concentration[a]	17.53
Location ID	Field Sample ID	Sample Date	Sample Depth (feet bgs)[b]	
Borehole VW38				
VW38	VW38-2	11/24/2020	2	**17**

Notes:

Concentrations detected above the laboratory MDL shown in **bold**.

Concentration exceeds Site-specific background concentration.

[a] Site-specific background concentration (AECOM, 2019).

[b] Depth from top of soil. In paved areas, top of soil is at the bottom of pavement unless indicated otherwise.

[c] Field duplicate analytical result

[d] Depth from bottom of dock/top of underlying fill material

[e] Depth from top of soil referenced to the surrounding grade.

bgs = below ground surface
ID = identification
MDL = method detection limit
mg/kg = milligrams per kilogram

Data Validation Qualifier Definitions:

Refer to Appendix C for qualifier reason codes.
J = estimated concentration
J+ = estimated concentration, potential high bias

TABLE 4-6. CURRENT INVESTIGATION ANALYTE CONCENTRATIONS DETECTED IN VAPOR WELL BOREHOLE AND ASSOCIATED STEP-OUT BOREHOLE SOIL SAMPLES COMPARED TO REGULATORY SCREENING LEVELS AND BACKGROUND

					Location ID	VW15			VW31			VW31-S			VW31-S			VW31-S			VW35			VW35-E			VW35-E		
					Sampling Date/Time	12/15/2020 15:00			11/23/2020 14:48			02/23/2021 09:35			02/23/2021 09:40			02/23/2021 09:45			11/23/2020 14:25			02/22/2021 14:30			02/22/2021 14:40		
					Sample Depth (feet)[a]	2			2			2			5			5			2			2			5		
					Sample Type	N			N			N			N			FD			N			N			N		
					Field Sample ID	SO-VW15-01			VW-31-2			VW-31-S-2			VW-31-S-5			VW-31-S-5-FD			VW-35-2			VW-35-E-2			VW-35-E-5		
					Lab Sample ID	2037036-01			2034585-02			2106339-14			2106339-11			2106339-12			2034585-01			2106339-04			2106339-05		
					Status	*Not Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*		
Analyte	Residential SL[b]	Commercial/ Industrial SL[b]	Background[c]	Units	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason
Aroclor 1260	0.24	0.60	NE	mg/kg	**0.010**	**J**		**0.0077**	**J**	**6G**	NA			NA			NA			**0.035**	**J-**	**2C-, 6G**	NA			NA		
Total PCBs	0.23	0.58	NE	mg/kg	ND (<0.025)			**0.0077**	**J**	**6G**	NA			NA			NA			**0.035**	**J-**	**2C-, 6G**	NA			NA		
Tetrachloroethene (PCE)	0.59	2.7	NE	mg/kg	ND (<0.00097)			ND (<0.00097)			NA			NA			NA			**0.0017**	**J**	**6G**	NA			NA		
TPH - Diesel	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	**40**			**6.3**	**J**	**6G, 6H**	NA			NA			NA			**650**	**J**	**6G, 6H**	ND (<11)			ND (<11)		
TPH - Hydraulic Oil/Motor Oil	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	**510**			**29**	**J**	**6H**	NA			NA			NA			**3,500**	**J**	**6H**	**960**	**J**	**6H**	**400**	**J**	**6H**
Antimony	*(31)*	*(470)*	NE	mg/kg	**0.26**	**J**		**0.14**	**J**	**6G**	NA			NA			NA			**0.52**	**J-**	**2B-**	NA			NA		
Arsenic	0.11	0.36	17.53	mg/kg	**7.3**			**26**			**150**			**6.0**			**6.0**			**46**			**50**			**8.1**		
Barium	*(15,000)*	*(220,000)*	NE	mg/kg	**130**			**120**			NA			NA			NA			**170**	**J-**	**2B-**	NA			NA		
Beryllium	*(16)*	*(230)*	NE	mg/kg	**0.19**	**J**		**0.33**			NA			NA			NA			**0.33**	**J**	**3C**	NA			NA		
Cadmium	*(71)*	*(780)*	NE	mg/kg	**0.32**			ND (<0.048)			NA			NA			NA			**0.22**	**J**	**6G**	NA			NA		
Chromium	NE	NE	NE	mg/kg	**27**			**29**			NA			NA			NA			**33**	**J-**	**2B-**	NA			NA		
Cobalt	*(23)*	*(350)*	NE	mg/kg	**4.8**			**7.9**			NA			NA			NA			**8.1**			NA			NA		
Copper	*(3,100)*	*(47,000)*	NE	mg/kg	**70**			**22**			NA			NA			NA			**53**	**J**	**2B-, 2B+**	NA			NA		
Lead	*(80)*	*(320)*	NE	mg/kg	**9.2**			**10**			NA			NA			NA			**120**			**13**			**10**		
Mercury	*(1.0)*	*(4.4)*	NE	mg/kg	ND (<0.021)			ND (<0.12)	UJ	1A	NA			NA			NA			**0.21**	**J+**	**1A**	NA			NA		
Molybdenum	*(390)*	*(5,800)*	NE	mg/kg	**1.4**			**0.46**			NA			NA			NA			**0.61**			NA			NA		
Nickel	*(820)*	*(11,000)*	NE	mg/kg	**27**			**25**			NA			NA			NA			**29**			NA			NA		
Selenium	*(390)*	*(5,800)*	NE	mg/kg	**0.55**			ND (<0.11)			NA			NA			NA			ND (<0.11)			NA			NA		
Silver	*(390)*	*(5,800)*	NE	mg/kg	**0.11**	**J**		**0.077**	**J**	**6G**	NA			NA			NA			**0.093**	**J**	**6G**	NA			NA		
Thallium	*(0.78)*	*(12)*	NE	mg/kg	**0.14**	**J**		**0.13**	**J**	**6G**	NA			NA			NA			**0.090**	**J**	**6G**	NA			NA		
Vanadium	*(390)*	*(5,800)*	NE	mg/kg	**37**			**44**			NA			NA			NA			**38**	**J-**	**2B-**	NA			NA		
Zinc	*(23,000)*	*(350,000)*	NE	mg/kg	**44**			**46**			NA			NA			NA			**170**			NA			NA		

TABLE 4-6. CURRENT INVESTIGATION ANALYTE CONCENTRATIONS DETECTED IN VAPOR WELL BOREHOLE AND ASSOCIATED STEP-OUT BOREHOLE SOIL SAMPLES COMPARED TO REGULATORY SCREENING LEVELS AND BACKGROUND

					Location ID	VW35-N			VW35-N			VW35-N			VW35-NN			VW35-NN			VW35-S			VW35-S			VW35-S		
					Sampling Date/Time	02/22/2021 11:20			02/22/2021 11:55			02/22/2021 13:35			02/24/2021 14:10			02/24/2021 14:15			02/23/2021 07:55			02/23/2021 08:05			02/23/2021 08:10		
					Sample Depth (feet)[a]	2			5			7.5			2			5			2			5			5		
					Sample Type	N			N			N			N			N			N			N			FD		
					Field Sample ID	VW-35-N-2			VW-35-N-5			VW-35-N-7.5			VW-35-NN-2			VW-35-NN-5			VW-35-S-2			VW-35-S-5			VW-35-S-5-FD		
					Lab Sample ID	2106339-01			2106339-02			2106339-03			2106339-29			2106339-30			2106339-08			2106339-09			2106339-10		
					Status	*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Validated*		
Analyte	Residential SL[b]	Commercial/ Industrial SL[b]	Background[c]	Units	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason
Aroclor 1260	0.24	0.60	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Total PCBs	0.23	0.58	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Tetrachloroethene (PCE)	0.59	2.7	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
TPH - Diesel	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	**280**	**J**	**6H**	ND (<2.2)			ND (<2.2)			ND (<11)			ND (<2.2)			ND (<11)			ND (<2.2)			ND (<2.2)		
TPH - Hydraulic Oil/Motor Oil	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	**6,000**	**J**	**6H**	**83**	**J**	**6H**	**28**	**J**	**6H**	**130**	**J**	**6H**	**8.5**	**J**	**6G, 6H**	**380**	**J**	**6H**	**14**	**J**	**3D, 6G, 6H**	**27**	**J**	**3D, 6H**
Antimony	*(31)*	*(470)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Arsenic	0.11	0.36	17.53	mg/kg	**44**			**180**			**8.4**			**100**			**4.4**			**280**			**8.5**			**6.6**		
Barium	*(15,000)*	*(220,000)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Beryllium	*(16)*	*(230)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Cadmium	*(71)*	*(780)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Chromium	NE	NE	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Cobalt	*(23)*	*(350)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Copper	*(3,100)*	*(47,000)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Lead	*(80)*	*(320)*	NE	mg/kg	**130**			**10**			**7.7**			**55**			**6.8**			**13**			**6.5**			**6.7**		
Mercury	*(1.0)*	*(4.4)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Molybdenum	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Nickel	*(820)*	*(11,000)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Selenium	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Silver	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Thallium	*(0.78)*	*(12)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Vanadium	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		
Zinc	*(23,000)*	*(350,000)*	NE	mg/kg	NA			NA			NA			NA			NA			NA			NA			NA		

TABLE 4-6. CURRENT INVESTIGATION ANALYTE CONCENTRATIONS DETECTED IN VAPOR WELL BOREHOLE AND ASSOCIATED STEP-OUT BOREHOLE SOIL SAMPLES COMPARED TO REGULATORY SCREENING LEVELS AND BACKGROUND

				Location ID	VW35-SS			VW35-SS			VW35-SS			VW35-W			VW35-W			VW38		
				Sampling Date/Time	02/24/2021 12:55			02/24/2021 13:10			02/24/2021 13:15			02/22/2021 16:05			02/22/2021 16:15			11/24/2020 13:45		
				Sample Depth (feet)[a]	2			5			5			2			5			2		
				Sample Type	N			N			FD			N			N			N		
				Field Sample ID	VW-35-SS-2			VW-35-SS-5			VW-35-SS-5-FD			VW-35-W-2			VW-35-W-5			VW38-2		
				Lab Sample ID	2106339-26			2106339-27			2106339-28			2106339-06			2106339-07			2034758-01		
				Status	*Validated*			*Validated*			*Validated*			*Validated*			*Validated*			*Not Validated*		
Analyte	Residential SL[b]	Commercial/ Industrial SL[b]	Background[c]	Units	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason	Result	QA	Reason
Aroclor 1260	0.24	0.60	NE	mg/kg	NA			NA			NA			NA			NA			**0.0023**	**J**	
Total PCBs	0.23	0.58	NE	mg/kg	NA			NA			NA			NA			NA			ND (<0.0050)		
Tetrachloroethene (PCE)	0.59	2.7	NE	mg/kg	NA			NA			NA			NA			NA			ND (<0.00097)		
TPH - Diesel	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	ND (<2.2)			ND (<2.2)			ND (<2.2)			ND (<2.2)			ND (<2.2)			**10**		
TPH - Hydraulic Oil/Motor Oil	*(2,400)*[d]	*(18,000)*[d]	NE	mg/kg	ND (<7.0)			ND (<7.0)			ND (<7.0)			ND (<7.0)			**9.1**	**J**	**6G, 6H**	**36**		
Antimony	*(31)*	*(470)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.34**	**J**	
Arsenic	0.11	0.36	17.53	mg/kg	**94**			**4.3**			**4.1**			**61**	**J+**	**2E+**	**4.4**			**17**		
Barium	*(15,000)*	*(220,000)*	NE	mg/kg	NA			NA			NA			NA			NA			**110**		
Beryllium	*(16)*	*(230)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.27**		
Cadmium	*(71)*	*(780)*	NE	mg/kg	NA			NA			NA			NA			NA			ND (<0.048)		
Chromium	NE	NE	NE	mg/kg	NA			NA			NA			NA			NA			**34**		
Cobalt	*(23)*	*(350)*	NE	mg/kg	NA			NA			NA			NA			NA			**7.6**		
Copper	*(3,100)*	*(47,000)*	NE	mg/kg	NA			NA			NA			NA			NA			**29**		
Lead	*(80)*	*(320)*	NE	mg/kg	**7.9**			**6.6**			**6.5**			**11**	**J+**	**2E+**	**6.6**			**19**		
Mercury	*(1.0)*	*(4.4)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.052**	**J**	
Molybdenum	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.28**		
Nickel	*(820)*	*(11,000)*	NE	mg/kg	NA			NA			NA			NA			NA			**29**		
Selenium	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			ND (<0.11)		
Silver	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.059**	**J**	
Thallium	*(0.78)*	*(12)*	NE	mg/kg	NA			NA			NA			NA			NA			**0.10**	**J**	
Vanadium	*(390)*	*(5,800)*	NE	mg/kg	NA			NA			NA			NA			NA			**41**		
Zinc	*(23,000)*	*(350,000)*	NE	mg/kg	NA			NA			NA			NA			NA			**49**		

TABLE 4-6. CURRENT INVESTIGATION ANALYTE CONCENTRATIONS DETECTED IN VAPOR WELL BOREHOLE AND ASSOCIATED STEP-OUT BOREHOLE SOIL SAMPLES COMPARED TO REGULATORY SCREENING LEVELS AND BACKGROUND

Notes:

Only analytes detected in one or more samples are shown.
Concentrations detected above the laboratory MDL are shown in **bold**.
For non-detects, the value in parentheses corresponds to the laboratory MDL.
Unless otherwise noted, sample depths are referenced to top of soil (bottom of pavement if present).
Concentration exceeds residential SL.
Concentration exceeds residential and commercial/industrial SLs.
Concentration exceeds residential and commercial/industrial SLs and background.
[a] Depth from top of soil. In paved areas, top of soil is at the bottom of pavement unless indicated otherwise.
[b] Residential and commercial/industrial SLs from HERO HHRA Note 3 (DTSC, 2020). Cancer Endpoint *(Non-Cancer Endpoint)*.
[c] Site-specific background concentration (AECOM, 2019).
[d] SL for TPH (C17-C32 Aromatic High)
< = less than
DTSC = California Department of Toxic Substances Control
FD = field duplicate sample
HERO = Human and Ecological Risk Office
HHRA = human health risk assessment
ID = identification
MDL = method detection limit
mg/kg = milligrams per kilogram
N = normal sample
NA = not analyzed
ND = not detected above the laboratory MDL
NE = not established
PCB = polychlorinated biphenyl
PQL = practical quantitation limit
QA = quality assurance data validation qualifier
SL = screening level
TPH = total petroleum hydrocarbons

Data Validation Qualifier Definitions:

J = estimated concentration
J+ = estimated concentration; potential high bias
J- = estimated concentration; potential low bias
UJ = estimated concentration; analyte not detected at the indicated value

Data Validation Reason Code Definitions:

1A = method blank contamination
2B+ = high matrix pike recovery
2B- = low matrix spike recovery
2C- = low surrogate spike recovery
2E+ = high post digestion spike recovery
3C = laboratory duplicate imprecision
3D = field duplicate imprecision
6G = detected between the PQL and MDL
6H = chromatographic pattern of the sample did not resemble the chromatographic pattern of the standard

TABLE 5-1. SUMMARY OF CUMULATIVE RISK AND HAZARD RESULTS FOR THE VAPOR INTRUSION PATHWAY

	Attenuation Factor = 0.03[a]			Attenuation Factor = 0.001[b]		
Receptor	Potential Estimated Cumulative Cancer Risk	Potential Estimated Noncancer Hazard Index	Primary Risk Contributors[c]	Potential Estimated Cumulative Cancer Risk	Potential Estimated Noncancer Hazard Index	Primary Risk Contributors[c]
Resident	**2E-02**	**578**	benzene, BDCM, chloroform, 1,2-DBE, cis-1,2-DCE, ethylbenzene, naphthalene, PCE, TCE, toluene	**7E-04**	**19**	chloroform, 1,2-DBE, cis-1,2-DCE, PCE, TCE
Commercial/ Industrial Worker	**5E-03**	**136**	benzene, BDCM, chloroform, 1,2-DBE, cis-1,2-DCE, 1,2-DCP, naphthalene, PCE, TCE	**2E-04**	**5**	Chloroform, PCE, TCE

Notes:

Cancer risk greater than 1E-06 or noncancer hazard index greater than 1 shown in **bold**.

Cancer risks and noncancer hazards are presented to one significant figure.

[a] Residential and Commercial/Industrial soil vapor screening levels derived using 0.03 attenuation factor (CalEPA, 2020).

[b] Residential and Commercial/Industrial soil vapor screening levels derived using 0.001 attenuation factor (DTSC, 2011).

[c] Primary risk contributors were identified as chemicals contributing to a cumulative cancer risk greater than 1E-06 or noncancer hazard index greater than 1.

BDCM = bromodichloromethane

CalEPA = California Environmental Protection Agency

DBE = dibromoethane

DCE = dichloroethene

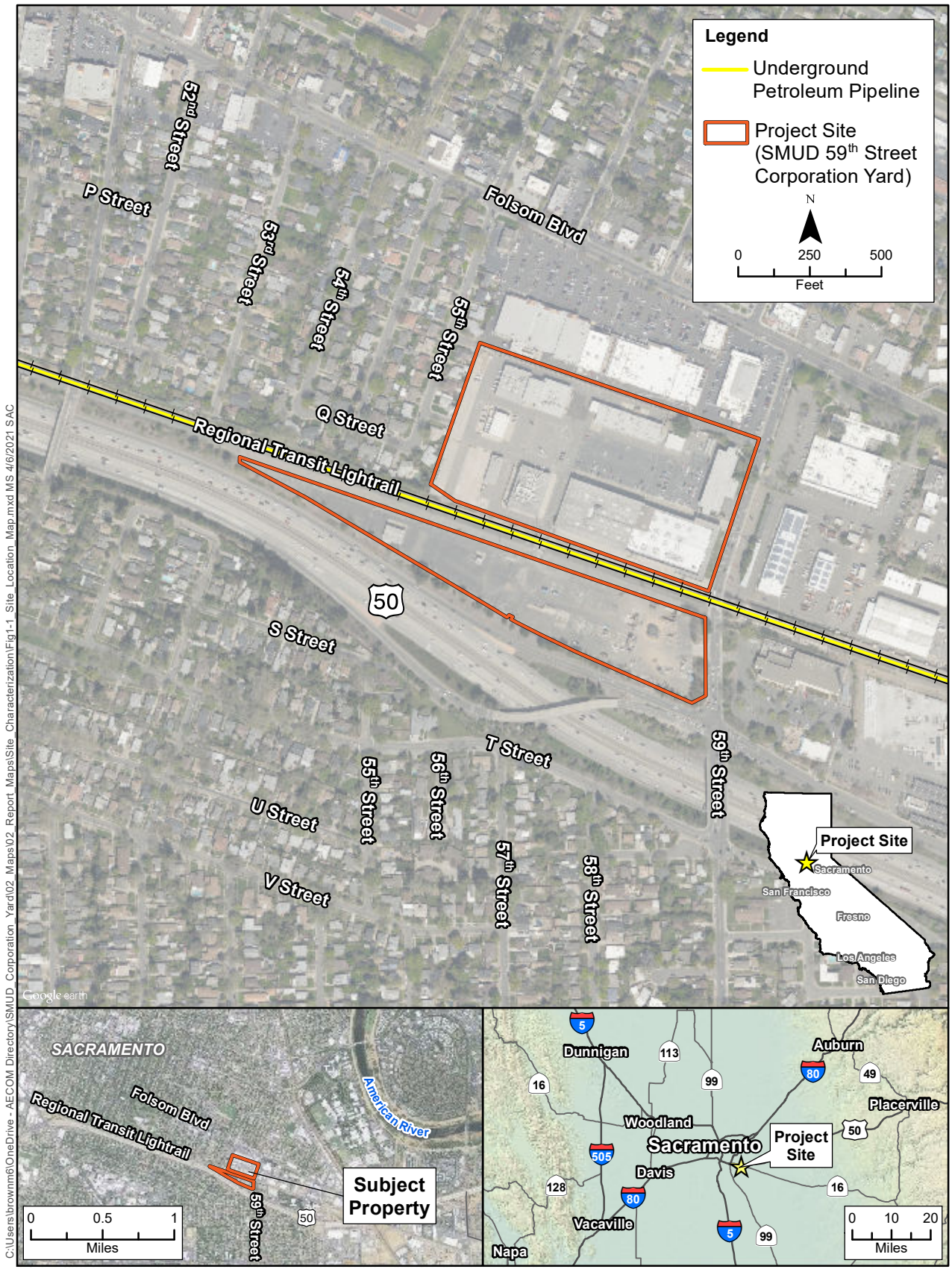
DCP = dichloropropane

DTSC = California Department of Toxic Substances Control

PCE = tetrachloroethene

TCE = trichloroethene

Figures



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AECOM SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 1-1
Site Location Map

Legend

- Underground Petroleum Pipeline
- Site Boundary
- Assessor Parcel Boundary
- 008-0010-009 Assessor Parcel Number

Note:

1. Only the first 10 digits of the 14-digit Assessor Parcel numbers are shown. The last four digits of each parcel are "-0000".

0 75 150
Feet

N

CHRISTOPHER WAY
55th STREET
54th STREET
59th STREET
P STREET

SHOPS BUILDING
GARAGE BUILDING
TRAILER T4
TRAILER T3
OFFICE BUILDING
HAZARDOUS MATERIALS BUILDING
NORTH CORPORATION YARD
008-0010-009
TRAILER T1
TRAILER T2
SALVAGE BUILDING
TOOL ISSUE BUILDING
WAREHOUSE BUILDING

REGIONAL TRANSIT LIGHT RAIL

011-0073-003
011-0073-001
STORAGE YARD
PRE FAB BUILDING
011-0073-002
011-0073-004
SOUTH CORPORATION YARD
011-0073-008
011-0081-001
011-0081-002
011-0081-003
011-0073-006
011-0081-008

HIGHWAY 50

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AECOM

SMUD Corporation Yard
1708 59th Street Sacramento, California

Figure 1-2
Site Features Map

Legend

Approximate Location of Removed UST

Site Boundary

Abbreviations:
GAL Gallons
UST Underground Storage Tank

Note:
1. The former location of UST #100 is unknown.

0 30 60
Feet

N

#1
5,000 GAL
TRANSFORMER OIL

#2
5,000 GAL
TRANSFORMER OIL

#3
500 GAL
USED TRANSFORMER OIL

#92
5,000 GAL
UNLEADED GASOLINE

#93/93D
10,000 GAL
REGULAR/UNLEADED GASOLINE

#94/94D
5,000/10,000 GAL
DIESEL

#95
10,000 GAL
UNLEADED GASOLINE

#96
500 GAL
USED OIL

#90
500 GAL
STODDARD SOLVENT

#96D
550 GAL
USED OIL

#89/89D
500/550 GAL
USED OIL

#98
500 GAL
MOTOR OIL

#99
500 GAL
HYDRAULIC FLUID

#97
500 GAL
TRANSMISSION FLUID

#91/91D
10,000 GAL
UNLEADED GASOLINE

#77
3,500 GAL
HYDRAULIC OIL CONTAINMENT
(INSIDE GARAGE BUILDING)

#78 THROUGH #88
1,000 GAL
HYDRAULIC OIL CONTAINMENT
(VARIOUS LOCATIONS INSIDE
GARAGE BUILDING)

#2
350 GAL
STODDARD SOLVENT

#3
350 GAL
KEROSENE

#1/1D
350/550 GAL
REGULAR/UNLEADED GASOLINE

SHOPS BUILDING

GARAGE BUILDING

TRAILER T4

NORTH CORPORATION YARD

HAZARDOUS MATERIALS BUILDING

SALVAGE BUILDING

TOOL ISSUE BUILDING

TRAILER T1

TRAILER T2

WAREHOUSE BUILDING

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AECOM SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 2-1
Historical Underground Storage Tank Locations

Legend

- Approximate Location of SWMU/AOC
- Site Boundary

Abbreviations:

AOC Area of Concern
AST Aboveground Storage Tank
OWS Oil/Water Separator
PCB Polychlorinated Biphenyl
SWMU Solid Waste Management Unit
UST Underground Storage Tank

0 60 120
Feet

N

SWMU #10
PAINT BOOTH AND
PAINT STORAGE ROOM

SWMU #9
FORMER WASTE OIL UST

SWMU #3
LUBE ROOM

SWMU #5
USED OIL AST

SWMU #7
DIESEL FILTER PULSE CLEANER

SWMU #14
DRAINED TRANSFORMER
STAGING AREA AND
UNIVERSAL WASTE STORAGE

AOC #1
VEHICLE FUELING
STATION

SWMU #8
FORMER WASTE OIL UST

SHOPS
BUILDING

SWMU #19
SATELLITE
ACCUMULATION AREA

TRAILER
T3

SWMU #19
SATELLITE
ACCUMULATION AREA

OFFICE
BUILDING

SWMU #1
VEHICLE OWS

SWMU #4
PARTS WASHERS

59th STREET

SWMU #13
OIL STORAGE TANKS

SWMU #2
PARTS WASHER

SWMU #6
BATTERY ROOM

SWMU #11
HAZMAT USED BATTERY
STORAGE AREA

SWMU #12
HAZMAT BUILDING

TRAILER T1

TRAILER T2

SALVAGE
BUILDING

TOOL ISSUE
BUILDING

WAREHOUSE BUILDING

SWMU #19
SATELLITE
ACCUMULATION AREA

SWMU #15
FORMER FUEL UST

REGIONAL TRANSIT LIGHTRAIL

SWMU #16
FORMER PCB
STORAGE AREA

PRE FAB
BUILDING

SWMU #17
TREATED WOOD
WASTE AREA

SWMU #18
VEHICLE OWS

AOC #2
UTILITY POLE
STORAGE AREA

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 2-2
Solid Waste Management Unit
and Area of Concern Locations

Legend

- Active Soil Gas Sample Location (2018/2019)
- Active Soil Gas Sample Location (2015)
- PCE Isoconcentration Contour Corresponding to Residential SVSL derived using a 0.03 attenuation factor
- PCE Isoconcentration Contour Corresponding to Commercial/Industrial SVSL derived using a 0.03 attenuation factor
- Site Boundary

Location ID — Depth (ft bgs)
KA-17 4.5'
PCE 15,000
Analyte — Concentration ($\mu g/m^3$)

Abbreviations:
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
ft = feet
ID = identification
PCE = tetrachloroethene
SVSL = soil vapor screening level

Notes:
1. PCE isoconcentration contours based on 2018/2019 soil gas data collected from 5.5 ft bgs.
2. PCE concentrations denoted by an asterisk (*) reflect the higher of two concentrations for a duplicate pair of samples.

KA-2 4.5' PCE 220
KA-8 4.5' PCE 47
KA-11 4.5' PCE 33
KA-19 4.5' PCE 240
KA-31 4.5' PCE 6.9
KA-17 4.5' PCE 15,000*

VW01 5.5' 14.5' PCE 320 2,000
VW02 5.5' 14.5' PCE 400 970
VW03 5.5' PCE ND(<44)*
VW04 5.5' 14.5' PCE 1,200 5,900
VW05 5.5' 14.5' PCE 5,100 3,900*
VW06 5.5' 14.5' PCE 99J 210
VW07 5.5' 14.5' PCE 96J 560
VW08 5.5' 14.5' PCE 82J 510
VW09 5.5' 14.5' PCE ND(<44) 100
VW10 5.5' 14.5' PCE 1,100 4,200
VW11 5.5' 14.5' PCE 740 2,600
VW12 5.5' 14.5' PCE 97 270
VW13 5.5' PCE 400*

15
67

SHOPS BUILDING
GARAGE BUILDING
TRAILER T4
TRAILER T3
OFFICE BUILDING
59th STREET
HAZARDOUS MATERIAL BUILDING
SALVAGE BUILDING
TOOL ISSUE BUILDING
TRAILER T1
TRAILER T2
PSC-20
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING
59th STREET

N
0 60 120
Feet

SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 2-3
Previous Investigation
PCE Concentrations in Soil Gas

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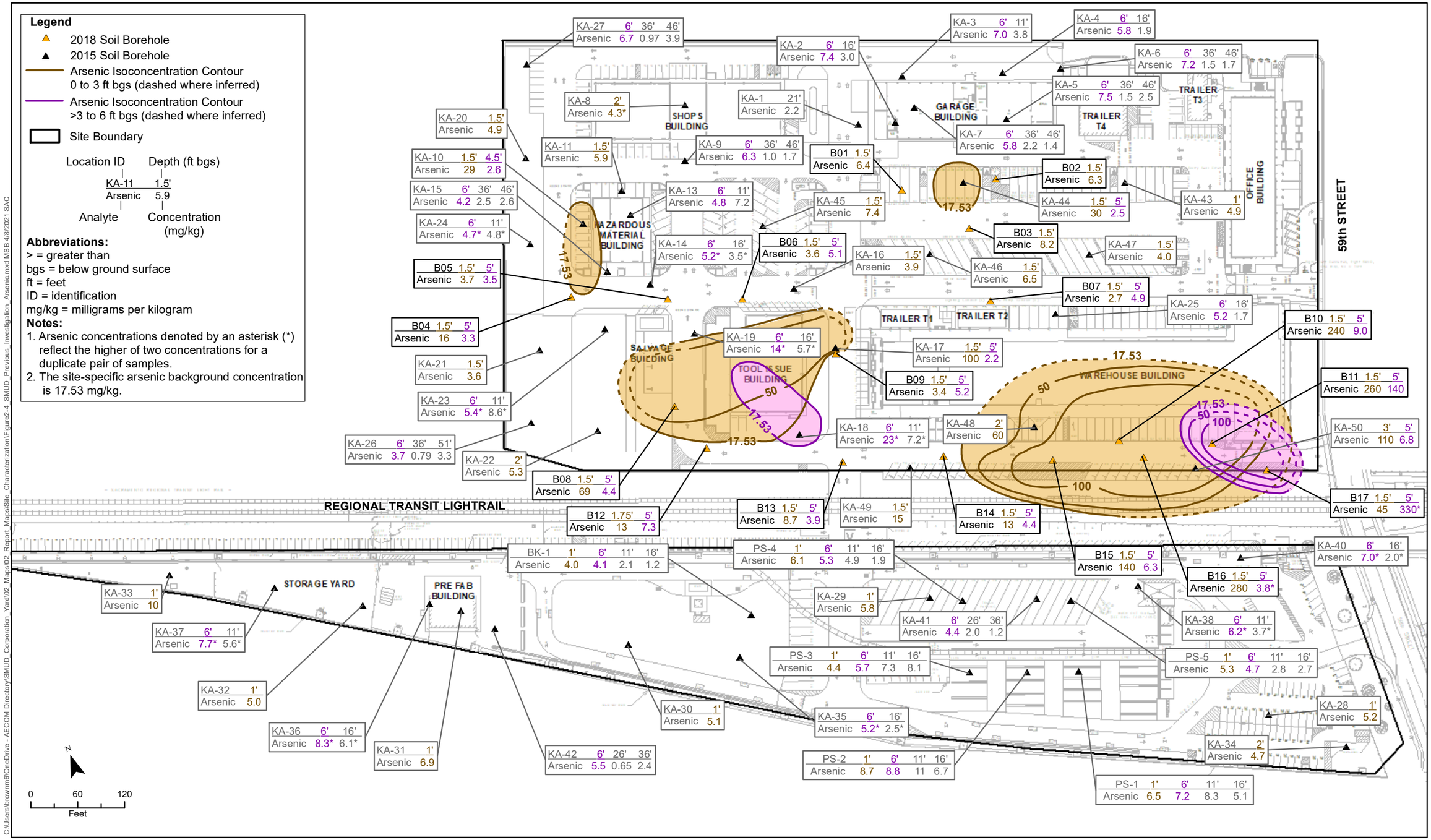
Legend

- 2018 Soil Borehole
- 2015 Soil Borehole
- Arsenic Isoconcentration Contour 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour >3 to 6 ft bgs (dashed where inferred)
- Site Boundary

Location ID | Depth (ft bgs)
KA-11 | 1.5'
Arsenic | 5.9
Analyte | Concentration (mg/kg)

Abbreviations:
> = greater than
bgs = below ground surface
ft = feet
ID = identification
mg/kg = milligrams per kilogram

Notes:
1. Arsenic concentrations denoted by an asterisk (*) reflect the higher of two concentrations for a duplicate pair of samples.
2. The site-specific arsenic background concentration is 17.53 mg/kg.



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AECOM

SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 2-4
Previous Investigation Arsenic Concentrations in Soil

Legend

- ▲ 2018 Groundwater Borehole
- ▲ 2015 Groundwater Borehole
- ▭ Site Boundary

Borehole ID	Depth (ft bgs)
KA-27	47' - 49'
BDCM	ND (<0.14)
CF	1.2
PCE	1.8
TPHd	ND (<34)
TPHg	NA
TPHmo	ND (<66)
Analyte	Concentration µg/L

Abbreviations:
< = less than
µg/L = micrograms per liter
BDCM = bromodichloromethane
bgs = below ground surface
CF = chloroform
ft = feet
ID = identification
J = estimated concentration
NA = not analyzed
ND = not detected
PCE = tetrachloroethene
TPH = total petroleum hydrocarbons
TPHd = total petroleum hydrocarbons as diesel
TPHg = total petroleum hydrocarbons as gasoline
TPHmo = total petroleum hydrocarbons as motor oil
VOC = volatile organic compund

Notes:
1. Only analytes detected at one or more locations are shown.
2. Primary MCL for sum of total trihalomethanes (bromoform, BDCM, CF, and chlorodibromomethane) = 80 µg/L.
3. Primary MCL for PCE = 5 µg/L
4. No primary MCL is established for TPHd, TPHg, or TPHmo.

KA-27	47' - 49'
BDCM	ND (<0.14)
CF	1.2
PCE	1.8
TPHd	ND (<34)
TPHg	NA
TPHmo	ND (<66)

KA-7	40' - 45'
BDCM	ND (<0.14)
CF	0.51
PCE	0.77
TPHd	230
TPHg	11 J
TPHmo	ND (<66)

KA-6	47.5' - 49.5'
BDCM	ND (<0.14)
CF	4.7
PCE	0.85
TPHd	ND (<34)
TPHg	9.4 J
TPHmo	ND (<66)

KA-9	47.5' - 49.5'
BDCM	ND (<0.14)
CF	3.9
PCE	2.1
TPHd	ND (<34)
TPHg	9.6 J
TPHmo	ND (<66)

KA-5	40' - 45'
BDCM	ND (<0.14)
CF	1.1
PCE	0.35 J
TPHd	ND (<34)
TPHg	ND (<7.2)
TPHmo	ND (<66)

KA-15	47.5' - 49.5'
BDCM	ND (<0.14)
CF	2.1
PCE	0.50
TPHd	ND (<34)
TPHg	7.8 J
TPHmo	ND (<66)

KA-26	47' - 49'
BDCM	0.19 J
CF	8.0
PCE	ND (<0.13)
TPHd	ND (<34)
TPHg	NA
TPHmo	ND (<66)

B06	33.73'
BDCM	NA
CF	NA
PCE	0.33 J/0.73
TPHd	NA
TPHg	NA
TPHmo	NA

B13	37'
BDCM	NA
CF	NA
PCE	0.44 J
TPHd	NA
TPHg	NA
TPHmo	NA

KA-41	34' - 40'
BDCM	0.30 J
CF	4.1
PCE	ND (<0.13)
TPHd	ND (<34)
TPHg	10 J
TPHmo	ND (<66)

KA-42	34' - 40'
BDCM	ND (<0.14)
CF	0.63
PCE	0.18 J
TPHd	330
TPHg	ND (<7.2)
TPHmo	470 J

SHOPS BUILDING
GARAGE BUILDING
TRAILER T4
OFFICE BUILDING
59th STREET
HAZARDOUS MATERIAL BUILDING
APPROXIMATE GROUNDWATER FLOW DIRECTION
TRAILER T1
TRAILER T2
SALVAGE BUILDING
TOOL ISSUE BUILDING
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING
SHIN STREET

N
0 60 120
Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 2-5
Previous Investigation
VOC and TPH Concentrations in Groundwater

Legend

- Active Soil Gas Sample Location
- Existing Soil Vapor Montoring Well
- Existing Soil Vapor Extraction Well
- Site Boundary

N

0 50 100
Feet

VW43 VW44 VW16 VW17 VW18 VW19 VW52 VW45 VW20 VW21 VW22 VW23 VW24 VW25 VW53 VW46 VW26 VW27 VW28 VW29 VW30 VW54 VW47 VW31 VW32 VW14 VW33 VW34 VW55 VW48 VW35 VW36 VW15 VW38 VW37 VW51 VW39 VW56 VW49 VW50 VW40 VW41 VW42 VW57

SVE-1 SVE-2 SVE-3 SVE-4 SVE-5 SVM-1 SVM-2 SVM-3

SHOPS BUILDING
GARAGE BUILDING
TRAILER T4
TRAILER T3
OFFICE BUILDING
HAZARDOUS MATERIAL BUILDING
SALVAGE BUILDING
TOOL ISSUE BUILDING
TRAILER T1
TRAILER T2
WAREHOUSE BUILDING
59th STREET
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 3-1
Current Investigation
Soil Gas Sample Locations

Legend

- 2020 Phase 1 Step-Out Borehole
- 2020 Phase 2 Step-Out Borehole
- 2020 Phase 3 Step-Out Borehole
- 2020 Phase 4 Step-Out Borehole
- 2020 Warehouse Step-Out Borehole
- 2020 Vapor Well Borehole
- 2021 Step-Out Borehole
- Previous Investigation Borehole
- Site Boundary

Note:
1. Only previous investigation boreholes associated with current investigation step-out boreholes are shown.

N

0 50 100
Feet

SHOPS BUILDING
GARAGE BUILDING
TRAILER T4
TRAILER T3
OFFICE BUILDING
59th STREET
HAZARDOUS MATERIAL BUILDING
KA-10-W
KA-10-N
KA-10-WW
KA-10
KA-10-SW
KW-10-S
KA-10-SS
KA-10-3-S
KA-44-N
KA-44-W
KA-44-E
KA-44-S
KA-44
VW31
VW31-S
KA-17-NW
KA-17-3-NW
KW-17-WW
KA-17-3-W
KA-17-3-N
KA-17-NN
KA-17-4-NE
KA-17-3-NE
KA-17-N
KA-17-E
KA-17
KA-17-W
TRAILER T1
TRAILER T2
VW35-NN
VW35-N
VW35
VW35-W
VW35-E
VW35-S
VW35-SS
SALVAGE BUILDING
B08-3-N
B08-NN
B08-N
B08
B08-EE
B08-3-E
B08-E
B08-S
B08-W
B08-SS
B08-3-S
TOOL ISSUE BUILDING
VW15
VW38
WAREHOUSE BUILDING
WB08
WB01
WB02
WB09
WB11
WB03
WB04
WB06
WB05
VW56
VW57
WB10
WB07
WB12
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING

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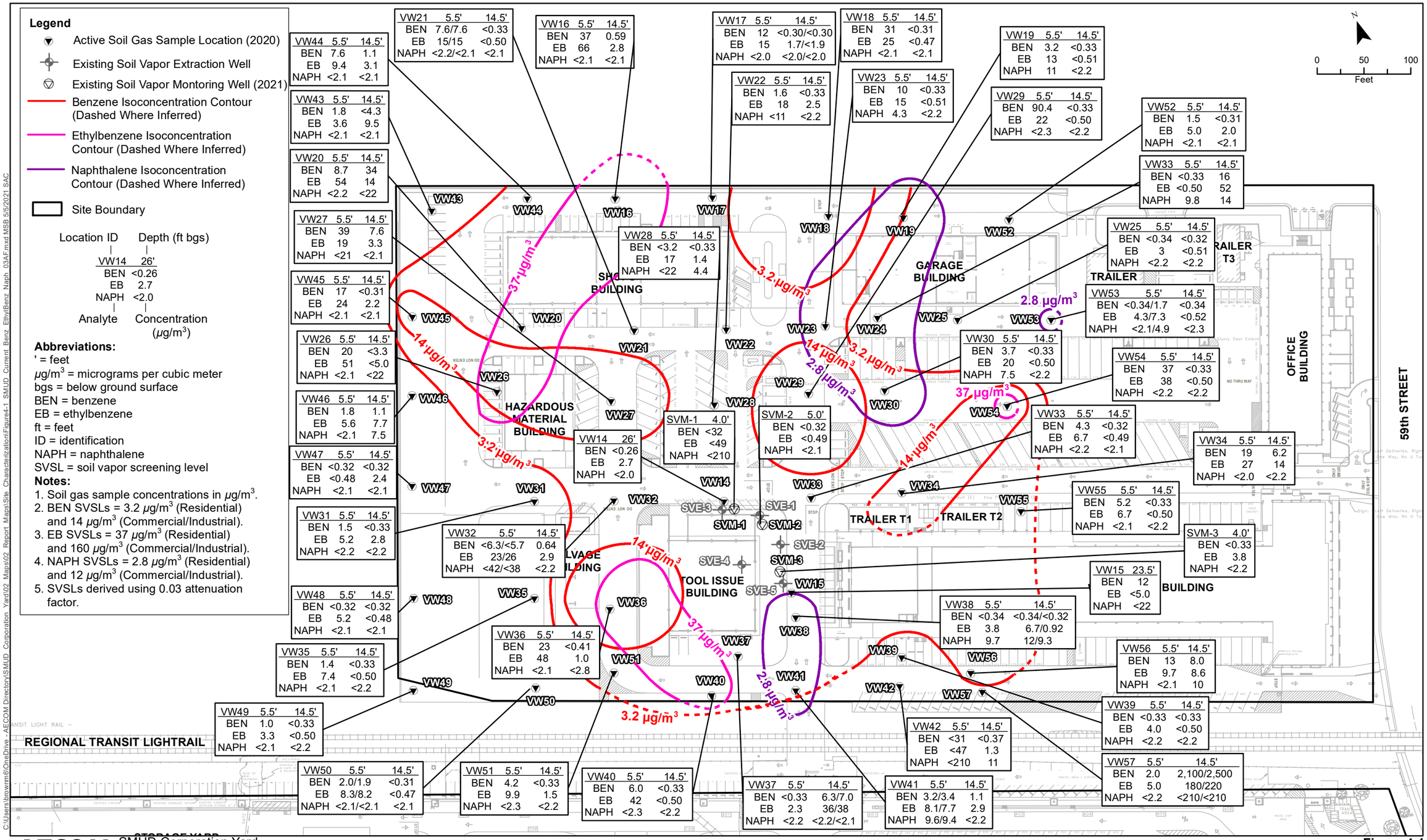
SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 3-2
Current Investigation
Soil Sample Locations



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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-1
Current Investigation Benzene, Ethylbenzene, and Naphthalene Concentrations in Soil Gas (0.03 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- Site Boundary

Location ID — Depth (ft bgs)

VW14	26'
BEN	<0.26
EB	2.7
NAPH	<2.0

Analyte — Concentration ($\mu g/m^3$)

Abbreviations:

' = feet
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
BEN = benzene
EB = ethylbenzene
ft = feet
ID = identification
NAPH = naphthalene
SVSL = soil vapor screening level

Notes:

1. Soil gas sample concentrations in $\mu g/m^3$.
2. BEN SVSLs = 97 $\mu g/m^3$ (Residential) and 420 $\mu g/m^3$ (Commercial/Industrial).
3. EB SVSLs = 1,100 $\mu g/m^3$ (Residential) and 4,900 $\mu g/m^3$ (Commercial/Industrial).
4. NAPH SVSLs = 83 $\mu g/m^3$ (Residential) and 360 $\mu g/m^3$ (Commercial/Industrial).
5. SVSLs derived using 0.001 attenuation factor.
6. BEN, EB, and NAPH were not detected in shallow soil gas (4.0'-5.5') at concentrations above SVSLs.

VW44	5.5'	14.5'
BEN	7.6	1.1
EB	9.4	3.1
NAPH	<2.1	<2.1

VW21	5.5'	14.5'
BEN	7.6/7.6	<0.33
EB	15/15	<0.50
NAPH	<2.2/<2.1	<2.1

VW16	5.5'	14.5'
BEN	37	0.59
EB	66	2.8
NAPH	<2.1	<2.1

VW17	5.5'	14.5'
BEN	12	<0.30/<0.30
EB	15	1.7/<1.9
NAPH	<2.0	<2.0/<2.0

VW18	5.5'	14.5'
BEN	31	<0.31
EB	25	<0.47
NAPH	<2.1	<2.1

VW19	5.5'	14.5'
BEN	3.2	<0.33
EB	13	<0.51
NAPH	11	<2.2

VW43	5.5'	14.5'
BEN	1.8	<4.3
EB	3.6	9.5
NAPH	<2.1	<2.1

VW22	5.5'	14.5'
BEN	1.6	<0.33
EB	18	2.5
NAPH	<11	<2.2

VW23	5.5'	14.5'
BEN	10	<0.33
EB	15	<0.51
NAPH	4.3	<2.2

VW29	5.5'	14.5'
BEN	90.4	<0.33
EB	22	<0.50
NAPH	<2.3	<2.2

VW52	5.5'	14.5'
BEN	1.5	<0.31
EB	5.0	2.0
NAPH	<2.1	<2.1

VW33	5.5'	14.5'
BEN	<0.33	16
EB	<0.50	52
NAPH	9.8	14

VW20	5.5'	14.5'
BEN	8.7	34
EB	54	14
NAPH	<2.2	<22

VW28	5.5'	14.5'
BEN	<3.2	<0.33
EB	17	1.4
NAPH	<22	4.4

VW25	5.5'	14.5'
BEN	<0.34	<0.32
EB	3	<0.51
NAPH	<2.2	<2.2

VW27	5.5'	14.5'
BEN	39	7.6
EB	19	3.3
NAPH	<21	<2.1

VW45	5.5'	14.5'
BEN	17	<0.31
EB	24	2.2
NAPH	<2.1	<2.1

VW53	5.5'	14.5'
BEN	<0.34/1.7	<0.34
EB	4.3/7.3	<0.52
NAPH	<2.1/4.9	<2.3

VW26	5.5'	14.5'
BEN	20	<3.3
EB	51	<5.0
NAPH	<2.1	<22

VW30	5.5'	14.5'
BEN	3.7	<0.33
EB	20	<0.50
NAPH	7.5	<2.2

VW54	5.5'	14.5'
BEN	37	<0.33
EB	38	<0.50
NAPH	<2.2	<2.2

VW46	5.5'	14.5'
BEN	1.8	1.1
EB	5.6	7.7
NAPH	<2.1	7.5

VW14	26'
BEN	<0.26
EB	2.7
NAPH	<2.0

SVM-1	4.0'
BEN	<32
EB	<49
NAPH	<210

SVM-2	5.0'
BEN	<0.32
EB	<0.49
NAPH	<2.1

VW33	5.5'	14.5'
BEN	4.3	<0.32
EB	6.7	<0.49
NAPH	<2.2	<2.1

VW34	5.5'	14.5'
BEN	19	6.2
EB	27	14
NAPH	<2.0	<2.2

VW47	5.5'	14.5'
BEN	<0.32	<0.32
EB	<0.48	2.4
NAPH	<2.1	<2.1

VW31	5.5'	14.5'
BEN	1.5	<0.33
EB	5.2	2.8
NAPH	<2.2	<2.2

VW32	5.5'	14.5'
BEN	<6.3/<5.7	0.64
EB	23/26	2.9
NAPH	<42/<38	<2.2

VW55	5.5'	14.5'
BEN	5.2	<0.33
EB	6.7	<0.50
NAPH	<2.1	<2.2

SVM-3	4.0'
BEN	<0.33
EB	3.8
NAPH	<2.2

VW48	5.5'	14.5'
BEN	<0.32	<0.32
EB	5.2	<0.48
NAPH	<2.1	<2.1

VW15	23.5'
BEN	12
EB	<5.0
NAPH	<22

VW35	5.5'	14.5'
BEN	1.4	<0.33
EB	7.4	<0.50
NAPH	<2.1	<2.2

VW36	5.5'	14.5'
BEN	23	<0.41
EB	48	1.0
NAPH	<2.1	<2.8

VW38	5.5'	14.5'
BEN	<0.34	<0.34/<0.32
EB	3.8	6.7/0.92
NAPH	9.7	12/9.3

VW56	5.5'	14.5'
BEN	13	8.0
EB	9.7	8.6
NAPH	<2.1	10

VW49	5.5'	14.5'
BEN	1.0	<0.33
EB	3.3	<0.50
NAPH	<2.1	<2.2

VW42	5.5'	14.5'
BEN	<31	<0.37
EB	<47	1.3
NAPH	<210	11

VW39	5.5'	14.5'
BEN	<0.33	<0.33
EB	4.0	<0.50
NAPH	<2.2	<2.2

VW50	5.5'	14.5'
BEN	2.0/1.9	<0.31
EB	8.3/8.2	<0.47
NAPH	<2.1/<2.1	<2.1

VW51	5.5'	14.5'
BEN	4.2	<0.33
EB	9.9	1.5
NAPH	<2.3	<2.2

VW40	5.5'	14.5'
BEN	6.0	<0.33
EB	42	<0.50
NAPH	<2.3	<2.2

VW37	5.5'	14.5'
BEN	<0.33	6.3/7.0
EB	2.3	36/38
NAPH	<2.2	<2.2/<2.1

VW41	5.5'	14.5'
BEN	3.2/3.4	1.1
EB	8.1/7.7	2.9
NAPH	9.6/9.4	<2.2

VW57	5.5'	14.5'
BEN	2.0	2,100/2,500
EB	5.0	180/220
NAPH	<2.2	<210/<210

SHOP BUILDING
GARAGE BUILDING
TRAILER
TRAILER T3
OFFICE BUILDING
59th STREET
HAZARDOUS MATERIAL BUILDING
TOOL ISSUE BUILDING
TRAILER T1
TRAILER T2
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
TRAIN AREA

0 50 100 Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-2
Current Investigation Benzene, Ethylbenzene, and Naphthalene Concentrations in Soil Gas (0.001 Attenuation Factor)

Legend

- Active Soil Gas Sample Location
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well
- Site Boundary

Location ID — Depth (ft bgs)

VW45	5.5' 12/2020	5.5' 03/2021
BEN	17	<0.35
EB	24	<0.53
NAPH	<2.2	<2.3
1,2-DBE	<0.90	4.0
BDCM	<0.70	<0.75
CF	2.4	<0.90
PCE	5.1	8.6
TCE	<84	2
cDCE	<50	<0.53
TPHg	2,800	94

Analyte — Concentration ($\mu g/m^3$) — Sample Date

Abbreviations:

' = feet
$\mu g/m^3$ = micrograms per cubic meter
1,2-DBE = 1,2-dibromoethane
bgs = below ground surface
BDCM = bromodichloromethane
BEN = benzene
CF = chloroform
cDCE = cis-1,2-dichloroethene
EB = ethylbenzene
ft = feet
ID = identification
NAPH = naphthalene
PCE = tetrachloroethene
TCE = trichloroethene
TPHg = total petroleum hydrocarbons as gasoline

Notes:

1. Soil gas sample concentrations in $\mu g/m^3$.

VW45	5.5' 12/2020	5.5' 03/2021
BEN	17	<0.35
EB	24	<0.53
NAPH	<2.2	<2.3
1,2-DBE	<0.90	4.0
BDCM	<0.70	<0.75
CF	2.4	<0.90
PCE	5.1	8.6
TCE	<84	2
cDCE	<50	<0.53
TPHg	2,800	94

VW24	5.5' 12/2020	5.5' 03/2021
BEN	<0.33	1.8/1.5
EB	<0.50	5.5/1.9
NAPH	9.8	17/6.9
1,2-DBE	<0.90	<0.91/<0.92
BDCM	<0.70	<0.71/<0.72
CF	9.3	<0.85/<0.86
PCE	650	120/110
TCE	<0.84	<0.85/<0.86
cDCE	<0.50	<0.50/<0.51
TPHg	810	860/580

VW30	5.5' 12/2020	5.5' 03/2021	14.5' 12/2020	14.5' 03/2021
BEN	3.7	<0.34	<0.33	<0.33
EB	20	1.8	<0.50	<0.51
NAPH	7.5	<2.2	<2.2	<2.2
1,2-DBE	<89	<0.93	<0.90	<0.92
BDCM	12	24	60	43
CF	650	1,400	1,300	920
PCE	99	210	370	290
TCE	2.7	2.5	3.6	2.9
cDCE	<0.49	<0.51	<0.50	<0.51
TPHg	1,800	1,800	1,400	1,500

VW48	5.5' 12/2020	5.5' 03/2021
BEN	<0.32	<0.33
EB	5.2	<0.51
NAPH	<2.1	70
1,2-DBE	<0.89	2.8
BDCM	<0.69	<0.71
CF	3.5	5.4
PCE	35	29
TCE	<0.83	<0.85
cDCE	<0.49	<0.51
TPHg	410	2,800

VW42	5.5' 12/2020	5.5' 03/2021
BEN	<31	<0.34
EB	<47	<0.51
NAPH	<210	<2.2
1,2-DBE	<86	<0.93
BDCM	<67	<0.72
CF	<80	<0.86
PCE	<74	6.7
TCE	<80	<0.86
cDCE	<47	<0.51
TPHg	63,000	91

VW49	5.5' 12/2020	5.5' 03/2021
BEN	1.0	<0.32
EB	3.3	<0.49
NAPH	<2.2	<2.1
1,2-DBE	<0.90	<0.88
BDCM	<0.70	<0.68
CF	4.7	7.6
PCE	54	55
TCE	<0.84	<0.82
cDCE	<0.50	<0.49
TPHg	190	120

VW57	14.5' 12/2020	14.5' 03/2021
BEN	2,100/2,500	<0.35
EB	180/220	<0.53
NAPH	<210/<210	<2.3
1,2-DBE	<86/<85	<0.96
BDCM	<67/<66	<0.75
CF	<80/<79	2.0
PCE	<74/<74	37
TCE	<80/<79	5.6
cDCE	<48/<47	5.3
TPHg	1,500,000/1,900,000	100

SHOPS BUILDING
GARAGE BUILDING
HAZARDOUS MATERIAL BUILDING
SALVAGE BUILDING
TOOL ISSUE BUILDING
TRAILER T1
TRAILER T2
REGIONAL TRANSIT LIGHTRAIL
59th STREET

N
0 50 100
Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-3
COC Concentrations in Soil Gas
December 2020 and March 2021

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- 1,2-DBE Isoconcentration Contour (Dashed Where Inferred)
- BDCM Isoconcentration Contour (Dashed Where Inferred)
- Chloroform Isoconcentration Contour (Dashed Where Inferred)
- Site Boundary

Location ID / Depth (ft bgs)

VW14	26'
1,2-DBE	<0.81
BDCM	<0.63
CF	10
Analyte	Concentration ($\mu g/m^3$)

Abbreviations:
' = feet
$\mu g/m^3$ = micrograms per cubic meter
1,2-DBE = 1,2-dibromoethane
bgs = below ground surface
BDCM = bromodichloromethane
CF = chloroform
ft = feet
ID = identification
SVSL = soil vapor screening level

Notes:
1. Soil gas sample concentrations in $\mu g/m^3$.
2. 1,2-DBE SVSLs = 0.16 $\mu g/m^3$ (Residential) and 0.67 $\mu g/m^3$ (Commercial/Industrial).
3. BDCM SVSLs = 2.5 $\mu g/m^3$ (Residential) and 11 $\mu g/m^3$ (Commercial/Industrial).
4. CF SVSLs = 4.0 $\mu g/m^3$ (Residential) and 18 $\mu g/m^3$ (Commercial/Industrial).
5. SVSLs derived using 0.03 attenuation factor.

VW16	5.5'	14.5'
1,2-DBE	<0.88	<0.89
BDCM	<0.68	<0.69
CF	12	130

VW17	5.5'	14.5'
1,2-DBE	<0.83	2.4/<0.84
BDCM	<0.64	3.5/3.5
CF	89	610/630

VW23	5.5'	14.5'
1,2-DBE	<0.89	<0.92
BDCM	<0.69	<0.72
CF	3.2	2.9

VW18	5.5'	14.5'
1,2-DBE	<0.85	<0.86
BDCM	<0.66	<0.67
CF	5.3	140

VW19	5.5'	14.5'
1,2-DBE	5.1	<0.92
BDCM	<0.71	<0.72
CF	10	44

VW44	5.5'	14.5'
1,2-DBE	<0.86	<0.85
BDCM	<0.67	<0.66
CF	20	73

VW22	5.5'	14.5'
1,2-DBE	<4.5	<0.90
BDCM	<3.5	<0.70
CF	10	29

VW24	5.5'	14.5'
1,2-DBE	<0.90	24
BDCM	<0.70	<0.68
CF	9.3	<0.82

VW52	5.5'	14.5'
1,2-DBE	<0.89	<0.86
BDCM	<0.69	<0.67
CF	9.0	25

VW43	5.5'	14.5'
1,2-DBE	<0.89	<0.89
BDCM	<0.69	<0.69
CF	<0.83	43

VW25	5.5'	14.5'
1,2-DBE	<0.93	<0.93
BDCM	<0.72	<0.72
CF	5.7	6.8

VW21	5.5'	14.5'
1,2-DBE	<0.90/<0.89	<0.91
BDCM	<0.70/<0.69	<0.71
CF	4.7/6.3	24

VW28	5.5'	14.5'
1,2-DBE	<8.9	<0.92
BDCM	<6.9	<0.72
CF	<8.3	12

VW53	5.5'	14.5'
1,2-DBE	<0.93/<0.90	<0.95
BDCM	<0.72/<0.70	<0.73
CF	<0.86/<0.84	2.8

VW20	5.5'	14.5'
1,2-DBE	<0.90	<9.3
BDCM	<0.70	<7.2
CF	0.91	<8.6

VW30	5.5'	14.5'
1,2-DBE	<0.89	<0.90
BDCM	12	60
CF	650	1,300

VW45	5.5'	14.5'
1,2-DBE	<0.90	<0.85
BDCM	<0.70	<0.66
CF	2.4	27

VW27	5.5'	14.5'
1,2-DBE	<8.8	3.2
BDCM	<6.8	<0.68
CF	<8.2	2.3

VW54	5.5'	14.5'
1,2-DBE	<0.93	<0.91
BDCM	<0.72	<0.71
CF	6.7	3.8

VW26	5.5'	14.5'
1,2-DBE	<0.87	<9.1
BDCM	<0.68	<7.1
CF	0.95	<8.5

VW29	5.5'	14.5'
1,2-DBE	<0.93	<0.90
BDCM	<0.72	<0.70
CF	4.1	13

SVM-2	5.0'
1,2-DBE	<0.89
BDCM	<0.69
CF	<0.83

VW33	5.5'	14.5'
1,2-DBE	<0.90	<0.88
BDCM	<0.70	<0.68
CF	<0.84	22

VW46	5.5'	14.5'
1,2-DBE	<0.87	<0.87
BDCM	<0.68	<0.68
CF	<0.81	15

VW14	26'
1,2-DBE	<0.81
BDCM	<0.63
CF	10

VW55	5.5'	14.5'
1,2-DBE	<0.89	<0.90
BDCM	<0.69	<0.70
CF	<0.83	<0.84

VW47	5.5'	14.5'
1,2-DBE	<0.87	<0.88
BDCM	<0.68	2.3
CF	<0.81	170

VW32	5.5'	14.5'
1,2-DBE	<17/<16	<0.89
BDCM	<14/<12	<0.69
CF	<16/<5.7	6.2

SVM-1	4.0'
1,2-DBE	<88
BDCM	<68
CF	<82

SVM-3	4.0'
1,2-DBE	<0.90
BDCM	<0.70
CF	<0.84

VW34	5.5'	14.5'
1,2-DBE	<0.85	19
BDCM	<0.66	<0.68
CF	2.8	5.6

VW31	5.5'	14.5'
1,2-DBE	<0.92	<0.91
BDCM	<0.72	<0.71
CF	<0.86	0.92

VW15	23.5'
1,2-DBE	<9.0
BDCM	<7.0
CF	<8.4

VW38	5.5'	14.5'
1,2-DBE	<0.95	<0.93/<0.88
BDCM	<0.74	<0.72/<0.68
CF	<0.89	6.3/6.1

VW48	5.5'	14.5'
1,2-DBE	<0.89	<0.87
BDCM	<0.69	<0.68
CF	3.5	130

VW35	5.5'	14.5'
1,2-DBE	<0.88	1.8
BDCM	<0.68	<0.70
CF	<0.82	31

VW36	5.5'	14.5'
1,2-DBE	<0.87	<1.1
BDCM	<0.68	<0.89
CF	<0.81	4.7

VW56	5.5'	14.5'
1,2-DBE	<0.85	<0.89
BDCM	<0.66	2.6
CF	<0.79	33

VW49	5.5'	14.5'
1,2-DBE	<0.90	<0.90
BDMC	<0.70	<0.70
CF	4.7	39

VW42	5.5'	14.5'
1,2-DBE	<86	<1.0
BDCM	<67	<0.78
CF	<80	<0.94

VW39	5.5'	14.5'
1,2-DBE	<0.90	<0.88
BDCM	<0.70	<0.68
CF	3.0	8.5

VW50	5.5'	14.5'
1,2-DBE	<0.88/<0.87	<0.85
BDCM	<0.68/<0.68	<0.66
CF	2.6/1.7	17

VW51	5.5'	14.5'
1,2-DBE	<0.95	<0.92
BDCM	<0.73	<0.72
CF	<0.88	27

VW40	5.5'	14.5'
1,2-DBE	<0.94	<0.90
BDCM	<0.73	<0.70
CF	<0.87	<0.84

VW37	5.5'	14.5'
1,2-DBE	<0.92	<0.78/<0.89
BDCM	<0.72	<0.61/<0.69
CF	<0.86	<0.73/<0.83

VW41	5.5'	14.5'
1,2-DBE	<0.90/<0.90	<0.93
BDCM	<0.70/<0.70	5.3
CF	<0.84/<0.84	210

VW57	5.5'	14.5'
1,2-DBE	<0.90	<86/<85
BDCM	<0.70	<67/<66
CF	<0.84	<80/<79

18 $\mu g/m^3$ 18 $\mu g/m^3$ 0.67 $\mu g/m^3$ 0.16 $\mu g/m^3$ 4.0 $\mu g/m^3$ 4.0 $\mu g/m^3$ 2.5 $\mu g/m^3$ 11 $\mu g/m^3$ 4.0 $\mu g/m^3$

GARAGE BUILDING
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OFFICE BUILDING
SHOPS BUILDING
HAZARDOUS MATERIAL BUILDING
TRAILER T1
TRAILER T2
TOOL ISSUE BUILDING
REGIONAL TRANSIT LIGHTRAIL
59th STREET

0 50 100 Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-4
Current Investigation 1,2-DBE, BDCM, and Chloroform Concentrations in Soil Gas (0.03 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- 1,2-DBE Isoconcentration Contour (Dashed Where Inferred)
- Chloroform Isoconcentration Contour (Dashed Where Inferred)
- Site Boundary

Location ID — Depth (ft bgs)

VW14 — 26'

1,2-DBE	<0.81
BDCM	<0.63
CF	10

Analyte — Concentration ($\mu g/m^3$)

Abbreviations:

' = feet
$\mu g/m^3$ = micrograms per cubic meter
1,2-DBE = 1,2-dibromoethane
bgs = below ground surface
BDCM = bromodichloromethane
CF = chloroform
ft = feet
ID = identification
SVSL = soil vapor screening level

Notes:

1. Soil gas sample concentrations in $\mu g/m^3$.
2. 1,2-DBE SVSLs = 4.7 $\mu g/m^3$ (Residential) and 20 $\mu g/m^3$ (Commercial/Industrial).
3. BDCM SVSLs = 76 $\mu g/m^3$ (Residential) and 330 $\mu g/m^3$ (Commercial/Industrial).
4. CF SVSLs = 120 $\mu g/m^3$ (Residential) and 530 $\mu g/m^3$ (Commercial/Industrial).
5. SVSLs derived using 0.001 attenuation factor.
6. BDCM was not detected in shallow soil gas (4.0'-5.5') at concentrations above SVSLs.

VW16	5.5'	14.5'
1,2-DBE	<0.88	<0.89
BDCM	<0.68	<0.69
CF	12	130

VW17	5.5'	14.5'
1,2-DBE	<0.83	2.4/<0.84
BDCM	<0.64	3.5/3.5
CF	89	610/630

VW23	5.5'	14.5'
1,2-DBE	<0.89	<0.92
BDCM	<0.69	<0.72
CF	3.2	2.9

VW18	5.5'	14.5'
1,2-DBE	<0.85	<0.86
BDCM	<0.66	<0.67
CF	5.3	140

VW19	5.5'	14.5'
1,2-DBE	5.1	<0.92
BDCM	<0.71	<0.72
CF	10	44

VW44	5.5'	14.5'
1,2-DBE	<0.86	<0.85
BDCM	<0.67	<0.66
CF	20	73

VW22	5.5'	14.5'
1,2-DBE	<4.5	<0.90
BDCM	<3.5	<0.70
CF	10	29

VW24	5.5'	14.5'
1,2-DBE	<0.90	24
BDCM	<0.70	<0.68
CF	9.3	<0.82

VW52	5.5'	14.5'
1,2-DBE	<0.89	<0.86
BDCM	<0.69	<0.67
CF	9.0	25

VW43	5.5'	14.5'
1,2-DBE	<0.89	<0.89
BDCM	<0.69	<0.69
CF	<0.83	43

VW25	5.5'	14.5'
1,2-DBE	<0.93	<0.93
BDCM	<0.72	<0.72
CF	5.7	6.8

VW21	5.5'	14.5'
1,2-DBE	<0.90/<0.89	<0.91
BDCM	<0.70/<0.69	<0.71
CF	4.7/6.3	24

VW28	5.5'	14.5'
1,2-DBE	<8.9	<0.92
BDCM	<6.9	<0.72
CF	<8.3	12

VW53	5.5'	14.5'
1,2-DBE	<0.93/<0.90	<0.95
BDCM	<0.72/<0.70	<0.73
CF	<0.86/<0.84	2.8

VW20	5.5'	14.5'
1,2-DBE	<0.90	<9.3
BDCM	<0.70	<7.2
CF	0.91	<8.6

VW30	5.5'	14.5'
1,2-DBE	<0.89	<0.90
BDCM	12	60
CF	650	1,300

VW45	5.5'	14.5'
1,2-DBE	<0.90	<0.85
BDCM	<0.70	<0.66
CF	2.4	27

VW27	5.5'	14.5'
1,2-DBE	<8.8	3.2
BDCM	<6.8	<0.68
CF	<8.2	2.3

VW54	5.5'	14.5'
1,2-DBE	<0.93	<0.91
BDCM	<0.72	<0.71
CF	6.7	3.8

VW26	5.5'	14.5'
1,2-DBE	<0.87	<9.1
BDCM	<0.68	<7.1
CF	0.95	<8.5

VW29	5.5'	14.5'
1,2-DBE	<0.93	<0.90
BDCM	<0.72	<0.70
CF	4.1	13

SVM-2	5.0'
1,2-DBE	<0.89
BDCM	<0.69
CF	<0.83

VW33	5.5'	14.5'
1,2-DBE	<0.90	<0.88
BDCM	<0.70	<0.68
CF	<0.84	22

VW46	5.5'	14.5'
1,2-DBE	<0.87	<0.87
BDCM	<0.68	<0.68
CF	<0.81	15

VW14	26'
1,2-DBE	<0.81
BDCM	<0.63
CF	10

VW47	5.5'	14.5'
1,2-DBE	<0.87	<0.88
BDCM	<0.68	2.3
CF	<0.81	170

VW55	5.5'	14.5'
1,2-DBE	<0.89	<0.90
BDCM	<0.69	<0.70
CF	<0.83	<0.84

VW31	5.5'	14.5'
1,2-DBE	<0.92	<0.91
BDCM	<0.72	<0.71
CF	<0.86	0.92

VW32	5.5'	14.5'
1,2-DBE	<17/<16	<0.89
BDCM	<14/<12	<0.69
CF	<16/<5.7	6.2

SVM-1	4.0'
1,2-DBE	<88
BDCM	<68
CF	<82

SVM-3	4.0'
1,2-DBE	<0.90
BDCM	<0.70
CF	<0.84

VW34	5.5'	14.5'
1,2-DBE	<0.85	19
BDCM	<0.66	<0.68
CF	2.8	5.6

VW15	23.5'
1,2-DBE	<9.0
BDCM	<7.0
CF	<8.4

VW48	5.5'	14.5'
1,2-DBE	<0.89	<0.87
BDCM	<0.69	<0.68
CF	3.5	130

VW35	5.5'	14.5'
1,2-DBE	<0.88	1.8
BDCM	<0.68	<0.70
CF	<0.82	31

VW36	5.5'	14.5'
1,2-DBE	<0.87	<1.1
BDCM	<0.68	<0.89
CF	<0.81	4.7

VW38	5.5'	14.5'
1,2-DBE	<0.95	<0.93/<0.88
BDCM	<0.74	<0.72/<0.68
CF	<0.89	6.3/6.1

VW56	5.5'	14.5'
1,2-DBE	<0.85	<0.89
BDCM	<0.66	2.6
CF	<0.79	33

VW49	5.5'	14.5'
1,2-DBE	<0.90	<0.90
BDMC	<0.70	<0.70
CF	4.7	39

VW42	5.5'	14.5'
1,2-DBE	<86	<1.0
BDCM	<67	<0.78
CF	<80	<0.94

VW39	5.5'	14.5'
1,2-DBE	<0.90	<0.88
BDCM	<0.70	<0.68
CF	3.0	8.5

VW50	5.5'	14.5'
1,2-DBE	<0.88/<0.87	<0.85
BDCM	<0.68/<0.68	<0.66
CF	2.6/1.7	17

VW51	5.5'	14.5'
1,2-DBE	<0.95	<0.92
BDCM	<0.73	<0.72
CF	<0.88	27

VW40	5.5'	14.5'
1,2-DBE	<0.94	<0.90
BDCM	<0.73	<0.70
CF	<0.87	<0.84

VW37	5.5'	14.5'
1,2-DBE	<0.92	<0.78/<0.89
BDCM	<0.72	<0.61/<0.69
CF	<0.86	<0.73/<0.83

VW41	5.5'	14.5'
1,2-DBE	<0.90/<0.90	<0.93
BDCM	<0.70/<0.70	5.3
CF	<0.84/<0.84	210

VW57	5.5'	14.5'
1,2-DBE	<0.90	<86/<85
BDCM	<0.70	<67/<66
CF	<0.84	<80/<79

4.7 $\mu g/m^3$

120 $\mu g/m^3$

530 $\mu g/m^3$

GARAGE BUILDING

SHOPS BUILDING

HAZARDOUS MATERIAL BUILDING

TOOL ISSUE BUILDING

TRAILER T4

TRAILER T2

OFFICE BUILDING

WAREHOUSE BUILDING

59th STREET

REGIONAL TRANSIT LIGHTRAIL

N

0 50 100 Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-5
Current Investigation 1,2-DBE, BDCM, and Chloroform Concentrations in Soil Gas (0.001 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- cDCE Isoconcentration Contour
- cDCE Isoconcentration Contour
- PCE Isoconcentration Contour
- PCE Isoconcentration Contour
- TCE Isoconcentration Contour
- TCE Isoconcentration Contour
- Site Boundary

Location ID | Depth (ft bgs)

VW14	26'
PCE	880
TCE	23
cDCE	4.3

Analyte | Concentration ($\mu g/m^3$)

Abbreviations:
' = feet
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
cDCE = cis-1,2-dichloroethene
ft = feet
ID = identification
PCE = tetrachloroethene
TCE = trichloroethene
SVSL = soil vapor screening level

Notes:
1. Soil gas sample concentrations in $\mu g/m^3$.
2. PCE SVSLs = 15 $\mu g/m^3$ (Residential) and 67 $\mu g/m^3$ (Commercial/Industrial).
3. TCE SVSLs = 16 $\mu g/m^3$ (Residential) and 100 $\mu g/m^3$ (Commercial/Industrial).
4. cDCE SVSLs = 280 $\mu g/m^3$ (Residential) and 1,200 $\mu g/m^3$ (Commercial/Industrial).
5. SVSLs derived using 0.03 attenuation factor.

VW16	5.5'	14.5'
PCE	20	100
TCE	<0.82	11
cDCE	<0.49	<0.49

VW17	5.5'	14.5'
PCE	61	220/230
TCE	<0.77	2.9/2.9
cDCE	<0.46	<0.46/<0.46

VW23	5.5'	14.5'
PCE	54	210
TCE	6.8	<0.86
cDCE	<0.49	<0.51

VW18	5.5'	14.5'
PCE	33	460
TCE	<0.79	<0.80
cDCE	<0.47	<0.47

VW24	5.5'	14.5'
PCE	650	160
TCE	<0.84	<0.82
cDCE	<0.50	<0.48

VW44	5.5'	14.5'
PCE	9.1	21
TCE	5.5	5.9
cDCE	<0.48	<0.47

VW22	5.5'	14.5'
PCE	93	210
TCE	<4.2	13
cDCE	<2.5	<0.50

VW29	5.5'	14.5'
PCE	56	380
TCE	<0.87	<0.84
cDCE	<0.52	<0.50

VW19	5.5'	14.5'
PCE	260	340
TCE	<0.85	<0.86
cDCE	<0.51	<0.51

VW52	5.5'	14.5'
PCE	140	220
TCE	<0.83	<0.80
cDCE	<0.49	<0.47

VW43	5.5'	14.5'
PCE	5.5	15
TCE	<0.83	8.4
cDCE	<0.49	<0.49

VW20	5.5'	14.5'
PCE	28	39
TCE	0.92	70
cDCE	<0.51	<5.1

VW21	5.5'	14.5'
PCE	130/130	210
TCE	13/14	46
cDCE	<0.50/<0.49	<0.50

VW25	5.5'	14.5'
PCE	96	210
TCE	<0.86	<0.86
cDCE	<0.51	<0.51

VW45	5.5'	14.5'
PCE	5.1	10
TCE	<0.84	<0.79
cDCE	<0.50	<0.47

VW53	5.5'	14.5'
PCE	42/45	69
TCE	<0.86/<0.84	<0.88
cDCE	<0.51/<0.50	<0.52

VW46	5.5'	14.5'
PCE	5.3	11
TCE	<0.81	<0.81
cDCE	<0.48	<0.48

VW28	5.5'	14.5'
PCE	89	180
TCE	<8.3	11
cDCE	<49	<0.51

VW30	5.5'	14.5'
PCE	99	370
TCE	2.7	3.6
cDCE	<0.49	<0.50

VW54	5.5'	14.5'
PCE	29	53
TCE	<0.86	<0.85
cDCE	<0.51	<0.50

VW26	5.5'	14.5'
PCE	42	53
TCE	<0.81	<8.5
cDCE	<0.48	<5.0

VW27	5.5'	14.5'
PCE	<7.6	110
TCE	<8.2	<0.82
cDCE	<4.9	<0.49

VW14	26'
PCE	880
TCE	23
cDCE	4.3

SVM-2	4.0'	14.0'
PCE	15	62
TCE	<0.83	1.9
cDCE	<0.49	2.6

VW33	5.5'	14.5'
PCE	2.9	100
TCE	<0.84	<0.82
cDCE	<0.50	<0.49

VW55	5.5'	14.5'
PCE	<0.76	11
TCE	<0.83	<0.84
cDCE	<0.49	<0.50

VW47	5.5'	14.5'
PCE	9.5	11
TCE	<0.81	<0.82
cDCE	<0.48	<0.48

VW31	5.5'	14.5'
PCE	64	160
TCE	<0.86	<0.85
cDCE	<0.51	<0.50

VW32	5.5'	14.5'
PCE	83/57	120
TCE	<16/<15	<0.83
cDCE	<9.6/<8.7	<0.49

SVM-1	4.0'	14.0'
PCE	320,000	360
TCE	15,000	110
cDCE	35,000	82

SVM-3	4.0'	14.0'
PCE	39	19
TCE	<0.84	<0.79
cDCE	<0.50	<0.47

VW34	5.5'	14.47'
PCE	19	49
TCE	<0.79	11
cDCE	<0.47	<0.48

VW35	5.5'	14.5'
PCE	250	300
TCE	<0.82	1.7
cDCE	<0.49	<0.50

VW15	23.5'
PCE	<7.8
TCE	<8.4
cDCE	<5.0

VW38	5.5'	14.5'
PCE	37	50/46
TCE	<0.89	0.95/<0.82
cDCE	<0.52	<0.52/<0.48

VW39	5.5'	14.5'
PCE	30	22
TCE	<0.84	<0.82
cDCE	<0.50	<0.48

VW48	5.5'	14.5'
PCE	35	41
TCE	<0.83	<0.81
cDCE	<0.49	<0.48

VW56	5.5'	14.5'
PCE	8.6	12
TCE	<0.79	<0.83
cDCE	<0.47	<0.49

VW50	5.5'	14.5'
PCE	71/71	220
TCE	<0.82/<0.81	<0.79
cDCE	<0.49/<0.48	<0.47

VW51	5.5'	14.5'
PCE	23	97
TCE	<0.88	<0.86
cDCE	<0.52	<0.51

VW42	5.5'	14.5'
PCE	<74	6.4
TCE	<80	<0.94
cDCE	<47	<0.56

VW57	5.5'	14.5'
PCE	18	<74/<74
TCE	<0.84	<80/<79
cDCE	<0.50	<48/<47

VW49	5.5'	14.5'
PCE	54	98
TCE	<0.84	<0.84
cDCE	<0.50	<0.50

VW36	5.5'	14.5'
PCE	78	260
TCE	<0.81	1.7
cDCE	<0.48	<0.63

VW40	5.5'	14.5'
PCE	3.3	6.7
TCE	<0.87	<0.84
cDCE	<0.52	<0.50

VW37	5.5'	14.5'
PCE	<0.80	2.9/4.7
TCE	<0.86	16/22
cDCE	<0.51	<0.43/<0.49

VW41	5.5'	14.5'
PCE	12/12	16
TCE	0.92/0.92	1.9
cDCE	<0.50/<0.50	<0.51

67 µg/m³
15 µg/m³
100 µg/m³
1,200 µg/m³
16 µg/m³
280 µg/m³

SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
TRAILER T2
TOOL ISSUE
WAREHOUSE BUILDING
HAZARDOUS
REGIONAL TRANSIT LIGHTRAIL
59th STREET

0 50 100 Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-6
Current Investigation PCE, TCE, and cDCE Concentrations in Soil Gas (0.03 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- cDCE Isoconcentration Contour
- cDCE Isoconcentration Contour
- PCE Isoconcentration Contour
- PCE Isoconcentration Contour
- TCE Isoconcentration Contour
- TCE Isoconcentration Contour
- Site Boundary

Location ID | Depth (ft bgs)

VW14	26'
PCE	880
TCE	23
cDCE	4.3

Analyte | Concentration ($\mu g/m^3$)

Abbreviations:

' = feet
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
cDCE = cis-1,2-dichloroethene
ft = feet
ID = identification
PCE = tetrachloroethene
TCE = trichloroethene
SVSL = soil vapor screening level

Notes:

1. Soil gas sample concentrations in $\mu g/m^3$.
2. PCE SVSLs = 460 $\mu g/m^3$ (Residential) and 2,000 $\mu g/m^3$ (Commercial/Industrial).
3. TCE SVSLs = 480 $\mu g/m^3$ (Residential) and 3,000 $\mu g/m^3$ (Commercial/Industrial).
4. cDCE SVSLs = 8,300 $\mu g/m^3$ (Residential) and 35,000 $\mu g/m^3$ (Commercial/Industrial).
5. SVSLs derived using 0.001 attenuation factor.

VW16	5.5'	14.5'
PCE	20	100
TCE	<0.82	11
cDCE	<0.49	<0.49

VW17	5.5'	14.5'
PCE	61	220/230
TCE	<0.77	2.9/2.9
cDCE	<0.46	<0.46/<0.46

VW23	5.5'	14.5'
PCE	54	210
TCE	6.8	<0.86
cDCE	<0.49	<0.51

VW18	5.5'	14.5'
PCE	33	460
TCE	<0.79	<0.80
cDCE	<0.47	<0.47

VW24	5.5'	14.5'
PCE	650	160
TCE	<0.84	<0.82
cDCE	<0.50	<0.48

VW44	5.5'	14.5'
PCE	9.1	21
TCE	5.5	5.9
cDCE	<0.48	<0.47

VW22	5.5'	14.5'
PCE	93	210
TCE	<4.2	13
cDCE	<2.5	<0.50

VW29	5.5'	14.5'
PCE	56	380
TCE	<0.87	<0.84
cDCE	<0.52	<0.50

VW19	5.5'	14.5'
PCE	260	340
TCE	<0.85	<0.86
cDCE	<0.51	<0.51

VW52	5.5'	14.5'
PCE	140	220
TCE	<0.83	<0.80
cDCE	<0.49	<0.47

VW43	5.5'	14.5'
PCE	5.5	15
TCE	<0.83	8.4
cDCE	<0.49	<0.49

VW20	5.5'	14.5'
PCE	28	39
TCE	0.92	70
cDCE	<0.51	<5.1

VW21	5.5'	14.5'
PCE	130/130	210
TCE	13/14	46
cDCE	<0.50/<0.49	<0.50

VW25	5.5'	14.5'
PCE	96	210
TCE	<0.86	<0.86
cDCE	<0.51	<0.51

VW53	5.5'	14.5'
PCE	42/45	69
TCE	<0.86/<0.84	<0.88
cDCE	<0.51/<0.50	<0.52

VW45	5.5'	14.5'
PCE	5.1	10
TCE	<0.84	<0.79
cDCE	<0.50	<0.47

VW28	5.5'	14.5'
PCE	89	180
TCE	<8.3	11
cDCE	<49	<0.51

VW30	5.5'	14.5'
PCE	99	370
TCE	2.7	3.6
cDCE	<0.49	<0.50

VW54	5.5'	14.5'
PCE	29	53
TCE	<0.86	<0.85
cDCE	<0.51	<0.50

VW46	5.5'	14.5'
PCE	5.3	11
TCE	<0.81	<0.81
cDCE	<0.48	<0.48

VW26	5.5'	14.5'
PCE	42	53
TCE	<0.81	<8.5
cDCE	<0.48	<5.0

VW27	5.5'	14.5'
PCE	<7.6	110
TCE	<8.2	<0.82
cDCE	<4.9	<0.49

VW14	26'
PCE	880
TCE	23
cDCE	4.3

SVM-2	4.0'	14.0'
PCE	15	62
TCE	<0.83	1.9
cDCE	<0.49	2.6

VW33	5.5'	14.5'
PCE	2.9	100
TCE	<0.84	<0.82
cDCE	<0.50	<0.49

VW55	5.5'	14.5'
PCE	<0.76	11
TCE	<0.83	<0.84
cDCE	<0.49	<0.50

VW47	5.5'	14.5'
PCE	9.5	11
TCE	<0.81	<0.82
cDCE	<0.48	<0.48

VW31	5.5'	14.5'
PCE	64	160
TCE	<0.86	<0.85
cDCE	<0.51	<0.50

VW32	5.5'	14.5'
PCE	83/57	120
TCE	<16/<15	<0.83
cDCE	<9.6/<8.7	<0.49

SVM-1	4.0'	14.0'
PCE	320,000	360
TCE	15,000	110
cDCE	35,000	82

SVM-3	4.0'	14.0'
PCE	39	19
TCE	<0.84	<0.79
cDCE	<0.50	<0.47

VW34	5.5'	14.47'
PCE	19	49
TCE	<0.79	11
cDCE	<0.47	<0.48

VW48	5.5'	14.5'
PCE	35	41
TCE	<0.83	<0.81
cDCE	<0.49	<0.48

VW35	5.5'	14.5'
PCE	250	300
TCE	<0.82	1.7
cDCE	<0.49	<0.50

VW15	23.5'
PCE	<7.8
TCE	<8.4
cDCE	<5.0

VW38	5.5'	14.5'
PCE	37	50/46
TCE	<0.89	0.95/<0.82
cDCE	<0.52	<0.52/<0.48

VW39	5.5'	14.5'
PCE	30	22
TCE	<0.84	<0.82
cDCE	<0.50	<0.48

VW49	5.5'	14.5'
PCE	54	98
TCE	<0.84	<0.84
cDCE	<0.50	<0.50

VW56	5.5'	14.5'
PCE	8.6	12
TCE	<0.79	<0.83
cDCE	<0.47	<0.49

VW51	5.5'	14.5'
PCE	23	97
TCE	<0.88	<0.86
cDCE	<0.52	<0.51

VW42	5.5'	14.5'
PCE	<74	6.4
TCE	<80	<0.94
cDCE	<47	<0.56

VW57	5.5'	14.5'
PCE	18	<74/<74
TCE	<0.84	<80/<79
cDCE	<0.50	<48/<47

VW50	5.5'	14.5'
PCE	71/71	220
TCE	<0.82/<0.81	<0.79
cDCE	<0.49/<0.48	<0.47

VW36	5.5'	14.5'
PCE	78	260
TCE	<0.81	1.7
cDCE	<0.48	<0.63

VW40	5.5'	14.5'
PCE	3.3	6.7
TCE	<0.87	<0.84
cDCE	<0.52	<0.50

VW37	5.5'	14.5'
PCE	<0.80	2.9/4.7
TCE	<0.86	16/22
cDCE	<0.51	<0.43/<0.49

VW41	5.5'	14.5'
PCE	12/12	16
TCE	0.92/0.92	1.9
cDCE	<0.50/<0.50	<0.51

460 µg/m³

2,000 µg/m³
480 µg/m³
3,000 µg/m³

460 µg/m³

8,300 µg/m³

SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
TRAILER T2
WAREHOUSE BUILDING
HAZARDOUS
REGIONAL TRANSIT LIGHTRAIL
59th STREET

0 50 100 Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-7
Current Investigation PCE, TCE, and cDCE Concentrations in Soil Gas (0.001 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- TPHg Isoconcentration Contour (Dashed Where Inferred)
- TPHg Isoconcentration Contour (Dashed Where Inferred)
- Site Boundary

Location ID | Depth (ft bgs)
VW14 | 26'
TPHg | 2,100
Analyte | Concentration ($\mu g/m^3$)

Abbreviations:
' = feet
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
ft = feet
ID = identification
SVSL = soil vapor screening level
TPHg = total petroleum hydrocarbons as gasoline

Notes:
1. Soil gas sample concentrations in $\mu g/m^3$.
2. TPHg SVSLs = 20,000 $\mu g/m^3$ (Residential) and 83,000 $\mu g/m^3$ (Commercial/Industrial).
3. SVSLs derived using 0.03 attenuation factor.

VW17 5.5' 14.5' | TPHg 5,700 1,200/1,200
VW18 5.5' 14.5' | TPHg 2,700 1,100
VW24 5.5' 14.5' | TPHg 810 2,000
VW23 5.5' 14.5' | TPHg 1,400 300
VW52 5.5' 14.5' | TPHg 620 380
VW22 5.5' 14.5' | TPHg 2,800 520
VW44 5.5' 14.5' | TPHg 810 270
VW19 5.5' 14.5' | TPHg 1,300 430
VW16 5.5' 14.5' | TPHg 3,400 490
VW43 5.5' 14.5' | TPHg 220 630
VW25 5.5' 14.5' | TPHg 420 420
VW28 5.5' 14.5' | TPHg 6,900 870
VW21 5.5' 14.5' | TPHg 1,400/1,500 400
VW45 5.5' 14.5' | TPHg 2,800 260
VW53 5.5' 14.5' | TPHg 330/490 140
VW20 5.5' 14.5' | TPHg 2,200 8,200
VW27 5.5' 14.5' | TPHg 5,400 610
VW30 5.5' 14.5' | TPHg 1,800 1,400
VW46 5.5' 14.5' | TPHg 510 720
SVM-2 5.0' | TPHg 51
VW54 5.5' 14.5' | TPHg 3,000 94
VW26 5.5' 14.5' | TPHg 2,700 3,400
VW29 5.5' 14.5' | TPHg 1,600 710
VW33 5.5' 14.5' | TPHg 380 190
VW34 5.5' 14.5' | TPHg 3,400 340
VW14 26' | TPHg 2,100
83,000 $\mu g/m^3$
VW47 5.5' 14.5' | TPHg 130 240
VW31 5.5' 14.5' | TPHg 610 590
20,000 $\mu g/m^3$
SVM-1 4.0' | TPHg 500,000
VW55 5.5' 14.5' | TPHg 610 96
SVM-3 4.0' | TPHg 520
VW32 5.5' 14.5' | TPHg 9,500/10,000 570
VW15 23.5' | TPHg 1,600
VW48 5.5' 14.5' | TPHg 410 180
VW38 5.5' 14.5' | TPHg 280 750/200
VW39 5.5' 14.5' | TPHg 1,000 230
VW35 5.5' 14.5' | TPHg 810 590
VW36 5.5' 14.5' | TPHg 2,700 670
VW49 5.5' 14.5' | TPHg 190 180
20,000 $\mu g/m^3$
VW56 5.5' 14.5' | TPHg 200 500
VW50 5.5' 14.5' | TPHg 710/730 320
VW42 5.5' 14.5' | TPHg 63,000 300
VW57 5.5' 14.5' | TPHg 400 1,500,000/1,900,000
VW51 5.5' 14.5' | TPHg 870 240
VW40 5.5' 14.5' | TPHg 560 150
VW37 5.5' 14.5' | TPHg 350 1,800/1,700
VW41 5.5' 14.5' | TPHg 960/990 540

SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
HAZARDOUS MATERIAL BUILDING
TRAILER T1
TRAILER T2
TOOL ISSUE BUILDING
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
59th STREET

N
0 50 100
Feet

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-8
Current Investigation TPHg Concentrations in Soil Gas (0.03 Attenuation Factor)

Legend

- Active Soil Gas Sample Location (2020)
- Existing Soil Vapor Extraction Well
- Existing Soil Vapor Montoring Well (2021)
- Site Boundary

Location ID | Depth (ft bgs)
VW14 | 26'
TPHg | 2,100
Analyte | Concentration ($\mu g/m^3$)

Abbreviations:
' = feet
$\mu g/m^3$ = micrograms per cubic meter
bgs = below ground surface
ft = feet
ID = identification
SVSL = soil vapor screening level
TPHg = total petroleum hydrocarbons as gasoline

Notes:
1. Soil gas sample concentrations in $\mu g/m^3$.
2. TPHg SVSLs = 600,000 $\mu g/m^3$ (Residential) and 2,500,000 $\mu g/m^3$ (Commercial/Industrial).
3. SVSLs derived using 0.001 attenuation factor.
4. TPHg was not detected in shallow soil gas (4.0'-5.5') at concentrations above SVSLs.

N

0 50 100
Feet

	5.5'	14.5'
VW17 TPHg	5,700	1,200/1,200
VW18 TPHg	2,700	1,100
VW23 TPHg	1,400	300
VW24 TPHg	810	2,000
VW52 TPHg	620	380
VW22 TPHg	2,800	520
VW44 TPHg	810	270
VW16 TPHg	3,400	490
VW19 TPHg	1,300	430
VW43 TPHg	220	630
VW28 TPHg	6,900	870
VW25 TPHg	420	420
VW21 TPHg	1,400/1,500	400
VW45 TPHg	2,800	260
VW53 TPHg	330/490	140
VW20 TPHg	2,200	8,200
VW27 TPHg	5,400	610
VW30 TPHg	1,800	1,400
VW54 TPHg	3,000	94
SVM-2 TPHg	5.0' 51	
VW26 TPHg	2,700	3,400
VW29 TPHg	1,600	710
VW33 TPHg	380	190
VW34 TPHg	3,400	340
VW46 TPHg	510	720
VW14 TPHg	26' 2,100	
VW47 TPHg	130	240
VW31 TPHg	610	590
VW55 TPHg	610	96
VW32 TPHg	9,500/10,000	570
SVM-1 TPHg	4.0' 500,000	
SVM-3 TPHg	4.0' 520	
VW48 TPHg	410	180
VW15 TPHg	23.5' 1,600	
VW35 TPHg	810	590
VW36 TPHg	2,700	670
VW38 TPHg	280	750/200
VW39 TPHg	1,000	230
VW49 TPHg	190	180
VW56 TPHg	200	500
VW50 TPHg	710/730	320
VW42 TPHg	63,000	300
VW57 TPHg	400	1,500,000/1,900,000
VW51 TPHg	870	240
VW40 TPHg	560	150
VW37 TPHg	350	1,800/1,700
VW41 TPHg	960/990	540

SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
HAZARDOUS MATERIAL BUILDING
TRAILER T1
TRAILER T2
TOOL ISSUE BUILDING
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
59th STREET

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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-9
Current Investigation TPHg
Concentrations in Soil Gas (0.001 Attenuation Factor)

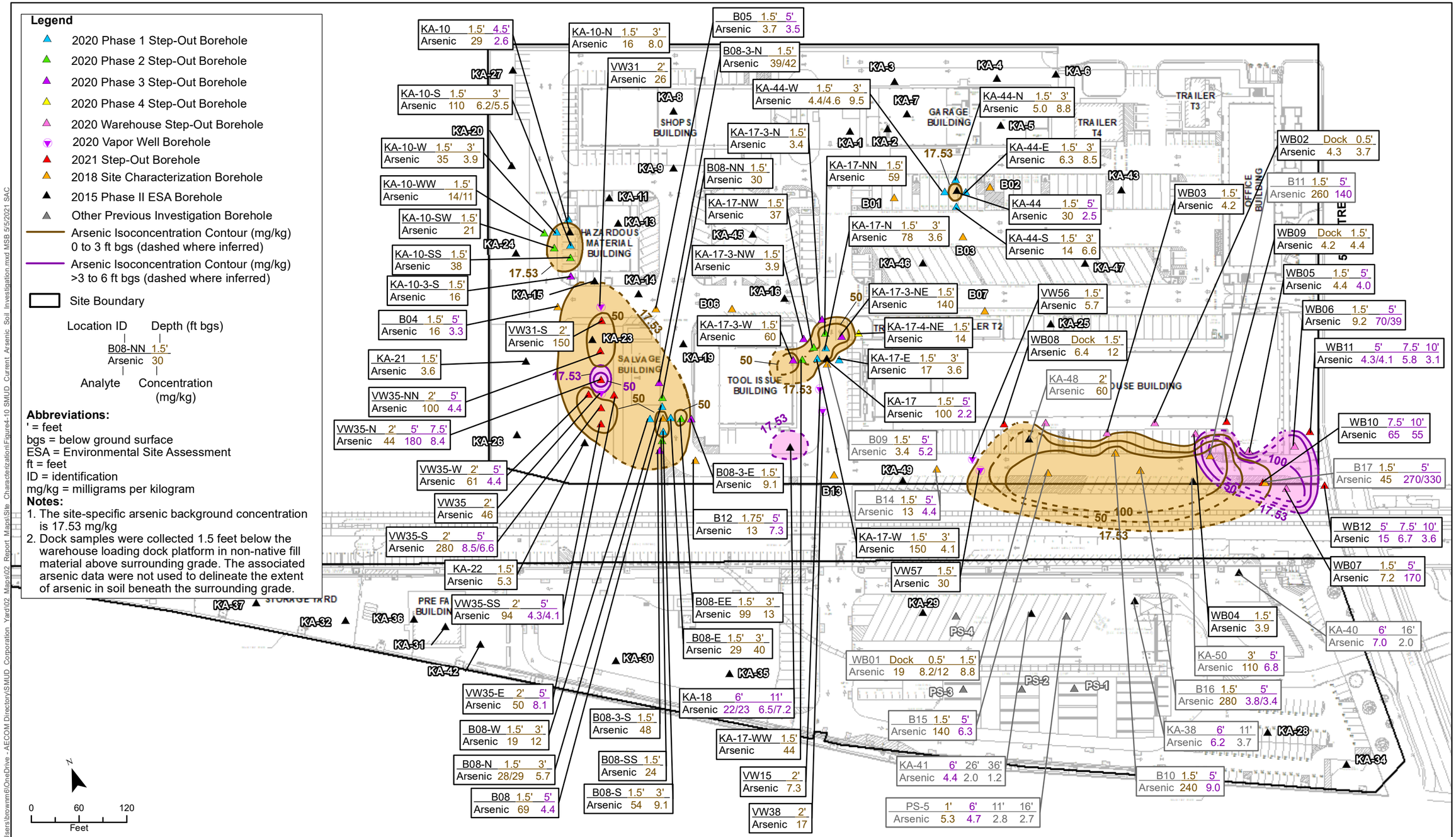
Legend

- 2020 Phase 1 Step-Out Borehole
- 2020 Phase 2 Step-Out Borehole
- 2020 Phase 3 Step-Out Borehole
- 2020 Phase 4 Step-Out Borehole
- 2020 Warehouse Step-Out Borehole
- 2020 Vapor Well Borehole
- 2021 Step-Out Borehole
- 2018 Site Characterization Borehole
- 2015 Phase II ESA Borehole
- Other Previous Investigation Borehole
- Arsenic Isoconcentration Contour (mg/kg) 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour (mg/kg) >3 to 6 ft bgs (dashed where inferred)
- Site Boundary

Location ID | Depth (ft bgs)
B08-NN 1.5'
Arsenic 30
Analyte | Concentration (mg/kg)

Abbreviations:
' = feet
bgs = below ground surface
ESA = Environmental Site Assessment
ft = feet
ID = identification
mg/kg = milligrams per kilogram

Notes:
1. The site-specific arsenic background concentration is 17.53 mg/kg
2. Dock samples were collected 1.5 feet below the warehouse loading dock platform in non-native fill material above surrounding grade. The associated arsenic data were not used to delineate the extent of arsenic in soil beneath the surrounding grade.



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SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 4-10
Current and Previous Investigation Arsenic Concentrations in Soil

Legend

- 2020 Vapor Well Borehole
- 2021 Step-Out Borehole
- Other Borehole
- $TPH_{ho/mo}$ Isoconcentration Contour (mg/kg)
- Lead Isoconcentration Contour (mg/kg)
- Site Boundary

Location ID | Depth (ft bgs)

VW35	2'
Arsenic	46
Lead	120
$TPH_{ho/mo}$	3,500

Analyte | Concentration (mg/kg)

Abbreviations:
' = feet
bgs = below ground surface
ft = feet
ID = identification
mg/kg = milligrams per kilogram
NA = not analyzed
SL = screening level
$TPH_{ho/mo}$ = total petroleum hydrocarbons as hydraulic oil/motor oil
TPH_{mo} = total petroleum hydrocarbons as motor oil

Notes:
1. Only analytes detected above one or more screening levels are presented.
2. Arsenic SLs = 0.11 mg/kg (Residential) and 0.36 mg/kg (Commercial/Industrial)
3. Arsenic Site-Specific Background Concentration = 17.53 mg/kg
4. Lead SLs = 80 mg/kg (Residential and 320 mg/kg (Commercial/Industrial)
5. $TPH_{ho/mo}$ SLs = 2,400 mg/kg (Residential) and 18,000 mg/kg (Commercial/Industrial)
6. Refer to Figure 4-10 for additional arsenic concentrations in soil.

KA-20 KA-9 KA-44-N KA-44-E B02 KA-44-W KA-44 B01 KA-44-S KA-11 KA-10-N KA-13 KA-10-W KA-10-WW KA-10 KW-10-S KA-10-SW KA-10-SS KA-10-3-S KA-24 HAZARDOUS MATERIAL BUILDING KA-45 B03 KA-46 KA-16 B04 B05 B06 B07 KA-17-3-N KA-17-NN KA-17-4-NE TRAILER 2 KA-17-3-NE KA-17-NW KW-17-WW KA-17-N KA-17-E KA-17 KA-17-3-W KA-17-W B09 KA-19 SALVAGE BUILDING TOOL ISSUE BUILDING WAREHOUSE BUILDING B-08-3-N B08-NN B08-N B08-E B08-EE B08-3-E B08-W B08 B08-S B08-SS B08-3-S B12 WB08 VW57 KA-49 B14 B13 2,400 mg/kg 80 mg/kg REGIONAL TRANSIT LIGHTRAIL

KA-15	6'	36'	46'
Arsenic	4.2	2.5	2.6
Lead	5.6	4.6	4.4
TPH_{mo}	<6.5	<6.5	<6.5

VW31	2'
Arsenic	26
Lead	10
$TPH_{ho/mo}$	29

KA-14	6'	16'
Arsenic	3.2/5.2	2.5/3.5
Lead	4.3/3.7	2.8/2.6
TPH_{mo}	<6.5/<6.5	<6.5/<6.5

KA-23	6'	11'
Arsenic	1.7/5.4	7.1/8.6
Lead	6.0/5.8	4.6/4.2
TPH_{mo}	<6.5/<6.5	<6.5/<6.5

VW31-S	2'
Arsenic	150
Lead	NA
$TPH_{ho/mo}$	NA

VW35-NN	2'	5'
Arsenic	100	4.4
Lead	55	6.8
$TPH_{ho/mo}$	130	8.5

KA-21	1.5'
Arsenic	3.6
Lead	5.4
TPH_{mo}	<6.5

VW35-N	2'	5'	7.5'
Arsenic	44	180	8.4
Lead	130	10	7.7
$TPH_{ho/mo}$	6,000	83	28

VW35-W	2'	5'
Arsenic	61	4.4
Lead	11	6.6
$TPH_{ho/mo}$	<7.0	9.1

VW38	2'
Arsenic	17
Lead	19
$TPH_{ho/mo}$	36

VW15	2'
Arsenic	7.3
Lead	9.2
$TPH_{ho/mo}$	510

VW56	1.5'
Arsenic	5.7
Lead	NA
$TPH_{ho/mo}$	NA

KA-26	6'	36'	51'
Arsenic	3.7	0.79 J	3.3
Lead	5.3	3.2	7.9
TPH_{mo}	<6.5	<6.5	<6.5

VW35	2'
Arsenic	46
Lead	120
$TPH_{ho/mo}$	3,500

VW57	1.5'
Arsenic	30
Lead	NA
$TPH_{ho/mo}$	NA

VW35-E	2'	5'
Arsenic	50	8.1
Lead	13	10
$TPH_{ho/mo}$	960	400

KA-18	6'	11'
Arsenic	23/22	7.2/6.5
Lead	7.7/7.2	6.7/6.4
TPH_{mo}	47/17 J	<6.5/<6.5

VW35-S	2'	5'
Arsenic	280	8.5/6.6
Lead	13	6.5/6.7
$TPH_{ho/mo}$	380	14/27

VW35-SS	2'	5'
Arsenic	94	4.3/4.1
Lead	7.9	6.6/6.5
$TPH_{ho/mo}$	<7.0	<7.0/<7.0

KA-22	2'
Arsenic	5.3
Lead	7.6
TPH_{mo}	<6.5

N

0 30 60
Feet

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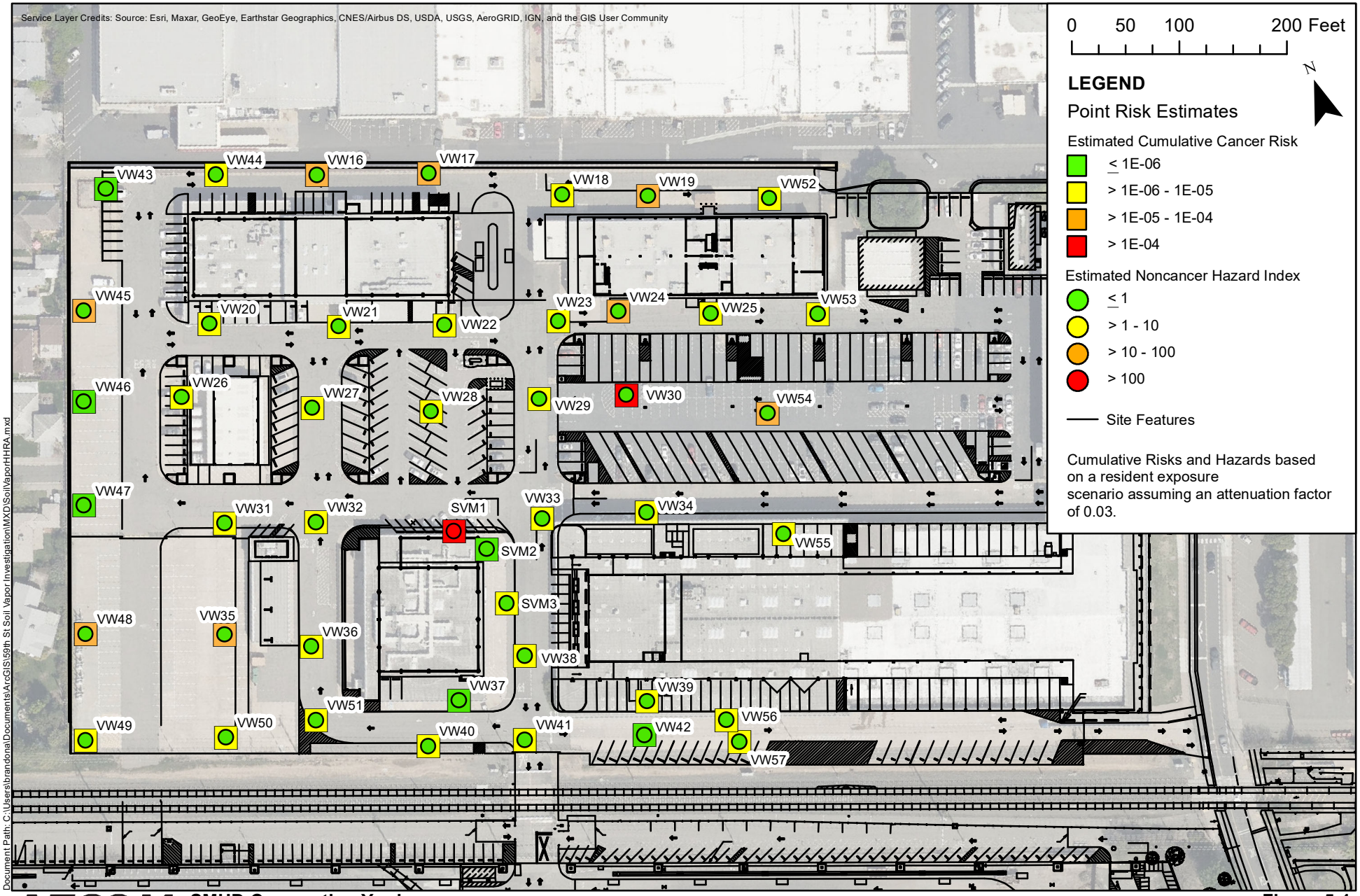
AECOM

SMUD Corporation Yard
1708 59th Street, Sacramento, California

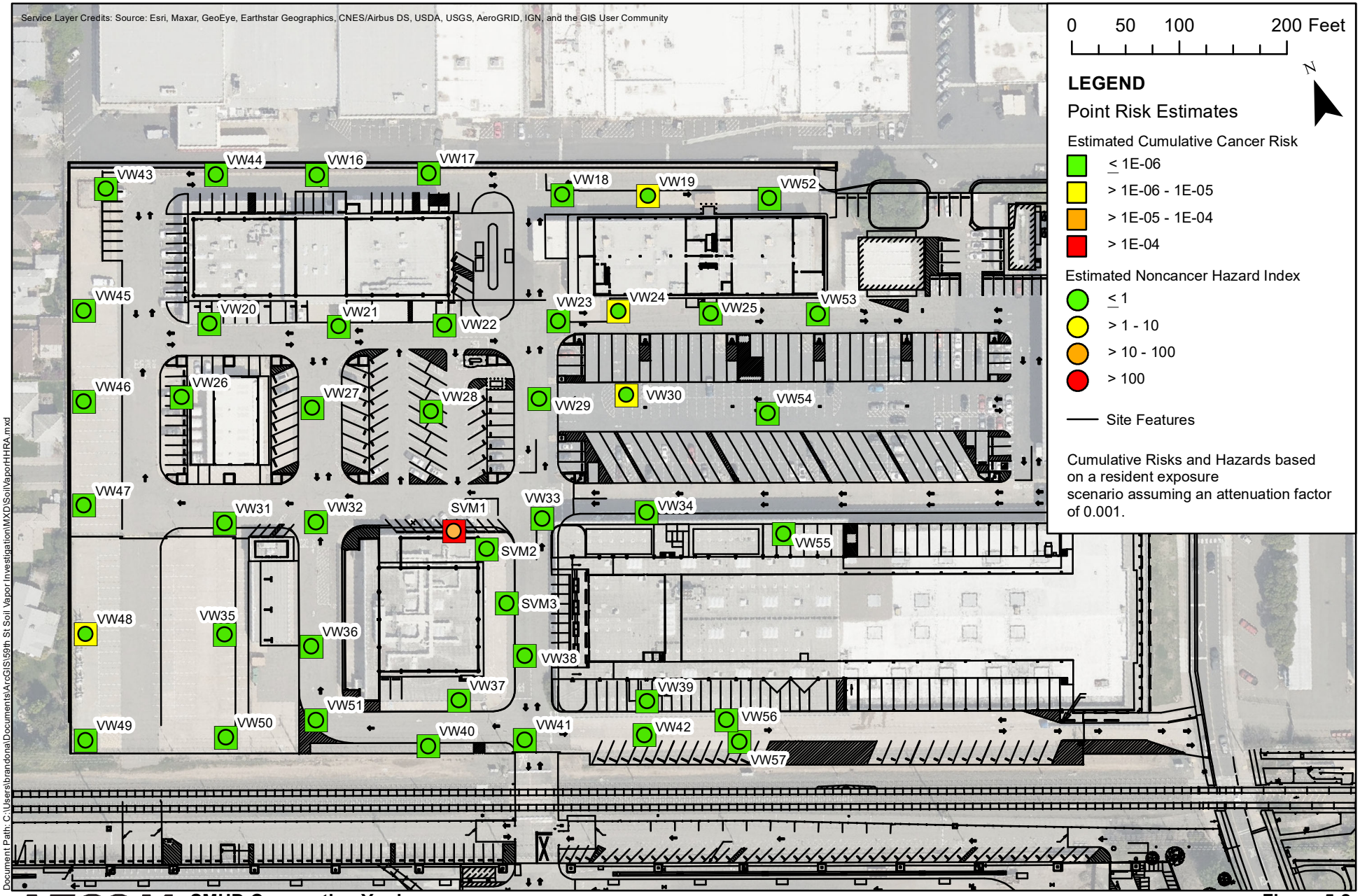
Figure 4-11
Current Investigation Soil Analytical Results for Vapor Well Boreholes and Associated Step-Outs



AECOM

SMUD Corporation Yard
1708 59th Street, Sacramento, California

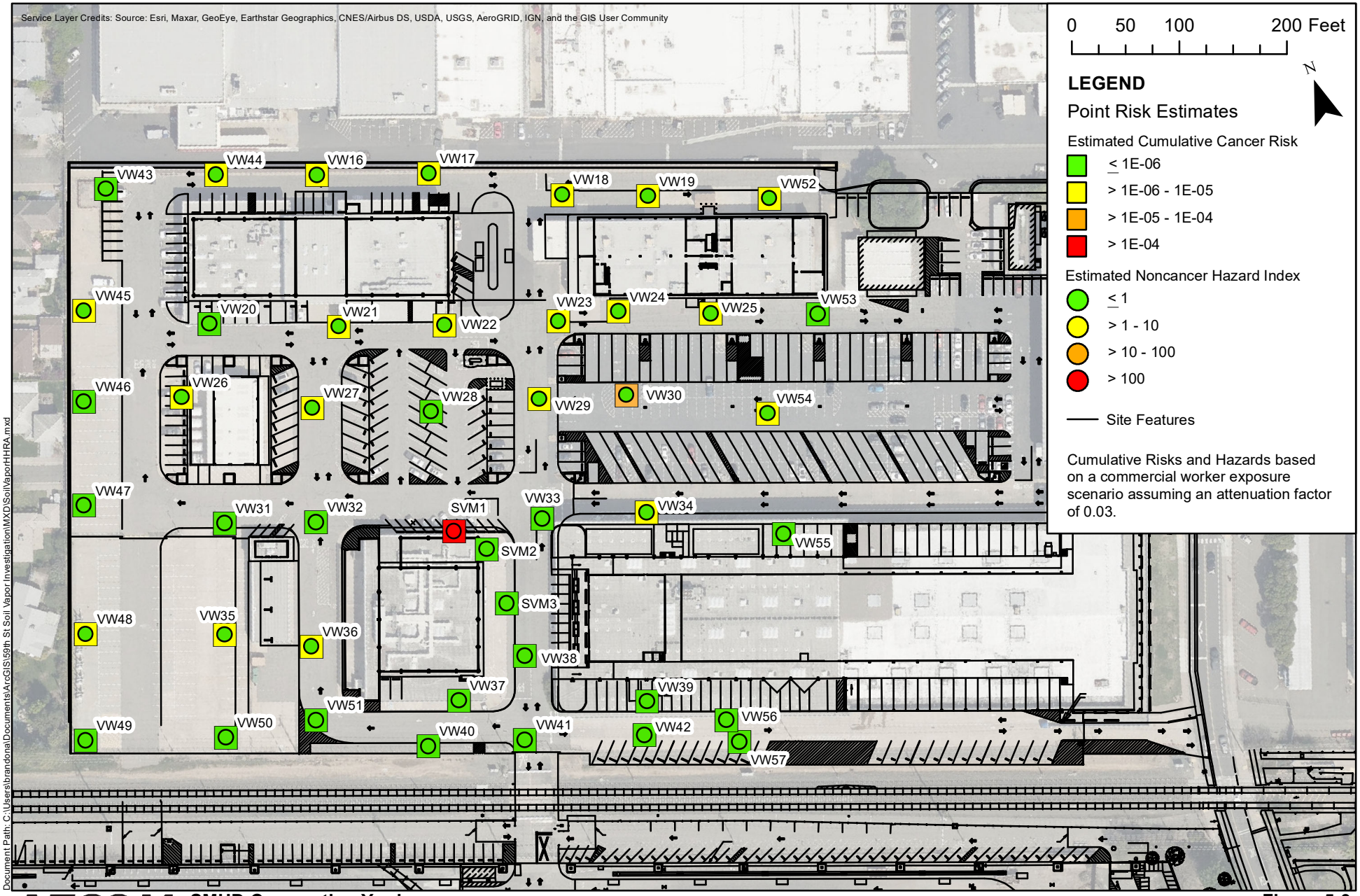
Figure 5-1
Vapor Intrusion Pathway Point Risk Estimates
Resident Scenario (Attenuation Factor = 0.03)



AECOM

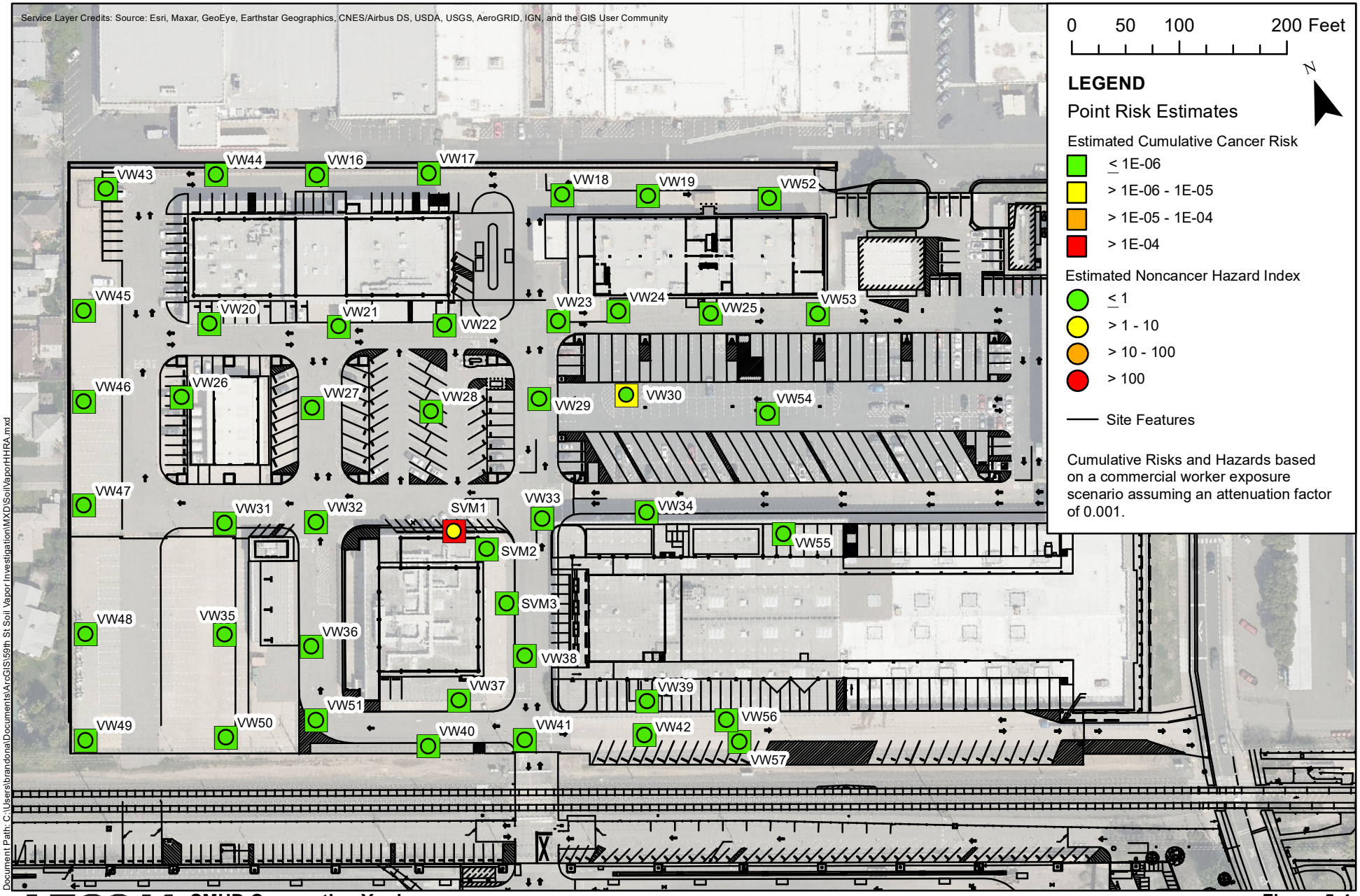
SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 5-2
Vapor Intrusion Pathway Point Risk Estimates
Resident Scenario (Attenuation Factor = 0.001)



SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 5-3
Vapor Intrusion Pathway Point Risk Estimates
Commercial Worker Scenario (Attenuation Factor = 0.03)



SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 5-4
Vapor Intrusion Pathway Point Risk Estimates
Commercial Worker Scenario (Attenuation Factor = 0.001)

Appendix A

Soil Sampling Notification Letters

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Date: June 22, 2020 ES 20-005

To: Mr. Jose Salcedo, P.E., Chief Northern California Schools Unit

From: Keegan George, P.E., SMUD Environmental Services

Subject: Notification of Additional Soil Sampling, SMUD 59th Street Corporation Yard

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☐	Sent for your Review	☑	For Your Files
☐	For Your Signature	☐	For Distribution
☐	Other:	☐	For Processing

Dear Mr. Salcedo,

SMUD plans to conduct additional soil sampling at the 59th Street Corporation Yard in Sacramento, California, to refine the extent of arsenic impacts in areas where limited shallow soil excavation will be proposed as part of the overall site remedy to be presented in the forthcoming Removal Action Workplan (RAW). Figure 1 (attached) shows the proposed soil sampling locations in four areas (south of the Garage Building, east-northeast of the Tool Issue Building, southeast of the Salvage Building, and west of the Hazardous Materials Building).

Soil samples will be collected at depths of 1.5 and 3.0 feet below ground surface (bgs) at step-out locations approximately 15 feet from previous boreholes KA-44, KA-17, B08, and KA-10. The step-out locations are depicted as blue triangles on Figure 1. The soil samples will be analyzed for arsenic. If arsenic concentrations exceeding the 17.53 milligram per kilogram site-specific background concentration are detected, further step-out sampling may be performed. Sample depths for any further step-out locations will be determined based on the initial step-out soil sample results.

Sampling and analysis procedures will be the same as those described in the Site Characterization and Analysis Plan, SMUD 59th Street Corporation Yard (AECOM 2018). The soil sampling results will be presented in the forthcoming RAW. The sampling event is planned to take place during the week of June 29, 2020. If further step-out sampling is performed, it would likely take place in August 2020. If DTSC would like to be present during sampling, please contact me in advance to coordinate your visit.

Keegan George

Keegan George, P.E.
Associate Civil Engineer, Environmental Services

Attachment:
Figure 1 – Additional Arsenic Soil Characterization Proposed Boring Locations

Legend

- Proposed Additional Characterization Borehole
- 2018 Soil Borehole
- 2015 Soil Borehole
- Arsenic Isoconcentration Contour 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour >3 to 6 ft bgs (dashed where inferred)

Location ID — Depth (ft bgs)
KA-11 1.5'
Arsenic 5.9
Analyte — Concentration (mg/kg)

Abbreviations:
> = greater than
bgs = below ground surface
ft = feet
ID = identification
mg/kg = milligrams per kilogram

Notes:
1. Arsenic concentrations denoted by an asterisk (*) reflect the higher of two concentrations for a duplicate pair of samples.
2. The site-specific arsenic background concentration is 17.53 mg/kg.

KA-27 6' 36' 46' Arsenic 6.7 0.97 3.9
KA-2 6' 16' Arsenic 7.4 3.0
KA-3 6' 11' Arsenic 7.0 3.8
KA-4 6' 16' Arsenic 5.8 1.9
KA-6 6' 36' 46' Arsenic 7.2 1.5 1.7
KA-5 6' 36' 46' Arsenic 7.5 1.5 2.5
KA-8 2' Arsenic 4.3*
KA-1 21' Arsenic 2.2
KA-20 1.5' Arsenic 4.9
KA-7 6' 36' 46' Arsenic 5.8 2.2 1.4
KA-11 1.5' Arsenic 5.9
KA-9 6' 36' 46' Arsenic 6.3 1.0 1.7
B01 1.5' Arsenic 6.4
KA-10 1.5' 4.5' Arsenic 29 2.6
B02 1.5' Arsenic 6.3
KA-15 6' 36' 46' Arsenic 4.2 2.5 2.6
KA-13 6' 11' Arsenic 4.8 7.2
KA-45 1.5' Arsenic 7.4
KA-44 1.5' 5' Arsenic 30 2.5
KA-43 1' Arsenic 4.9
KA-24 6' 11' Arsenic 4.7* 4.8*
KA-14 6' 16' Arsenic 5.2* 3.5*
B06 1.5' 5' Arsenic 3.6 5.1
B03 1.5' Arsenic 8.2
KA-47 1.5' Arsenic 4.0
B05 1.5' 5' Arsenic 3.7 3.5
KA-16 1.5' Arsenic 3.9
KA-46 1.5' Arsenic 6.5
B07 1.5' 5' Arsenic 2.7 4.9
KA-25 6' 16' Arsenic 5.2 1.7
B04 1.5' 5' Arsenic 16 3.3
KA-17 1.5' 5' Arsenic 100 2.2
B10 1.5' 5' Arsenic 240 9.0
KA-21 1.5' Arsenic 3.6
KA-19 6' 16' Arsenic 14* 5.7*
B09 1.5' 5' Arsenic 3.4 5.2
B11 1.5' 5' Arsenic 260 140
KA-23 6' 11' Arsenic 5.4* 8.6*
KA-18 6' 11' Arsenic 23* 7.2*
KA-48 2' Arsenic 60
KA-50 3' 5' Arsenic 110 6.8
KA-26 6' 36' 51' Arsenic 3.7 0.79 3.3
KA-22 2' Arsenic 5.3
B08 1.5' 5' Arsenic 69 4.4
B12 1.75' 5' Arsenic 13 7.3
B13 1.5' >5' Arsenic 8.7 3.9
KA-49 1.5' Arsenic 15
B14 1.5' 5' Arsenic 13 4.4
B17 1.5' 5' Arsenic 45 330*
BK-1 1' 6' 11' 16' Arsenic 4.0 4.1 2.1 1.2
PS-4 1' 6' 11' 16' Arsenic 6.1 5.3 4.9 1.9
B15 1.5' >5' Arsenic 140 6.3
KA-40 6' 16' Arsenic 7.0* 2.0*
B16 1.5' 5' Arsenic 280 3.8*
KA-33 1' Arsenic 10
KA-29 1' Arsenic 5.8
KA-41 6' 26' 36' Arsenic 4.4 2.0 1.2
KA-38 6' 11' Arsenic 6.2* 3.7*
KA-37 6' 11' Arsenic 7.7* 5.6*
PS-3 1' 6' 11' 16' Arsenic 4.4 5.7 7.3 8.1
PS-5 1' 6' 11' 16' Arsenic 5.3 4.7 2.8 2.7
KA-32 1' Arsenic 5.0
KA-30 1' Arsenic 5.1
KA-35 6' 16' Arsenic 5.2* 2.5*
KA-28 1' Arsenic 5.2
KA-36 6' 16' Arsenic 8.3* 6.1*
KA-34 2' Arsenic 4.7
KA-31 1' Arsenic 6.9
KA-42 6' 26' 36' Arsenic 5.5 0.65 2.4
PS-2 1' 6' 11' 16' Arsenic 8.7 8.8 11 6.7
PS-1 1' 6' 11' 16' Arsenic 6.5 7.2 8.3 5.1

SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
59th STREET
HAZARDOUS MATERIAL BUILDING
SALVAGE BUILDING
TOOL ISSUE BUILDING
TRAILER T2
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING

17.53
50
100

N
0 60 120
Feet

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AECOM
SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure1
Additional Arsenic Soil Characterization Proposed Boring Locations

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Date: July 15, 2020 ES 20-006

To: Mr. Jose Salcedo, P.E., Chief Northern California Schools Unit

From: Keegan George, P.E., SMUD Environmental Services

Subject: Notification of Additional Soil Sampling (Phase 2), SMUD 59th Street Corporation Yard

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☐	Sent for your Review	☑	For Your Files
☐	For Your Signature	☐	For Distribution
☐	Other:	☐	For Processing

Dear Mr. Salcedo,

SMUD plans to conduct additional soil sampling at the 59th Street Corporation Yard in Sacramento, California, to refine the extent of arsenic impacts in areas where limited shallow soil excavation will be proposed as part of the overall site remedy to be presented in the forthcoming Removal Action Workplan (RAW). Figure 1 (attached) shows the proposed soil sampling locations as the Phase 2 proposed soil samples in three areas (east-northeast of the Tool Issue Building, southeast of the Salvage Building, and west of the Hazardous Materials Building). Figure 1 also shows the sample locations and arsenic concentrations from recent sampling at the site during Phase 1 of the step-out location sampling completed on July 29 and July 30, 2020.

Soil samples will be collected at the Phase 2 step-out locations from previous boreholes KA-17, B08, and KA-10 at a depth of 1.5 below ground surface (bgs) at. Additionally, samples may be collected at deeper depths at some locations. The step-out locations are depicted as green triangles on Figure 1. The blue triangles depict the Phase 1 of the step-out location sampling completed on July 29 and July 30, 2020.

Sampling and analysis procedures will be the same as those described in the Site Characterization and Analysis Plan, SMUD 59th Street Corporation Yard (AECOM 2018). The soil sampling results will be presented in the forthcoming RAW. The sampling event is planned to take place on July 20, 2020. If DTSC would like to be present during sampling, please contact me in advance to coordinate your visit.

Keegan George

Keegan George, P.E.
Associate Civil Engineer, Environmental Services

Attachment:
Figure 1 – Additional Arsenic Soil Characterization Proposed Boring Locations

Legend

- Phase 1 Characterization Borehole
- Proposed Phase 2 Characterization Borehole
- 2018 Soil Borehole
- 2015 Soil Borehole
- Arsenic Isoconcentration Contour 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour >3 to 6 ft bgs (dashed where inferred)

Location ID — Depth (ft bgs)
KA-11 1.5'
Arsenic 5.9
Analyte — Concentration (mg/kg)

Abbreviations:
> = greater than
bgs = below ground surface
ft = feet
ID = identification
mg/kg = milligrams per kilogram

Notes:
1. Arsenic concentrations denoted by an asterisk (*) reflect the higher of two concentrations for a duplicate pair of samples.
2. The site-specific arsenic background concentration is 17.53 mg/kg.

KA-10 1.5' 4.5' Arsenic 29 2.6
KA-10-N 1.5' 3' Arsenic 16 8.0
KA-10-W 1.5' 3' Arsenic 35 3.9
KA-10-S 1.5' 3' 3'FD Arsenic 110 6.2 5.5
KA-44-W 1.5' 1.5'FD 3' Arsenic 4.4 4.6 9.5
KA-44-N 1.5' 3' Arsenic 5.0 8.8
KA-44-E 1.5' 3' Arsenic 6.3 8.5
KA-44 1.5' 5' Arsenic 30 2.5
KA-44-S 1.5' 3' Arsenic 14 6.6
B08-N 1.5' 1.5'FD 3' Arsenic 28 29 5.7
KA-17-N 1.5' 3' Arsenic 78 3.6
KA-17 1.5' 5' Arsenic 100 2.2
KA-17-E 1.5' 3' Arsenic 17 3.6
B09 1.5' 5' Arsenic 3.4 5.2
KA-17-W 1.5' 3' Arsenic 150 4.1
B08-W 1.5' 3' Arsenic 19 12
B08 1.5' 5' Arsenic 69 4.4
B08-S 1.5' 3' Arsenic 54 9.1
B08-E 1.5' 3' Arsenic 29 40

SHOPS
HAZARDOUS MATERIAL BUILDING
GARAGE BUILDING
TRAILER
TRAILER T3
TRAILER T2
OFFICE BUILDING
SALVAGE BUILDING
TOOL ISSUE BUILDING
WAREHOUSE BUILDING
17.53
50
100
59th STREET
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING

N
0 60 120
Feet

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AECOM
SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure1
Additional Arsenic Soil Characterization Proposed Boring Locations

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Date: November 2, 2020 ES 20-010

To: Mr. Jose Salcedo, P.E., Chief Northern California Schools Unit

From: Keegan George, P.E., SMUD Environmental Services

Subject: Notification of Additional Soil Sampling in and Around the Warehouse Building, SMUD 59th Street Corporation Yard

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☐	For Your Signature	☐	For Distribution
☐	Other:	☐	For Processing

Dear Mr. Salcedo,

SMUD plans to conduct additional soil sampling at the 59th Street Corporation Yard in Sacramento, California, to refine the extent of arsenic impacts in areas where limited shallow soil excavation will be proposed as part of the overall site remedy to be presented in the forthcoming Removal Action Plan (RAP). Figure 1 (attached) shows the proposed soil sampling locations in the southeast portion of the property in and around the Warehouse Building. Figure 1 also shows the soil sample locations and associated arsenic isoconcentration contours developed from recent sampling at the site.

Soil samples will be collected at the proposed borehole locations indicated by yellow triangles at a depth of 1.5 below ground surface (bgs). The exact location of proposed boreholes may change in the field based upon field conditions and access to locations within the Warehouse Building. Additionally, samples may be collected at deeper depths at some locations.

Sampling and analysis procedures will be the same as those described in the Site Characterization and Analysis Plan, SMUD 59th Street Corporation Yard (AECOM 2018). The soil sampling results will be presented in the forthcoming RAP. The sampling event is planned to take place in November of 2020. If DTSC would like to be present during sampling, please contact me in advance to coordinate your visit.

Keegan George

Keegan George, P.E.
Associate Civil Engineer, Environmental Services

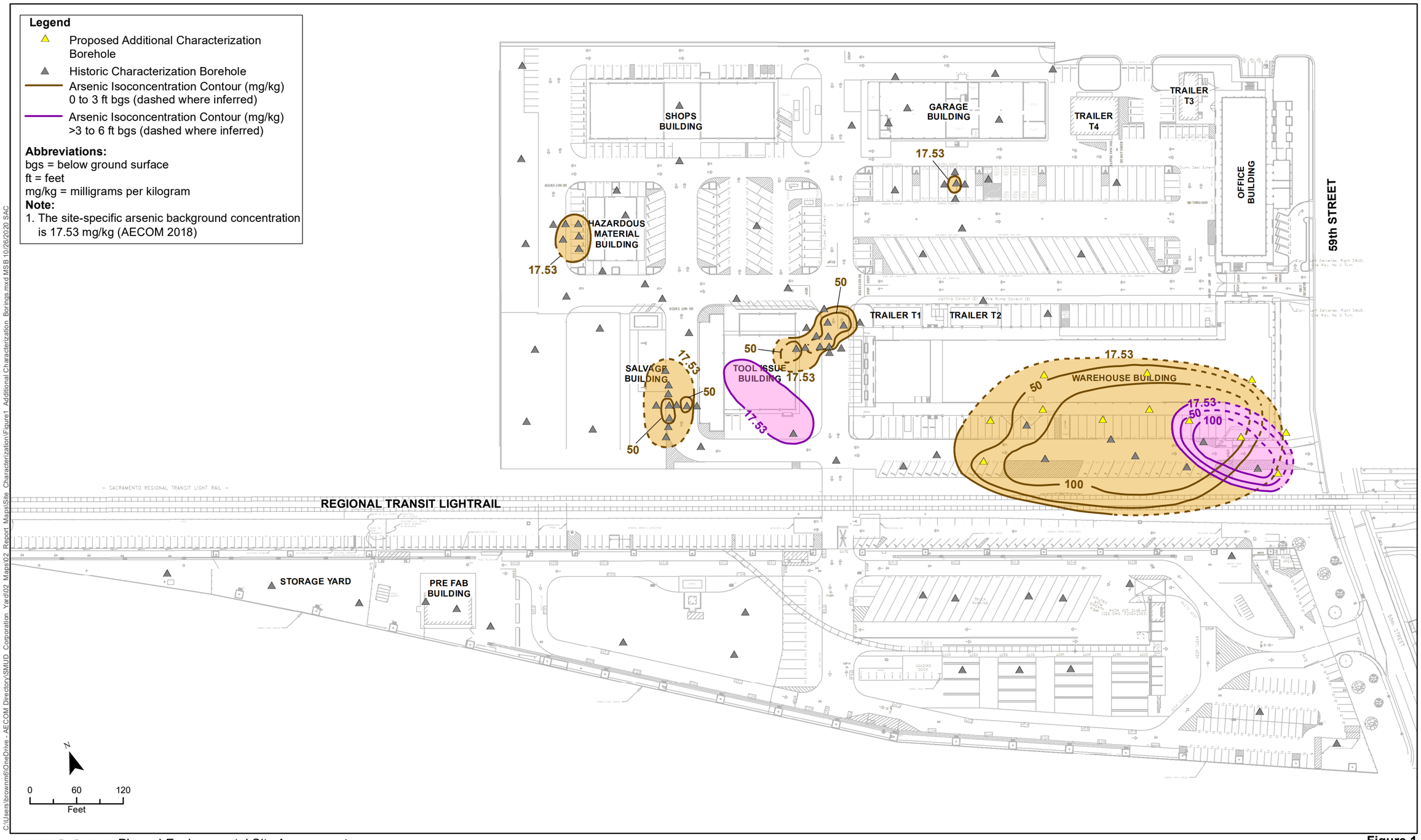
Attachment:
Figure 1 – Additional Arsenic Soil Characterization Proposed Boring Locations

Legend

- Proposed Additional Characterization Borehole
- Historic Characterization Borehole
- Arsenic Isoconcentration Contour (mg/kg) 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour (mg/kg) >3 to 6 ft bgs (dashed where inferred)

Abbreviations:
bgs = below ground surface
ft = feet
mg/kg = milligrams per kilogram

Note:
1. The site-specific arsenic background concentration is 17.53 mg/kg (AECOM 2018)



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AECOM

Phase I Environmental Site Assessment
SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 1
Additional Characterization Boring Locations

SACRAMENTO MUNICIPAL UTILITY DISTRICT

Date: February 17, 2021 ES 21-002

To: Mr. Jose Salcedo, P.E., Chief Northern California Schools Unit

From: Keegan George, P.E., SMUD Environmental Services

Subject: Notification of Additional Soil Sampling in and Around the Warehouse Building, SMUD 59th Street Corporation Yard

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☐	Sent for your Review	☑	For Your Files
☐	For Your Signature	☐	For Distribution
☐	Other:	☐	For Processing

Dear Mr. Salcedo,

SMUD plans to conduct additional soil sampling within the property boundary of the 59th Street Corporation Yard to refine the extent of the arsenic impacts in areas where limited soil excavations will be proposed as part of the overall site remedy, which will be presented in the forthcoming Removal Action Plan (RAP). Figure 1 (attached) shows the proposed soil sampling locations in the west (adjacent to the Salvage Building) and southeast (adjacent to the Warehouse Building) portions of the property. Figure 1 also shows historical sample locations and associated arsenic isoconcentration contours developed based on the results from recent sampling conducted at the site.

Soil samples will be collected at the proposed characterization borehole locations indicated by red triangles on Figure 1. Exact locations of the proposed boreholes may change in the field based upon field conditions and access. Additionally, samples may also be collected at deeper depths at some locations.

During the installation of soil vapor monitoring wells VM31 and VM35, shallow soil samples were collected at these locations when shallow soil contamination was identified during hand auger activities. In the area of the Savage Building at location VW35, four (4) 15 foot step-out soil samples are proposed to be collected in the north, south, east, and west directions each at a depth of 2 feet below ground surface (bgs) to further define the lateral extent of the current shallow arsenic isoconcentration contour (i.e., 0 to 3 feet bgs). Based on the previous soil sampling results from VW35, arsenic, lead, total petroleum hydrocarbons (TPH) as diesel, and TPH as hydraulic oil/motor oil were all detected at concentrations exceeding the California Department of Toxic Substances Control Human and Ecological Risk Office Human Health Risk Assessment Note 3 residential screening levels. Therefore, the proposed step-out soil samples will be analyzed for TPH (TPH as diesel and hydraulic oil/motor oil included) by Environmental Protection Agency (USEPA) Method SW8015B and California Administrative Manual (CAM) 17 Metals (arsenic and lead included) by USEPA Methods SW6020 and SW7471A. Additionally, at location VW31, one (1) 15-foot step-out soil sample is proposed to be collected in the south direction at a depth of 2 feet bgs to further define the lateral extent of the current shallow arsenic isoconcentration contour in this

area. This soil sample will be analyzed for CAM 17 Metals (arsenic included) by USEPA Methods SW6020 and SW7471A.

Near the Warehouse Building in the southeastern portion of the site, proposed borehole locations are selected to further define the vertical and lateral extent of the current deep arsenic isoconcentration contour (i.e., 3 to 6 feet bgs), as well as the lateral extent of the current shallow arsenic isoconcentration contour (i.e., 0 to 3 feet bgs). Therefore, one borehole location is proposed slightly east of previous sample location B17, where two (2) soil samples will be collected at depths of 7.5 and 10 feet bgs to further define the vertical extent of arsenic contamination. One borehole location is also proposed north of previous sample location WB06, where three (3) soil samples will be collected at depths of 5, 7.5, and 10 feet bgs to further define the northeastern extent of arsenic contamination. One additional borehole location is proposed east of previous sample location WB07, where three (3) soil samples will be collected at depths of 5, 7.5, and 10 feet bgs to further define the eastern extent of arsenic contamination. All proposed soil samples near the Warehouse Building will be analyzed for CAM 17 Metals (arsenic included) by USEPA Methods SW6020 and SW7471A. In addition, two borehole locations are proposed along the southern edge of the Warehouse Building (north of previous sample locations KA-48 and B11), where three (3) soil samples will be collected at each location at depths of 2 feet above ground surface (consisting of fill material within the loading dock), 1.5 feet bgs, and 5 feet bgs to further define the northern lateral extent of arsenic contamination in this area.

During this additional soil sampling event, a field-portable x-ray fluorescence (XRF) unit is proposed to be utilized to screen for total arsenic concentrations in all soil samples collected in the field prior to submittal to the laboratory for analysis. The XRF field readings may be used to determine if additional step-out borehole locations should be considered to collect additional soil samples at the site.

Sampling and analysis procedures will be the same as those described in the Site Characterization and Analysis Plan, SMUD 59th Street Corporation Yard (AECOM 2018). The soil sampling results will be presented in the forthcoming Site Characterization Report Amendment. The sampling event is planned to take place in February 2021. If DTSC would like to be present during the proposed sampling activities, please contact me in advance to coordinate your visit.

Keegan George

Keegan George, P.E.
Associate Civil Engineer, Environmental Services

Attachment:
Figure 1 – Additional Arsenic Soil Characterization Proposed Boring Locations

Legend

- Proposed Additional Characterization Borehole
- 2020 Phase 1 Characterization Borehole
- 2020 Phase 2 Characterization Borehole
- 2020 Phase 3 Characterization Borehole
- 2020 Phase 4 Characterization Borehole
- 2020 Phase 5 Characterization Borehole
- 2018 Soil Borehole
- 2015 Soil Borehole
- Historic Characterization Borehole
- Arsenic Isoconcentration Contour (mg/kg) 0 to 3 ft bgs (dashed where inferred)
- Arsenic Isoconcentration Contour (mg/kg) >3 to 6 ft bgs (dashed where inferred)

Location ID — Depth (ft bgs)
B08-NN 1.5'
Arsenic 30
Analyte — Concentration (mg/kg)

Abbreviations:
' = feet
bgs = below ground surface
FD = field duplicate
ft = feet
ID = identification
mg/kg = milligrams per kilogram

Note:
1. The site-specific arsenic background concentration is 17.53 mg/kg

KA-10 1.5' 4.5' Arsenic 29 2.6
KA-10-W 1.5' 3' Arsenic 35 3.9
KA-10-WW 1.5' 1.5'FD Arsenic 14 11
KA-10-S 1.5' 3' 3'FD Arsenic 110 6.2 5.5
KA-10-SW 1.5' Arsenic 21
KA-10-SS 1.5' Arsenic 38
KA-10-3-S 1.5' Arsenic 16
VW35 2' Arsenic 46
B08-N 1.5' 1.5'FD 3' Arsenic 28 29 5.7
B08-W 1.5' 3' Arsenic 19 12
B08 1.5' 5' Arsenic 69 4.4
KA-10-N 1.5' 3' Arsenic 16 8.0
VW31 2' Arsenic 26
B08-NN 1.5' Arsenic 30
B08-3-S 1.5' Arsenic 48
KA-44-W 1.5' 1.5'FD 3' Arsenic 4.4 4.6 9.5
KA-17-3-N 1.5' Arsenic 3.4
B08-3-N 1.5' 1.5'FD Arsenic 39 42
KA-17-NW 1.5' Arsenic 37
KA-17-3-NW 1.5' Arsenic 3.9
KA-17-WW 1.5' Arsenic 44
KA-17-3-W 1.5' Arsenic 60
B08-3-E 1.5' Arsenic 9.1
B08-EE 1.5' 3' Arsenic 99 13
B08-E 1.5' 3' Arsenic 29 40
B08-S 1.5' 3' Arsenic 54 9.1
B08-SS 1.5' Arsenic 24
KA-17-NN 1.5' Arsenic 59
KA-17-N 1.5' 3' Arsenic 78 3.6
KA-17-3-NE 1.5' Arsenic 140
KA-17-4-NE 1.5' Arsenic 14
KA-17-E 1.5' 3' Arsenic 17 3.6
KA-17 1.5' 5' Arsenic 100 2.2
B09 1.5' 5' Arsenic 3.4 5.2
KA-17-W 1.5' 3' Arsenic 150 4.1
VW57 1.5' Arsenic 30
B15 1.5' 5' Arsenic 140 6.3
KA-44-N 1.5' 3' Arsenic 5.0 8.8
KA-44-E 1.5' 3' Arsenic 6.3 8.5
KA-44 1.5' 5' Arsenic 30 2.5
KA-44-S 1.5' 3' Arsenic 14 6.6
VW56 1.5' Arsenic 5.7
KA-48 2' Arsenic 60
WB03 1.5' Arsenic 4.2
B10 1.5' 5' Arsenic 240 9.0
WB02 0.5' Arsenic 3.7
B11 1.5' 5' Arsenic 260 140
WB05 1.5' 5' Arsenic 4.4 4.0
WB06 1.5' 5' 5'FD Arsenic 9.2 70 39
B17 1.5' 5' Arsenic 45 330*
WB07 1.5' 5' Arsenic 7.2 170
WB04 1.5' Arsenic 3.9
KA-50 3' 5' Arsenic 110 6.8
B16 1.5' 5' Arsenic 280 3.8*
WB01 0.5' 0.5'FD 1.5' Arsenic 8.2 12 8.8

HAZARDOUS MATERIAL BUILDING
SHOPS BUILDING
GARAGE BUILDING
TRAILER T3
TRAILER T4
OFFICE BUILDING
59th STREET
SALVAGE BUILDING
TOOL ISSUE BUILDING
WAREHOUSE BUILDING
REGIONAL TRANSIT LIGHTRAIL
STORAGE YARD
PRE FAB BUILDING
SOHL STREET

17.53
50
100

N
0 60 120
Feet

C:\Users\brownmb\OneDrive - AECOM Directory\SMUD Corporation Yard\02 Maps\02 Report Maps\Site Characterization\Figure1 Proposed Additional Characterization Borehole 02012021.mxd MSB 2/1/2021 SAC

AECOM

SMUD Corporation Yard
1708 59th Street, Sacramento, California

Figure 1
Additional Arsenic Soil Characterization Proposed Borehole Locations

Appendix B

Vapor Well Borehole Logs

PROJECT NAME:	**Additional Soil Vapor Investigation**	**BORING LOGS**
SITE ADDRESS:	1708 59th Street Sacramento, California	BORING DIAMETER: 3.5-inch from 0' to 5' 2.25-inch from 5' to total depth
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve	DRILLER/ COMPANY: Confluence Environmental C57# 913194
		GEOLOGIST/ENGINEER: J. Cruz

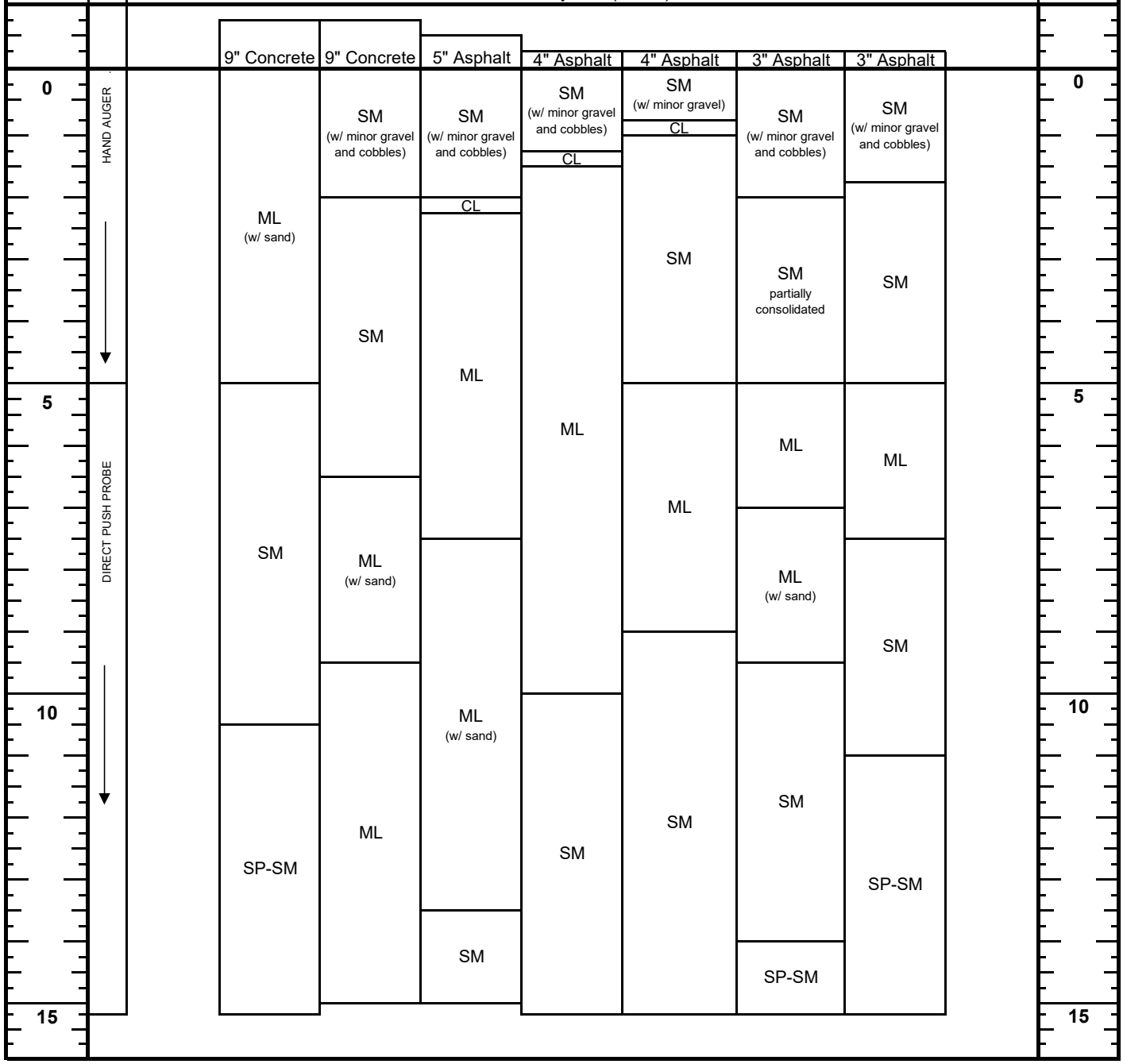
		VW43	VW44	VW16	VW17	VW18	VW19	VW52
Date Installed		12/17/20	12/17/20	11/25/20	12/15/20	12/15/20	11/23/20	12/17/20
Total Depth		15' 2"	15' 1"	15' 0"	15' 2"	15' 1.5"	15' 3"	15' 0"
DEPTH (Feet)	Sample Interval							
		Unified Soil Classification System (USCS) GROUP SYMBOL						
		3" Asphalt	4" Asphalt	4" Asphalt	3" Asphalt	2.5" Asphalt	3" Asphalt	3" Asphalt
0	HAND AUGER	SM (w/ minor gravel and cobbles)	SM (w/ minor gravel & cobbles)	FILL	SM (w/ minor gravel & cobbles)	FILL SM (w/ minor gravel & cobbles)	SM (w/ minor gravel & cobbles)	SM (w/ minor gravel & cobbles)
		SC	SC	SM	SM	ML (w/ sand)	ML	SC
5	DIRECT PUSH PROBE	SM	ML	ML (w/ sand)	ML		SM	ML
10		ML	ML (w/ sand)	SM	SM	SM	SP	SM
15			SM					SW

PROJECT NAME:	**Additional Soil Vapor Investigation**	**BORING LOGS**
SITE ADDRESS:	1708 59th Street Sacramento, California	BORING DIAMETER: 3.5-inch from 0' to 5' 2.25-inch from 5' to total depth
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve	DRILLER/COMPANY: Confluence Environmental C57# 913194
		GEOLOGIST/ENGINEER: J. Cruz

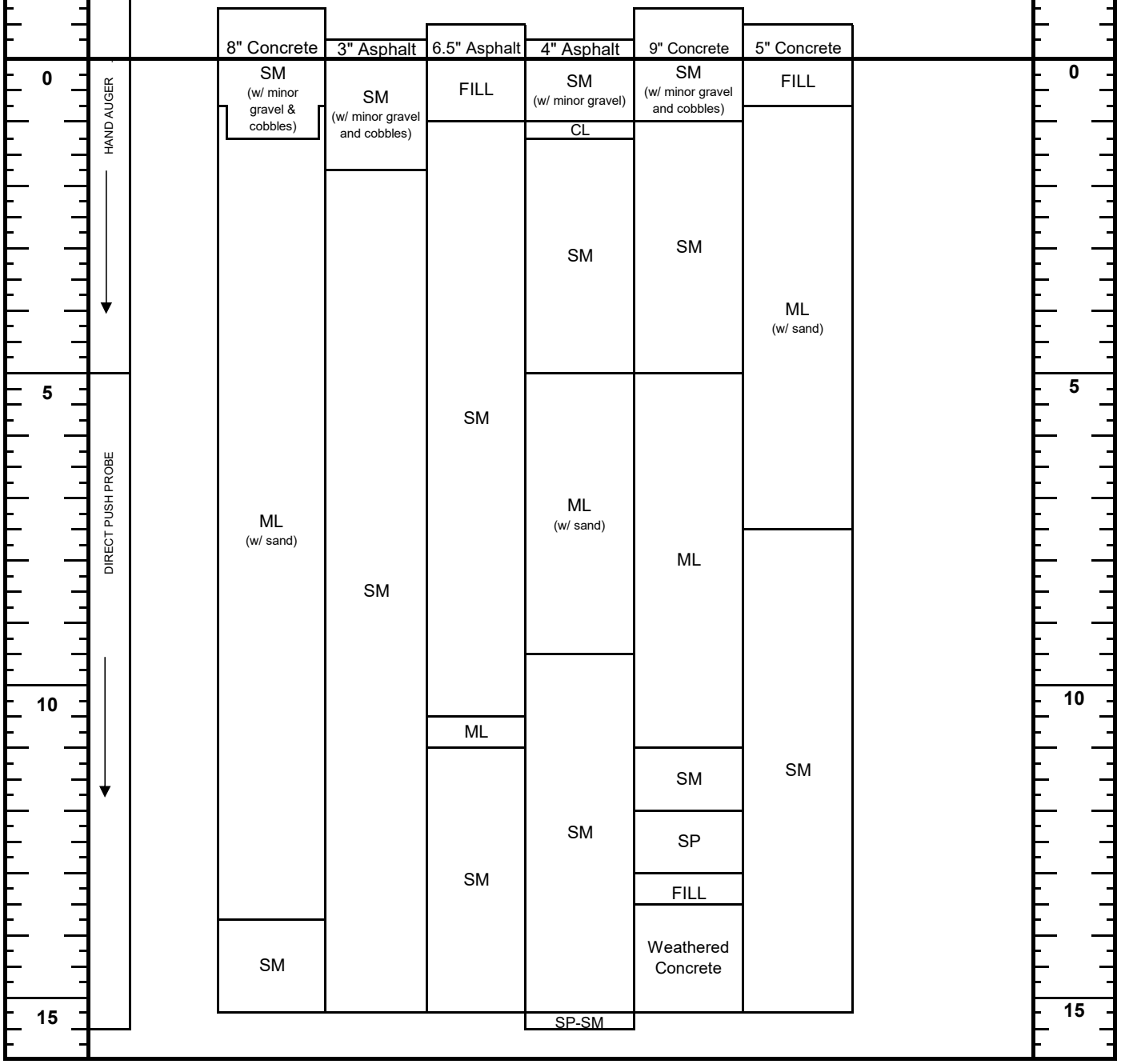
		VW45	VW20	VW21	VW22	VW23	VW24	VW25	VW53		
Date Installed		12/21/20	11/24/20	12/16/20	12/15/20	12/15/20	11/23/20	11/23/20	12/17/20		
Total Depth		15' 2"	15' 3"	15' 2.5"	15' 1"	15' 1"	15' 1.5"	15' 3"	15' 2"		
DEPTH (Feet)	Sample Interval	Unified Soil Classification System (USCS) GROUP SYMBOL									DEPTH (Feet)
		8" Concrete	2" Asphalt	4" Asphalt	3.5" Asphalt	4" Asphalt	6.5" Asphalt	3" Asphalt	3" Asphalt		
0	HAND AUGER	ML	SM (w/ minor gravel & cobbles)	SM (w/ minor gravel & cobbles)	SM (w/ minor gravel & cobbles)	SM (w/ minor cobbles)	FILL	SM (w/ minor gravel & cobbles)	SM (w/ minor gravel & cobbles)		0
				CL		SM	SM (w/ minor gravel & cobbles)				
5	DIRECT PUSH PROBE		SM	ML	ML	SP-SM	SM	SM	SM		5
						ML	ML				
10		SM	ML	SM	SM	SM	ML (w/ Sand)		ML SM		10
							SM				
			SM			ML (w/ Sand)					
15						SM	ML (w/ Sand)				15

PROJECT NAME:	**Additional Soil Vapor Investigation**	**BORING LOGS**
SITE ADDRESS:	1708 59th Street Sacramento, California	BORING DIAMETER: 3.5-inch from 0' to 5' 2.25-inch from 5' to total depth
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve	DRILLER/COMPANY: Confluence Environmental C57# 913194
		GEOLOGIST/ENGINEER: J. Cruz

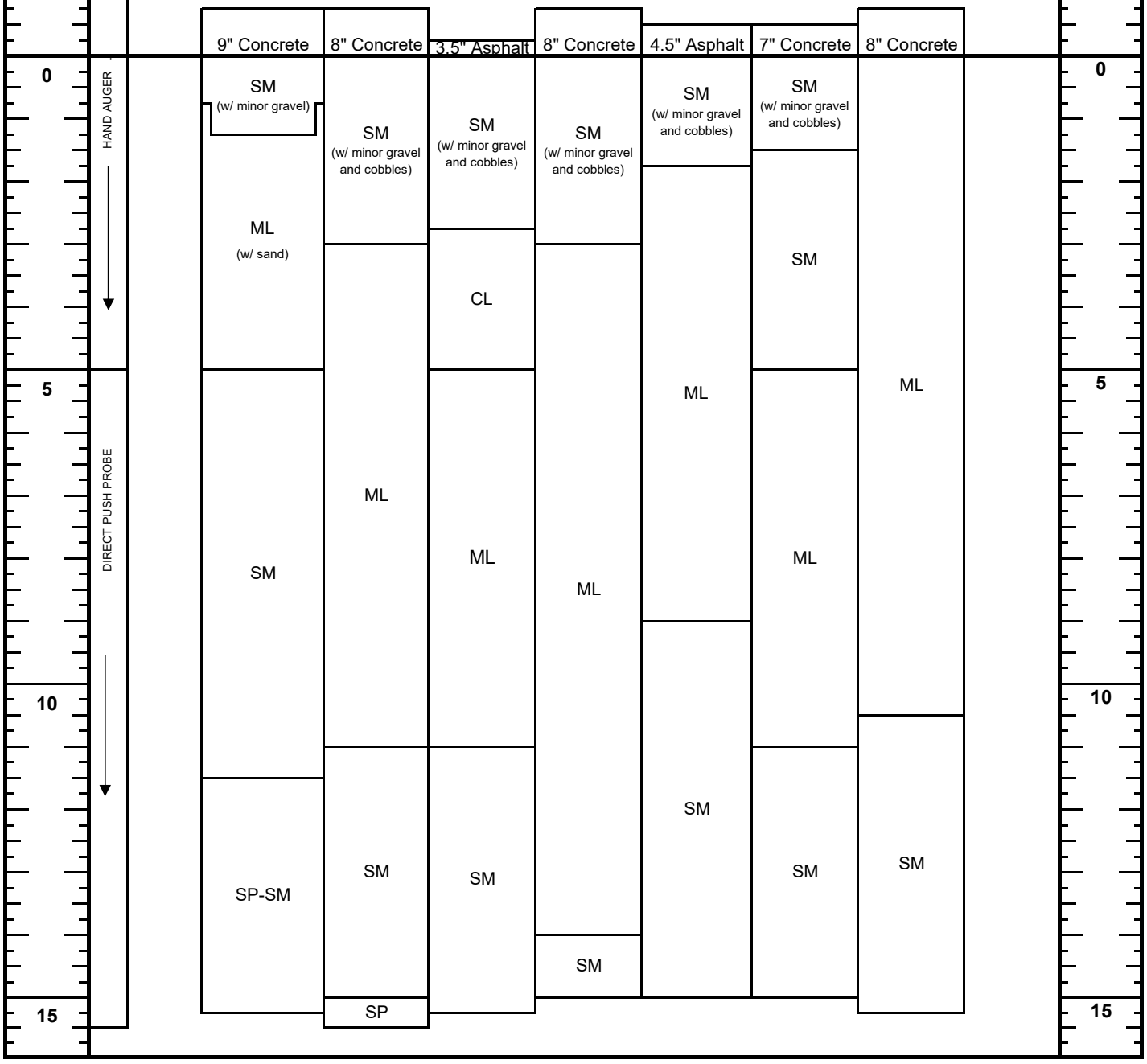
Date Installed	12/18/20	11/25/20	12/16/20	12/16/20	12/15/20	11/24/20	12/21/20
Total Depth	15' 2"	15' 0"	15' 0.5"	15' 2"	15' 1.5"	15' 2"	15' 3"



PROJECT NAME:		**Additional Soil Vapor Investigation**				**BORING LOGS**					
SITE ADDRESS:		1708 59th Street Sacramento, California				BORING DIAMETER:		3.5-inch from 0' to 5' 2.25-inch from 5' to total depth			
DRILLING METHOD:		0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve				DRILLER/ COMPANY:		Confluence Environmental C57# 913194			
						GEOLOGIST/ENGINEER:		J. Cruz			
Date Installed		12/18/20	11/24/20	11/25/20	12/15/20	11/23/20	12/21/20				
Total Depth		15' 2"	15' 3"	15' 0.5"	15' 5"	15' 1"	15' 2"				
DEPTH (Feet)	**Sample Interval**	**VW47**	**VW31**	**VW32**	**VW33**	**VW34**	**VW55**				**DEPTH (Feet)**
		Unified Soil Classification System (USCS) GROUP SYMBOL									



PROJECT NAME:	**Additional Soil Vapor Investigation**					**BORING LOGS**				
SITE ADDRESS:	1708 59th Street Sacramento, California					BORING DIAMETER:	3.5-inch from 0' to 5' 2.25-inch from 5' to total depth			
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve					DRILLER/COMPANY:	Confluence Environmental C57# 913194			
						GEOLOGIST/ENGINEER:	J. Cruz			
Date Installed		12/18/20	11/24/20	11/25/20	11/25/20	11/25/20	11/25/20	12/21/20		
Total Depth		15' 1.5"	15' 4"	15' 1.5"	15' 0"	14' 11.5"	15' 1"	15' 2"		
DEPTH (Feet)	Sample Interval	VW48	VW35	VW36	VW37	VW38	VW39	VW56		DEPTH (Feet)
		Unified Soil Classification System (USCS) GROUP SYMBOL								



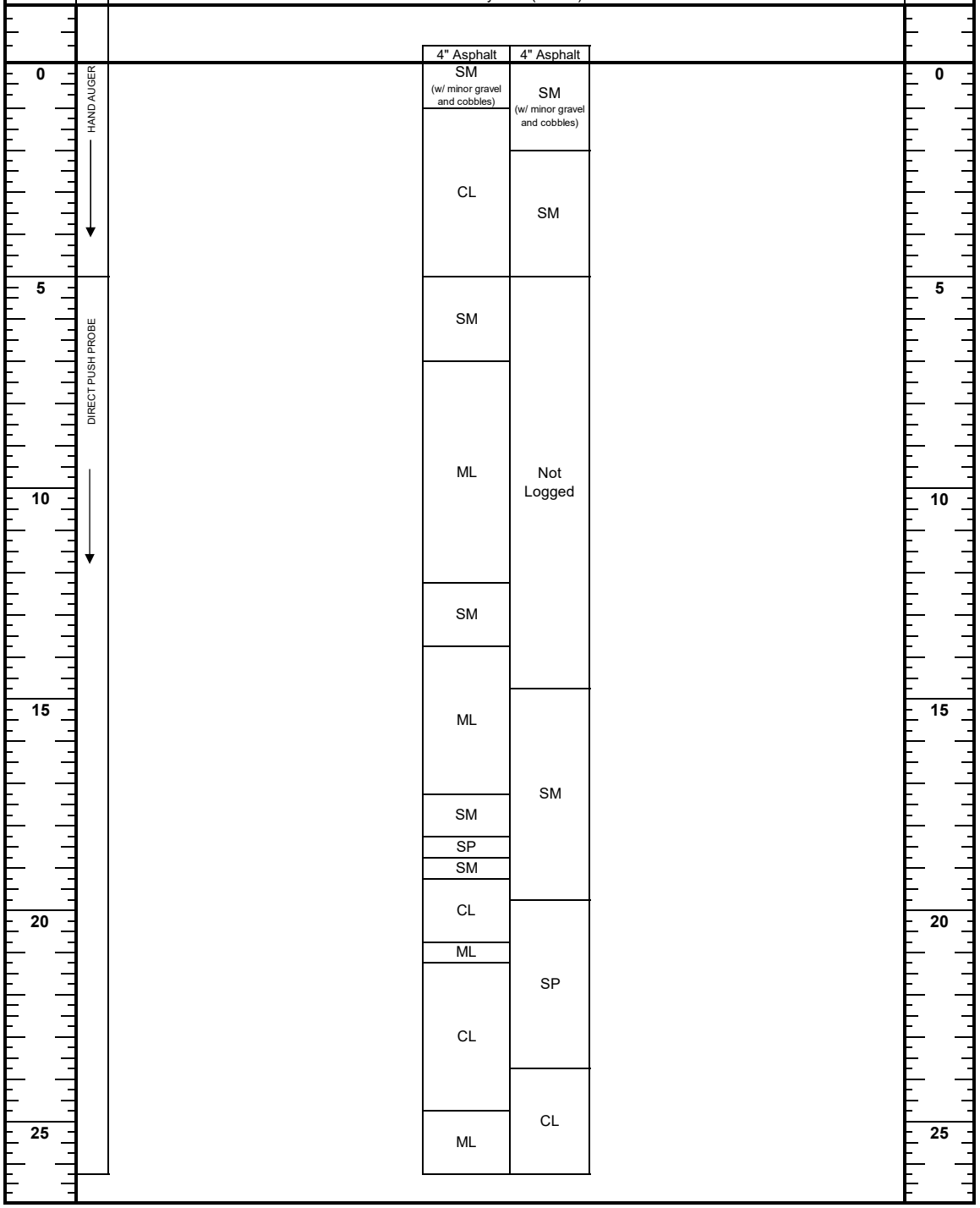
PROJECT NAME:	**Additional Soil Vapor Investigation**	**BORING LOGS**
SITE ADDRESS:	1708 59th Street Sacramento, California	BORING DIAMETER: 3.5-inch from 0' to 5' 2.25-inch from 5' to total depth
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve	DRILLER/COMPANY: Confluence Environmental C57# 913194
		GEOLOGIST/ENGINEER: J. Cruz

Date Installed	12/18/20	12/18/20	12/21/20	11/24/20	11/25/20	11/24/20	12/21/20
Total Depth	15' 2"	15' 2"	15' 2"	15' 3"	15' 0.5"	15' 2"	15' 2"

DEPTH (Feet)	Sample Interval	VW49	VW50	VW51	VW40	VW41	VW42	VW57	DEPTH (Feet)
		Unified Soil Classification System (USCS) GROUP SYMBOL							
		9" Concrete	8" Concrete	4" Concrete	3" Asphalt	7.5" Asphalt	8" Concrete	7" Concrete	
0	HAND AUGER	SM (w/ minor gravel)	SM (w/ minor gravel)	SM (w/ minor gravel)	SM (w/ minor gravel and cobbles)	SM (w/ minor gravel)	SM (w/ minor gravel and cobbles)		0
		ML (w/ sand)	ML						
					SM		SM		
5	DIRECT PUSH PROBE	SM	SM	ML (w/ sand)	ML	ML	ML	ML (w/ sand)	5
10		SP-SM	SP	SM	SM	SM	SM	SM	10
15									15

PROJECT NAME:	**Additional Soil Vapor Investigation**	**BORING LOGS**
SITE ADDRESS:	1708 59th Street Sacramento, California	BORING DIAMETER: 3.5-inch from 0' to 5' 2.25-inch from 5' to total depth
DRILLING METHOD:	0 to 5 feet bgs Hand Auger, Remainder drilled using 2.25" Geoprobe 6600 DPT, 1.25" DT22 plastic inner sleeve	DRILLER/COMPANY: Confluence Environmental C57# 913194
		GEOLOGIST/ENGINEER: J. Cruz

Date Installed					12/16/20	12/16/20					
Total Depth					26' 2.5"	26' 3"					
DEPTH (Feet)	**Sample Interval**				**VW14**	**VW15**					**DEPTH (Feet)**
		Unified Soil Classification System (USCS) GROUP SYMBOL									



Appendix C

Data Validation Summary and Validated Data Sets

Soil Gas Data Validation Summary

SMUD 59TH STREET CORPORATION YARD SOIL GAS DATA VALIDATION SUMMARY

A total of 108 field soil gas samples and 10 field duplicate (FD) samples were collected at the SMUD 59th Street Corporation Yard in Sacramento, California. The samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Toxic Organics (TO)-15 by BC Laboratories, Inc. in Bakersfield, California. The following samples were collected.

- November 30 and December 1, 2020 – Eight well samples analyzed under work order (WO) 2035147
- December 1 and 2, 2020 – 12 well samples and one FD sample analyzed under WO 2035335
- December 2 and 3, 2020 – Eight well samples analyzed under WO 2035539
- December 3 and 4, 2020 – Eight well samples and three FD samples analyzed under WO 2035587
- December 22 and 23, 2020 – 28 well samples and three FD samples analyzed under WO 2037849
- December 23, 29 and 30, 2020 – 22 well samples and two FD samples analyzed under WO 2100036
- March 3, 2021 – 14 system and well samples analyzed under WO 2107219
- March 3 and 4, 2021 – Eight well samples and one FD sample analyzed under WO 2107220

The quality control (QC) samples analyzed to assess contamination, precision, and accuracy for the data sets include method blanks, spikes (laboratory control samples [LCSs] and surrogate spikes) and duplicates (FD and LCS duplicates).

The analytical results were validated against laboratory accuracy and precision limits in accordance with the approved methods. No systematic analytical problems were indicated by the validation process. However, during the validation process, any analytes (detected or not detected) associated with laboratory or field QC samples that do not meet the accuracy or precision limits were flagged by AECOM's project chemist. Non-detect results with estimated practical quantitation limits (PQLs) and potential false negative results are flagged "UJ," detected results that are determined to be from external contamination are flagged as not-detected (U), detected results that are determined to be estimated results are flagged "J" (a "+" or "-" would indicate a potential high or low bias, respectively), and any results (detected or not) that are associated with extreme QC issues are rejected (R) and should not be used per EPA guidance. For this data set, there are no rejected (R) results, estimated results with potential high bias (J+) or blank contamination (U) flagged data results.

Three samples arrived at the laboratory at ambient pressure and three additional samples had elevated levels of isopropanol which was used as one of the leak check compounds. All analytes within these six samples are qualified as potential low bias due to possible dilution with ambient air.

From a total of 9,676 possible results, 1,343 results are qualified. The following bullets summarize the qualified results and Table 1 lists all qualified results.

- Seven hundred and seventy results are qualified as estimated concentrations (J) only because the analyte was detected between the PQL and method detection limit (MDL). These results do not indicate analytical quality issues; the reported results are below the calibration range.
- Two hundred forty-six results (all 82 results in 3 samples [SG-VW14-01, SG-VW32A-02 and SG-VW37B-01]) are qualified as having estimated PQLs (UJ) (188 non-detect results) or estimated results with potential low bias (J-) (58 results) because the canister arrived at the laboratory at ambient pressure. Four of these 246 results are associated with FD imprecision, one is associated with low continuing calibration verification (CCV) recovery and 25 were detected between the PQL and MDL. Sample SG-VW32A-02 is half of an FD pair, and although it was received at ambient pressure, there were no qualifications for FD imprecision.
- Two hundred forty-six results (all 82 results in 3 samples [SG-VW46B-01, SG-VW28B-01 and SG-VW56A-01]) are qualified as having estimated PQLs (UJ) (184 non-detect results) or estimated results with potential low bias (J-) (62 results) because isopropanol was detected at greater than 10 times the lowest PQL indicating a possible leak in the sampling system. One of the 184 non-detect results, is also qualified for low CCV recovery. Twenty-seven of the 62 detected results were reported between the PQL and MDL.

- Sixty-eight results are qualified as having estimated results (J) (64 results) or estimated PQLs (UJ) (4 non-detect results) due to FD imprecision. Fourteen of these detected results were also detected between the PQL and MDL.
- Thirteen additional non-detect results are qualified as having estimated PQLs (UJ) because of low CCV recoveries.
- Samples qualified as estimated (J) because they were detected between the PQL and MDL are not indicative of analytical quality control issues. These results are also flagged by the laboratory. The below table provides all qualified data results.

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³)							
SG-VW14-01	12/30/2020 09:00	Acrolein	ND	14	1.1	UJ	4A
		Acetone	23	7.0	0.60	J-	4A
		Acrylonitrile	ND	2.8	0.38	UJ	4A
		Allyl chloride	ND	2.8	0.39	UJ	4A
		t-Amyl Methyl ether	ND	7.0	0.43	UJ	4A
		Benzene	ND	2.8	0.29	UJ	4A
		Benzyl chloride	ND	14	0.36	UJ	4A
		Bromodichloromethane	ND	7.0	0.63	UJ	4A
		Bromoform	ND	14	1.2	UJ	4A
		Bromomethane	ND	2.8	0.66	UJ	4A
		1,3-Butadiene	ND	2.8	0.31	UJ	4A
		t-Butyl alcohol	ND	7.0	0.98	UJ	4A
		Carbon disulfide	3.4	2.8	0.27	J-	4A
		Carbon tetrachloride	ND	7.0	0.63	UJ	4A
		Chlorobenzene	ND	7.0	0.56	UJ	4A
		Chloroethane	ND	2.8	0.74	UJ	4A
		Chloroform	10	7.0	0.76	J-	4A
		Chloromethane	ND	2.8	0.29	UJ	4A
		Cyclohexane	ND	2.8	0.53	UJ	4A
		Dibromochloromethane	ND	7.0	0.60	UJ	4A
		1,2-Dibromo-3-chloropropane	ND	7.0	2.4	UJ	4A
		1,2-Dibromoethane	ND	7.0	0.81	UJ	4A
		Dibromomethane	ND	7.0	0.80	UJ	4A
		1,2-Dichlorobenzene	ND	7.0	0.70	UJ	4A
		1,3-Dichlorobenzene	ND	7.0	0.43	UJ	4A
		1,4-Dichlorobenzene	ND	7.0	0.70	UJ	4A
		Dichlorodifluoromethane	4.4	7.0	0.63	J-	4A,6G
		1,1-Dichloroethane	ND	7.0	0.32	UJ	4A
		1,2-Dichloroethane	4.6	7.0	0.36	J-	4A,6G
		1,1-Dichloroethene	ND	7.0	0.43	UJ	4A
		cis-1,2-Dichloroethene	4.3	2.8	0.45	J-	4A
		trans-1,2-Dichloroethene	ND	2.8	0.38	UJ	4A
		1,2-Dichloropropane	ND	7.0	0.45	UJ	4A
		cis-1,3-Dichloropropene	ND	7.0	0.42	UJ	4A
		trans-1,3-Dichloropropene	ND	7.0	0.56	UJ	4A
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.0	1.3	UJ	4A
		1,1-Difluoroethane	ND	7.0	2.8	UJ	4A
		Diisopropyl ether	ND	7.0	0.55	UJ	4A
		1,4-Dioxane	ND	2.8	0.46	UJ	4A
		Ethanol	13	2.8	0.59	J-	4A
		Ethyl acetate	ND	2.8	0.46	UJ	4A
		Ethylbenzene	2.7	7.0	0.45	J-	4A,6G
		1-Ethyl-4-methylbenzene	ND	7.0	0.42	UJ	4A
		Ethyl t-butyl ether	ND	7.0	0.46	UJ	4A
		n-Heptane	160	28	4.8	J-	4A

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW14-01	12/30/2020 09:00	Hexachlorobutadiene	ND	14	2.1	UJ	4A,5B
(continued)		Hexachloroethane	ND	2.8	1.0	UJ	4A
		Hexane	7.9	7.0	0.28	J-	4A
		2-Hexanone	ND	7.0	0.41	UJ	4A
		Isooctane	ND	7.0	0.49	UJ	4A
		Isopropyl alcohol	ND	2.8	0.45	UJ	4A
		Methylene chloride	ND	14	0.56	UJ	4A
		Methyl ethyl ketone	ND	2.8	0.27	UJ	4A
		Methyl iodide	ND	14	0.81	UJ	4A
		Methyl isobutyl ketone	ND	7.0	0.36	UJ	4A
		Methyl t-butyl ether	ND	2.8	0.39	UJ	4A
		Naphthalene	ND	28	2.0	UJ	4A
		Propylene	ND	2.8	0.35	UJ	4A
		Styrene	ND	7.0	0.34	UJ	4A
		1,1,1,2-Tetrachloroethane	ND	7.0	0.85	UJ	4A
		1,1,2,2-Tetrachloroethane	ND	7.0	0.66	UJ	4A
		Tetrachloroethene	880	70	7.0	J-	4A
		1,1,1,2-Tetrafluoroethane	ND	7.0	0.94	UJ	4A
		Tetrahydrofuran	7.1	2.8	0.38	J-	4A
		Toluene	210	28	3.8	J-	4A
		1,2,4-Trichlorobenzene	ND	14	1.1	UJ	4A
		1,1,1-Trichloroethane	1.6	7.0	0.55	J-	4A,6G
		1,1,2-Trichloroethane	ND	7.0	0.85	UJ	4A
		Trichloroethene	23	7.0	0.76	J-	4A
		Trichlorofluoromethane	1.9	7.0	0.66	J-	4A,6G
		1,2,3-Trichloropropane	ND	7.0	0.67	UJ	4A
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	7.0	0.77	UJ	4A
		1,2,4-Trimethylbenzene	ND	7.0	0.56	UJ	4A
		1,3,5-Trimethylbenzene	ND	7.0	0.56	UJ	4A
		Vinyl acetate	ND	2.8	0.46	UJ	4A
		Vinyl bromide	ND	7.0	0.45	UJ	4A
		Vinyl chloride	ND	2.8	0.55	UJ	4A
		p- & m-Xylenes	8.6	7.0	0.85	J-	4A
		o-Xylene	2.7	7.0	0.42	J-	4A,6G
		Total Xylenes	11	14	1.3	J-	4A,6G
		TPH - Gasoline	2,100	280	29	J-	4A,6G
		Total Petroleum Hydrocarbons	2,100	280	29	J-	4A,6G
SG-VW15-01	12/30/2020 10:20	Benzene	12	31	3.3	J	6G
		Hexachlorobutadiene	ND	160	23	UJ	5B
		Hexane	25	78	3.1	J	6G
		Isooctane	33	78	5.5	J	6G
		p- & m-Xylenes	27	78	9.5	J	6G
		Total Xylenes	27	160	14	J	6G
		TPH - Gasoline	1,600	3,100	330	J	6G
		Total Petroleum Hydrocarbons	1,600	3,100	330	J	6G
SG-VW16A-01	11/30/2020 11:07	Dichlorodifluoromethane	3.1	7.6	0.68	J	6G
		Methyl t-butyl ether	0.60	3.0	0.43	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW16A-01	11/30/2020 11:07	Styrene	2.6	7.6	0.36	J	6G
(continued)		Trichlorofluoromethane	1.7	7.6	0.71	J	6G
SG-VW16B-01	11/30/2020 09:46	Benzene	0.59	3.1	0.32	J	6G
		Carbon tetrachloride	2.7	7.6	0.69	J	6G
		Ethylbenzene	2.8	7.6	0.49	J	6G
		1-Ethyl-4-methylbenzene	3.7	7.6	0.46	J	6G
		Methyl isobutyl ketone	2.0	7.6	0.40	J	6G
		1,1,1-Trichloroethane	1.4	7.6	0.60	J	6G
		Trichlorofluoromethane	2.7	7.6	0.72	J	6G
		1,2,4-Trimethylbenzene	6.2	7.6	0.61	J	6G
		1,3,5-Trimethylbenzene	2.1	7.6	0.61	J	6G
		o-Xylene	4.3	7.6	0.46	J	6G
SG-VW17A-01	12/22/2020 09:07	Carbon tetrachloride	2.5	7.2	0.64	J	6G
		Isooctane	4.4	7.2	0.50	J	6G
		Methyl isobutyl ketone	6.6	7.2	0.37	J	6G
		Trichlorofluoromethane	2.6	7.2	0.67	J	6G
		1,3,5-Trimethylbenzene	7.0	7.2	0.57	J	6G
SG-VW17B-01	12/22/2020 08:56	Acetone	6.6	7.2	0.62	J	6G
		Bromodichloromethane	3.5	7.2	0.65	J	6G
		Carbon disulfide	1.5	2.9	0.27	J	6G
		1,2-Dibromoethane	2.4	7.2	0.84	J	6G
		Ethylbenzene	1.7	7.2	0.46	J	6G
		Isopropyl alcohol	2.0	2.9	0.46	J	6G
		Methyl ethyl ketone	1.8	2.9	0.27	J	6G
		Trichloroethene	2.9	7.2	0.78	J	6G
		Trichlorofluoromethane	3.4	7.2	0.68	J	6G
		p- & m-Xylenes	4.3	7.2	0.88	J	6G
		o-Xylene	2.1	7.2	0.43	J	6G
		Total Xylenes	6.5	14	1.3	J	6G
SG-VW17B-02	12/22/2020 08:56	Acetone	5.4	7.2	0.62	J	6G
		Bromodichloromethane	3.5	7.2	0.65	J	6G
		Carbon disulfide	1.5	2.9	0.27	J	6G
		Methyl ethyl ketone	1.5	2.9	0.27	J	6G
		Trichloroethene	2.9	7.2	0.78	J	6G
		Trichlorofluoromethane	3.3	7.2	0.68	J	6G
		1,2,3-Trichloropropane	5.3	7.2	0.69	J	6G
		p- & m-Xylenes	1.5	7.2	0.88	J	6G
		Total Xylenes	1.5	14	1.3	J	6G
SG-VW18A-01	12/22/2020 10:09	Chloroform	5.3	7.4	0.79	J	6G
		Ethanol	2.7	2.9	0.62	J	6G
		Hexane	6.9	7.4	0.29	J	6G
		Isooctane	5.9	7.4	0.51	J	6G
		Methyl isobutyl ketone	5.9	7.4	0.38	J	6G
		Styrene	1.3	7.4	0.35	J	6G
		Trichlorofluoromethane	2.9	7.4	0.69	J	6G
		1,1,2-Trichloro-1,2,2-trifluoroethane	2.6	7.4	0.81	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW18B-01	12/22/2020 09:58	Tetrahydrofuran	1.8	3.0	0.40	J	6G
		Trichlorofluoromethane	4.7	7.4	0.70	J	6G
SG-VW19A-01	12/02/2020 12:10	1,2-Dibromoethane	5.1	7.9	0.92	J	6G
		1,2-Dichloroethane	0.83	7.9	0.41	J	6G
		Isooctane	6.2	7.9	0.55	J	6G
		Naphthalene	11	32	2.2	J	6G
		Trichlorofluoromethane	7.5	7.9	0.74	J	6G
		1,3,5-Trimethylbenzene	7.6	7.9	0.63	J	6G
SG-VW19B-01	12/02/2020 11:55	Acetone	4.6	8.0	0.68	J	6G
		t-Butyl alcohol	5.0	8.0	1.1	J	6G
		Carbon disulfide	1.8	3.2	0.30	J	6G
		Methyl isobutyl ketone	0.72	8.0	0.41	J	6G
		Toluene	0.72	3.2	0.43	J	6G
		1,1,1-Trichloroethane	1.2	8.0	0.62	J	6G
SG-VW20A-01	11/30/2020 13:51	Chloroform	0.91	7.8	0.84	J	6G
		n-Heptane	0.77	3.1	0.53	J	6G
		Styrene	1.9	7.8	0.37	J	6G
		Trichloroethene	0.92	7.8	0.84	J	6G
SG-VW20B-01	11/30/2020 14:10	Ethylbenzene	14	80	5.1	J	6G
		Tetrachloroethene	39	80	8.0	J	6G
		Trichloroethene	70	80	8.6	J	6G
		p- & m-Xylenes	42	80	9.8	J	6G
		o-Xylene	20	80	4.8	J	6G
		Total Xylenes	62	160	15	J	6G
SG-VW21A-01	12/22/2020 14:17	t-Butyl alcohol	1.5	7.8	1.1	J	6G
		Chloroform	4.7	7.8	0.84	J	6G
		Dichlorodifluoromethane	3.9	7.8	0.70	J	6G
		n-Heptane	2.0	3.1	0.53	J	3D, 6G
		Isooctane	1.7	7.8	0.55	J	6G
		Methyl isobutyl ketone	4.8	7.8	0.41	J	6G
		1,1,1-Trichloroethane	7.1	7.8	0.61	J	6G
		Trichlorofluoromethane	1.8	7.8	0.73	J	6G
		1,3,5-Trimethylbenzene	5.3	7.8	0.62	J	6G
		Chloroform	6.3	7.6	0.83	J	6G
		Dichlorodifluoromethane	4.0	7.6	0.69	J	6G
		n-Heptane	4.1	3.1	0.52	J	3D
		Isooctane	1.4	7.6	0.54	J	6G
		Methyl isobutyl ketone	4.8	7.6	0.40	J	6G
		Trichlorofluoromethane	2.5	7.6	0.72	J	6G
		1,3,5-Trimethylbenzene	5.1	7.6	0.61	J	6G
SG-VW21B-01	12/22/2020 14:06	Carbon disulfide	2.6	3.1	0.30	J	6G
		Dichlorodifluoromethane	4.6	7.8	0.71	J	6G
		Trichlorofluoromethane	2.1	7.8	0.74	J	6G
		1,2,4-Trimethylbenzene	2.2	7.8	0.63	J	6G
		p- & m-Xylenes	3.5	7.8	0.96	J	6G
		o-Xylene	1.4	7.8	0.47	J	6G
		Total Xylenes	4.9	16	1.4	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW22A-01	12/22/2020 15:25	Benzene	7.5	16	1.6	J	6G
		Chloroform	10	39	4.2	J	6G
		Ethylbenzene	18	39	2.5	J	6G
		1-Ethyl-4-methylbenzene	16	39	2.3	J	6G
		Methyl isobutyl ketone	15	39	2.0	J	6G
		Tetrahydrofuran	13	16	2.1	J	6G
		1,2,4-Trimethylbenzene	23	39	3.1	J	6G
		o-Xylene	19	39	2.3	J	6G
		Total Xylenes	77	78	7.1	J	6G
SG-VW22B-01	12/22/2020 15:15	Ethylbenzene	2.5	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	2.7	7.8	0.46	J	6G
		Trichlorofluoromethane	2.5	7.8	0.73	J	6G
		1,2,4-Trimethylbenzene	3.8	7.8	0.62	J	6G
		o-Xylene	3.1	7.8	0.46	J	6G
		Total Xylenes	12	16	1.4	J	6G
SG-VW23A-01	12/29/2020 09:40	Chloroform	3.2	7.6	0.83	J	6G
		Dichlorodifluoromethane	3.6	7.6	0.69	J	6G
		Ethanol	2.6	3.1	0.64	J	6G
		n-Heptane	2.1	3.1	0.52	J	6G
		Hexane	3.0	7.6	0.31	J	6G
		Methyl isobutyl ketone	1.6	7.6	0.40	J	6G
		Naphthalene	4.3	31	2.1	J	6G
		Tetrahydrofuran	2.7	3.1	0.41	J	6G
		Trichloroethene	6.8	7.6	0.83	J	6G
		1,3,5-Trimethylbenzene	4.4	7.6	0.61	J	6G
SG-VW23B-01	12/29/2020 09:30	Chloroform	2.9	8.0	0.86	J	6G
		Dichlorodifluoromethane	6.0	8.0	0.72	J	6G
		Trichlorofluoromethane	2.2	8.0	0.75	J	6G
		1,2,3-Trichloropropane	3.0	8.0	0.76	J	6G
		p- & m-Xylenes	1.5	8.0	0.97	J	6G
		Total Xylenes	1.5	16	1.4	J	6G
		TPH - Gasoline	300	320	33	J	6G
		Total Petroleum Hydrocarbons	300	320	33	J	6G
SG-VW24A-01	12/03/2020 16:30	Carbon disulfide	2.5	3.1	0.29	J	6G
		Naphthalene	9.8	31	2.2	J	6G
		Toluene	1.2	3.1	0.42	J	6G
		1,1,1-Trichloroethane	0.93	7.8	0.60	J	6G
		Trichlorofluoromethane	3.4	7.8	0.73	J	6G
		1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	7.8	0.85	J	6G
		1,2,4-Trimethylbenzene	0.84	7.8	0.62	J	6G
SG-VW24A-02	03/03/2021 15:50	Acetone	6.0	7.8	0.68	J	6G
		Benzene	1.8	3.1	0.33	J	6G
		t-Butyl alcohol	3.3	7.8	1.1	J	6G
		Carbon disulfide	1.5	3.1	0.30	J	6G
		Dichlorodifluoromethane	7.5	7.8	0.71	J	6G
		Ethanol	49	3.1	0.66	J	3D
		Ethylbenzene	5.5	7.8	0.50	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW24A-02 (continued)	03/03/2021 15:50	1-Ethyl-4-methylbenzene	15	7.8	0.47	J	3D
		Isooctane	1.6	7.8	0.55	J	6G
		Methyl ethyl ketone	1.0	3.1	0.30	J	6G
		Naphthalene	17	31	2.2	J	6G
		Toluene	14	3.1	0.42	J	3D
		Trichlorofluoromethane	2.3	7.8	0.74	J	6G
		1,1,2-Trichloro-1,2,2-trifluoroethane	3.0	7.8	0.86	J	6G
		1,2,4-Trimethylbenzene	33	7.8	0.63	J	3D
		1,3,5-Trimethylbenzene	6.8	7.8	0.63	J	6G
		p- & m-Xylenes	29	7.8	0.96	J	3D
		o-Xylene	13	7.8	0.47	J	3D
		Total Xylenes	42	16	1.4	J	3D
		TPH - Gasoline	860	310	33	J	3D
		Total Petroleum Hydrocarbons	860	310	33	J	3D
SG-VW24A-03	03/03/2021 15:50	Acetone	6.7	8.0	0.68	J	6G
		Benzene	1.5	3.2	0.33	J	6G
		t-Butyl alcohol	2.7	8.0	1.1	J	6G
		Dichlorodifluoromethane	7.2	8.0	0.72	J	6G
		Ethanol	7.1	3.2	0.67	J	3D
		Ethylbenzene	1.9	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	4.1	8.0	0.48	J	3D, 6G
		Naphthalene	6.9	32	2.2	J	6G
		Toluene	6.0	3.2	0.43	J	3D
		Trichlorofluoromethane	2.1	8.0	0.75	J	6G
		1,2,4-Trimethylbenzene	8.2	8.0	0.64	J	3D
		1,3,5-Trimethylbenzene	1.9	8.0	0.64	J	6G
		p- & m-Xylenes	8.4	8.0	0.97	J	3D
		o-Xylene	3.7	8.0	0.48	J	3D, 6G
		Total Xylenes	12	16	1.4	J	3D, 6G
		TPH - Gasoline	580	320	33	J	3D
		Total Petroleum Hydrocarbons	580	320	33	J	3D
SG-VW24B-01	12/03/2020 16:20	Dichlorodifluoromethane	3.7	7.6	0.68	J	6G
		1,2-Dichloroethane	5.0	7.6	0.39	J	6G
		Isooctane	7.4	7.6	0.53	J	6G
		Methyl t-butyl ether	1.1	3.0	0.42	J	6G
		Naphthalene	14	30	2.1	J	6G
		1,1,1-Trichloroethane	1.6	7.6	0.59	J	6G
		Trichlorofluoromethane	1.6	7.6	0.71	J	6G
		1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	7.6	0.83	J	6G
SG-VW-25A-01	12/03/2020 10:35	Acetone	3.6	8.0	0.69	J	6G
		t-Butyl alcohol	2.3	8.0	1.1	J	6G
		Chloroform	5.7	8.0	0.86	J	6G
		Ethylbenzene	3.0	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	3.6	8.0	0.48	J	6G
		Tetrahydrofuran	2.5	3.2	0.43	J	6G
		Trichlorofluoromethane	1.9	8.0	0.75	J	6G
		1,2,4-Trimethylbenzene	7.7	8.0	0.64	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW-25A-01	12/03/2020 10:35	1,3,5-Trimethylbenzene	2.5	8.0	0.64	J	6G
		o-Xylene	5.2	8.0	0.48	J	6G
SG-VW25B-01	12/03/2020 10:21	Acetone	2.3	8.0	0.69	J	6G
		t-Butyl alcohol	1.4	8.0	1.1	J	6G
		Carbon disulfide	1.7	3.2	0.30	J	6G
		Chloroform	6.8	8.0	0.86	J	6G
		Isopropyl alcohol	1.9	3.2	0.51	J	6G
		Toluene	1.2	3.2	0.43	J	6G
		Trichlorofluoromethane	3.1	8.0	0.75	J	6G
		p- & m-Xylenes	4.3	8.0	0.98	J	6G
		Total Xylenes	4.3	16	1.5	J	6G
SG-VW26A-01	11/30/2020 12:28	Chloroform	0.95	7.5	0.81	J	6G
		Isooctane	3.6	7.5	0.52	J	6G
		Styrene	2.5	7.5	0.36	J	6G
		Trichlorofluoromethane	1.5	7.5	0.70	J	6G
SG-VW26B-01	11/30/2020 12:51	Acetone	19	78	6.8	J	6G
		Tetrachloroethene	53	78	7.8	J	6G
SG-VW27A-01	12/23/2020 15:57	Carbon disulfide	28	30	2.9	J	6G
		Ethylbenzene	19	76	4.9	J	6G
		n-Heptane	29	30	5.2	J	6G
		Isooctane	17	76	5.3	J	6G
		Methyl ethyl ketone	24	30	2.9	J	6G
		1,2,4-Trimethylbenzene	20	76	6.1	J	6G
		p- & m-Xylenes	64	76	9.3	J	6G
		o-Xylene	21	76	4.6	J	6G
		Total Xylenes	85	150	14	J	6G
SG-VW27B-01	12/23/2020 15:47	Chloroform	2.3	7.6	0.82	J	6G
		1,2-Dibromoethane	3.2	7.6	0.88	J	6G
		Dichlorodifluoromethane	2.4	7.6	0.68	J	6G
		1,2-Dichloroethane	4.4	7.6	0.40	J	6G
		Ethanol	1.8	3.0	0.64	J	6G
		Ethylbenzene	3.3	7.6	0.49	J	6G
		1-Ethyl-4-methylbenzene	1.7	7.6	0.46	J	6G
		Isooctane	3.8	7.6	0.53	J	6G
		1,2,4-Trimethylbenzene	2.6	7.6	0.61	J	6G
		o-Xylene	3.3	7.6	0.46	J	6G
		Total Xylenes	12	15	1.4	J	6G
SG-VW28A-01	12/29/2020 08:40	Carbon disulfide	26	31	2.9	J	6G
		Ethylbenzene	17	77	4.9	J	6G
		Propylene	8.5	31	3.8	J	6G
		1,2,4-Trimethylbenzene	16	77	6.2	J	6G
		p- & m-Xylenes	56	77	9.4	J	6G
		o-Xylene	18	77	4.6	J	6G
		Total Xylenes	74	150	14	J	6G
SG-VW28B-01	12/29/2020 08:30	Acrolein	ND	16	1.3	UJ	4D
		Acetone	27	8.0	0.68	J-	4D
		Acrylonitrile	ND	3.2	0.43	UJ	4D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW28B-01 (continued)	12/29/2020 08:30	Allyl chloride	ND	3.2	0.45	UJ	4D
		t-Amyl Methyl ether	ND	8.0	0.49	UJ	4D
		Benzene	ND	3.2	0.33	UJ	4D
		Benzyl chloride	ND	16	0.41	UJ	4D
		Bromodichloromethane	ND	8.0	0.72	UJ	4D
		Bromoform	ND	16	1.4	UJ	4D
		Bromomethane	ND	3.2	0.75	UJ	4D
		1,3-Butadiene	ND	3.2	0.35	UJ	4D
		t-Butyl alcohol	ND	8.0	1.1	UJ	4D
		Carbon disulfide	1.1	3.2	0.30	J-	4D,6G
		Carbon tetrachloride	ND	8.0	0.72	UJ	4D
		Chlorobenzene	ND	8.0	0.64	UJ	4D
		Chloroethane	ND	3.2	0.84	UJ	4D
		Chloroform	12	8.0	0.86	J-	4D
		Chloromethane	ND	3.2	0.33	UJ	4D
		Cyclohexane	ND	3.2	0.60	UJ	4D
		Dibromochloromethane	ND	8.0	0.68	UJ	4D
		1,2-Dibromo-3-chloropropane	ND	8.0	2.7	UJ	4D
		1,2-Dibromoethane	ND	8.0	0.92	UJ	4D
		Dibromomethane	ND	8.0	0.91	UJ	4D
		1,2-Dichlorobenzene	ND	8.0	0.80	UJ	4D
		1,3-Dichlorobenzene	ND	8.0	0.49	UJ	4D
		1,4-Dichlorobenzene	ND	8.0	0.80	UJ	4D
		Dichlorodifluoromethane	4.4	8.0	0.72	J-	4D,6G
		1,1-Dichloroethane	ND	8.0	0.37	UJ	4D
		1,2-Dichloroethane	ND	8.0	0.41	UJ	4D
		1,1-Dichloroethene	ND	8.0	0.49	UJ	4D
		cis-1,2-Dichloroethene	ND	3.2	0.51	UJ	4D
		trans-1,2-Dichloroethene	ND	3.2	0.43	UJ	4D
		1,2-Dichloropropane	ND	8.0	0.51	UJ	4D
		cis-1,3-Dichloropropene	ND	8.0	0.48	UJ	4D
		trans-1,3-Dichloropropene	ND	8.0	0.64	UJ	4D
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	8.0	1.4	UJ	4D
		1,1-Difluoroethane	ND	8.0	3.2	UJ	4D
		Diisopropyl ether	ND	8.0	0.62	UJ	4D
		1,4-Dioxane	ND	3.2	0.52	UJ	4D
		Ethanol	100	3.2	0.67	J-	4D
		Ethyl acetate	ND	3.2	0.52	UJ	4D
		Ethylbenzene	1.4	8.0	0.51	J-	4D,6G
		1-Ethyl-4-methylbenzene	ND	8.0	0.48	UJ	4D
		Ethyl t-butyl ether	ND	8.0	0.52	UJ	4D
		n-Heptane	ND	3.2	0.54	UJ	4D
		Hexachlorobutadiene	ND	16	2.4	UJ	4D
		Hexachloroethane	ND	3.2	1.2	UJ	4D
		Hexane	ND	8.0	0.32	UJ	4D
		2-Hexanone	ND	8.0	0.46	UJ	4D
		Isooctane	ND	8.0	0.56	UJ	4D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW28B-01 (continued)	12/29/2020 08:30	Isopropyl alcohol	42	3.2	0.51	J-	4D
		Methylene chloride	ND	16	0.64	UJ	4D
		Methyl ethyl ketone	69	3.2	0.30	J-	4D
		Methyl iodide	ND	16	0.92	UJ	4D
		Methyl isobutyl ketone	4.8	8.0	0.41	J-	4D,6G
		Methyl t-butyl ether	ND	3.2	0.45	UJ	4D
		Naphthalene	4.4	32	2.2	J-	4D,6G
		Propylene	ND	3.2	0.40	UJ	4D
		Styrene	ND	8.0	0.38	UJ	4D
		1,1,1,2-Tetrachloroethane	ND	8.0	0.97	UJ	4D
		1,1,2,2-Tetrachloroethane	ND	8.0	0.75	UJ	4D
		Tetrachloroethene	180	8.0	0.80	J-	4D
		1,1,1,2-Tetrafluoroethane	ND	8.0	1.1	UJ	4D
		Tetrahydrofuran	4.7	3.2	0.43	J-	4D
		Toluene	8.5	3.2	0.43	J-	4D
		1,2,4-Trichlorobenzene	ND	16	1.3	UJ	4D
		1,1,1-Trichloroethane	ND	8.0	0.62	UJ	4D
		1,1,2-Trichloroethane	ND	8.0	0.97	UJ	4D
		Trichloroethene	11	8.0	0.86	J-	4D
		Trichlorofluoromethane	ND	8.0	0.75	UJ	4D
		1,2,3-Trichloropropane	ND	8.0	0.76	UJ	4D
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	0.87	UJ	4D
		1,2,4-Trimethylbenzene	1.8	8.0	0.64	J-	4D,6G
		1,3,5-Trimethylbenzene	ND	8.0	0.64	UJ	4D
		Vinyl acetate	ND	3.2	0.52	UJ	4D
		Vinyl bromide	ND	8.0	0.51	UJ	4D
		Vinyl chloride	ND	3.2	0.62	UJ	4D
		p- & m-Xylenes	3.7	8.0	0.97	J-	4D,6G
		o-Xylene	ND	8.0	0.48	UJ	4D
		Total Xylenes	3.7	16	1.4	J-	4D,6G
		TPH - Gasoline	870	320	33	J-	4D
		Total Petroleum Hydrocarbons	870	320	33	J-	4D
SG-VW29A-01	12/29/2020 10:55	Acetone	5.5	8.0	0.69	J	6G
		Chloroform	4.1	8.0	0.87	J	6G
		Dichlorodifluoromethane	4.0	8.0	0.72	J	6G
		Methyl ethyl ketone	2.5	3.2	0.31	J	6G
		Tetrahydrofuran	3.0	3.2	0.43	J	6G
		1,3,5-Trimethylbenzene	7.0	8.0	0.64	J	6G
SG-VW29B-01	12/29/2020 10:45	Acetone	4.1	7.8	0.67	J	6G
		Trichlorofluoromethane	2.6	7.8	0.73	J	6G
		p- & m-Xylenes	1.9	7.8	0.95	J	6G
		Total Xylenes	1.9	16	1.4	J	6G
SG-VW30A-01	12/03/2020 15:03	t-Butyl alcohol	1.2	7.7	1.1	J	6G
		Dichlorodifluoromethane	6.5	7.7	0.69	J	6G
		n-Heptane	2.1	3.1	0.52	J	6G
		Isooctane	3.8	7.7	0.54	J	6G
		Methyl isobutyl ketone	6.0	7.7	0.40	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW30A-01	12/03/2020 15:03	Naphthalene	7.5	31	2.2	J	6G
(continued)		Trichloroethene	2.7	7.7	0.83	J	6G
		Trichlorofluoromethane	1.8	7.7	0.72	J	6G
SG-VW30A-02	03/04/2021 12:40	Acetone	5.0	8.0	0.69	J	6G
		t-Butyl alcohol	1.3	8.0	1.1	J	6G
		Ethylbenzene	1.8	8.0	0.51	J	6G
		Isopropyl alcohol	1.2	3.2	0.51	J	6G
		Methyl ethyl ketone	1.0	3.2	0.30	J	6G
		Tetrahydrofuran	1.2	3.2	0.43	J	6G
		Trichloroethene	2.5	8.0	0.86	J	6G
		1,2,4-Trimethylbenzene	1.8	8.0	0.64	J	6G
		p- & m-Xylenes	4.7	8.0	0.98	J	6G
		o-Xylene	1.9	8.0	0.48	J	6G
		Total Xylenes	6.6	16	1.5	J	6G
SG-VW30B-01	12/03/2020 15:04	Carbon disulfide	1.9	3.1	0.29	J	6G
		Isopropyl alcohol	1.2	3.1	0.50	J	6G
		Trichloroethene	3.6	7.8	0.84	J	6G
		Trichlorofluoromethane	2.1	7.8	0.73	J	6G
		p- & m-Xylenes	4.2	7.8	0.95	J	6G
		o-Xylene	1.4	7.8	0.46	J	6G
		Total Xylenes	5.6	16	1.4	J	6G
SG-VW30B-02	03/04/2021 12:55	Methyl ethyl ketone	1.7	3.2	0.30	J	6G
		Trichloroethene	2.9	7.9	0.85	J	6G
		Trichlorofluoromethane	2.4	7.9	0.74	J	6G
		1,2,4-Trimethylbenzene	1.6	7.9	0.63	J	6G
SG-VW31A-01	12/01/2020 14:32	Benzene	1.5	3.2	0.33	J	6G
		Ethylbenzene	7.0	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	4.9	8.0	0.48	J	6G
		n-Heptane	0.85	3.2	0.54	J	6G
		Isooctane	0.97	8.0	0.56	J	6G
		Methyl isobutyl ketone	2.3	8.0	0.41	J	6G
		Trichlorofluoromethane	2.6	8.0	0.75	J	6G
		1,3,5-Trimethylbenzene	2.4	8.0	0.64	J	6G
SG-VW31B-01	12/01/2020 14:22	Carbon disulfide	2.7	3.1	0.30	J	6G
		Carbon tetrachloride	1.4	7.8	0.71	J	6G
		Chloroform	0.92	7.8	0.85	J	6G
		Ethylbenzene	2.8	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	5.9	7.8	0.47	J	6G
		1,1,1-Trichloroethane	1.2	7.8	0.61	J	6G
		1,3,5-Trimethylbenzene	2.2	7.8	0.63	J	6G
		o-Xylene	2.5	7.8	0.47	J	6G
		Total Xylenes	15	16	1.4	J	6G
SG-VW32A-01	12/04/2020 09:42	Acetone	110	150	13	J	6G
		Ethylbenzene	23	150	9.6	J	6G
		Methyl ethyl ketone	26	60	5.7	J	6G
		Tetrachloroethene	83	150	15	J	6G
		Tetrahydrofuran	17	60	8.1	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW32A-01	12/04/2020 09:42	1,2,4-Trimethylbenzene	32	150	12	J	6G
		p- & m-Xylenes	110	150	18	J	6G
		o-Xylene	31	150	9.0	J	6G
		Total Xylenes	140	300	27	J	6G
SG-VW32A-02	12/04/2020 09:42	Acrolein	ND	270	22	UJ	4A
		Acetone	120	140	12	J-	4A,6G
		Acrylonitrile	ND	54	7.3	UJ	4A
		Allyl chloride	ND	54	7.6	UJ	4A
		t-Amyl Methyl ether	ND	140	8.4	UJ	4A
		Benzene	ND	54	5.7	UJ	4A
		Benzyl chloride	ND	270	7.1	UJ	4A
		Bromodichloromethane	ND	140	12	UJ	4A
		Bromoform	ND	270	23	UJ	4A
		Bromomethane	ND	54	13	UJ	4A
		1,3-Butadiene	ND	54	6.0	UJ	4A
		t-Butyl alcohol	ND	140	19	UJ	4A
		Carbon disulfide	ND	54	5.2	UJ	4A
		Carbon tetrachloride	ND	140	12	UJ	4A
		Chlorobenzene	ND	140	11	UJ	4A
		Chloroethane	ND	54	14	UJ	4A
		Chloroform	ND	140	15	UJ	4A
		Chloromethane	ND	54	5.7	UJ	4A
		Cyclohexane	ND	54	10	UJ	4A
		Dibromochloromethane	ND	140	12	UJ	4A
		1,2-Dibromo-3-chloropropane	ND	140	46	UJ	4A
		1,2-Dibromoethane	ND	140	16	UJ	4A
		Dibromomethane	ND	140	16	UJ	4A
		1,2-Dichlorobenzene	ND	140	14	UJ	4A
		1,3-Dichlorobenzene	ND	140	8.4	UJ	4A
		1,4-Dichlorobenzene	ND	140	14	UJ	4A
		Dichlorodifluoromethane	ND	140	12	UJ	4A
		1,1-Dichloroethane	ND	140	6.3	UJ	4A
		1,2-Dichloroethane	ND	140	7.1	UJ	4A
		1,1-Dichloroethene	ND	140	8.4	UJ	4A
		cis-1,2-Dichloroethene	ND	54	8.7	UJ	4A
		trans-1,2-Dichloroethene	ND	54	7.3	UJ	4A
		1,2-Dichloropropane	ND	140	8.7	UJ	4A
		cis-1,3-Dichloropropene	ND	140	8.2	UJ	4A
		trans-1,3-Dichloropropene	ND	140	11	UJ	4A
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	140	25	UJ	4A
		1,1-Difluoroethane	ND	140	54	UJ	4A
		Diisopropyl ether	ND	140	11	UJ	4A
		1,4-Dioxane	ND	54	9.0	UJ	4A
		Ethanol	ND	54	11	UJ	4A
		Ethyl acetate	ND	54	9.0	UJ	4A
		Ethylbenzene	26	140	8.7	J-	4A,6G
		1-Ethyl-4-methylbenzene	17	140	8.2	J-	4A,6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW32A-02 (continued)	12/04/2020 09:42	Ethyl t-butyl ether	ND	140	9.0	UJ	4A
		n-Heptane	ND	54	9.2	UJ	4A
		Hexachlorobutadiene	ND	270	41	UJ	4A
		Hexachloroethane	ND	54	20	UJ	4A
		Hexane	ND	140	5.4	UJ	4A
		2-Hexanone	ND	140	7.9	UJ	4A
		Isooctane	ND	140	9.5	UJ	4A
		Isopropyl alcohol	ND	54	8.7	UJ	4A
		Methylene chloride	ND	270	11	UJ	4A
		Methyl ethyl ketone	28	54	5.2	J-	4A,6G
		Methyl iodide	ND	270	16	UJ	4A
		Methyl isobutyl ketone	14	140	7.1	J-	4A,6G
		Methyl t-butyl ether	ND	54	7.6	UJ	4A
		Naphthalene	ND	540	38	UJ	4A
		Propylene	ND	54	6.8	UJ	4A
		Styrene	ND	140	6.5	UJ	4A
		1,1,1,2-Tetrachloroethane	ND	140	17	UJ	4A
		1,1,2,2-Tetrachloroethane	ND	140	13	UJ	4A
		Tetrachloroethene	57	140	14	J-	4A,6G
		1,1,1,2-Tetrafluoroethane	ND	140	18	UJ	4A
		Tetrahydrofuran	21	54	7.3	J-	4A,6G
		Toluene	9,700	270	37	J-	4A
		1,2,4-Trichlorobenzene	ND	270	22	UJ	4A
		1,1,1-Trichloroethane	ND	140	11	UJ	4A
		1,1,2-Trichloroethane	ND	140	17	UJ	4A
		Trichloroethene	ND	140	15	UJ	4A
		Trichlorofluoromethane	ND	140	13	UJ	4A
		1,2,3-Trichloropropane	ND	140	13	UJ	4A
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	140	15	UJ	4A
		1,2,4-Trimethylbenzene	32	140	11	J-	4A,6G
		1,3,5-Trimethylbenzene	ND	140	11	UJ	4A
		Vinyl acetate	ND	54	9.0	UJ	4A
		Vinyl bromide	ND	140	8.7	UJ	4A
		Vinyl chloride	ND	54	11	UJ	4A
		p- & m-Xylenes	120	140	17	J-	4A,6G
		o-Xylene	34	140	8.2	J-	4A,6G
		Total Xylenes	160	270	25	J-	4A,6G
		TPH - Gasoline	10,000	5,400	570	J-	4A
		Total Petroleum Hydrocarbons	10,000	5,400	570	J-	4A
SG-VW32B-01	12/04/2020 09:30	Acetone	5.2	7.7	0.66	J	6G
		Benzene	0.64	3.1	0.32	J	6G
		Benzyl chloride	6.1	15	0.40	J	6G
		Carbon disulfide	1.9	3.1	0.29	J	6G
		Chloroform	6.2	7.7	0.83	J	6G
		Dichlorodifluoromethane	2.5	7.7	0.69	J	6G
		Ethylbenzene	2.9	7.7	0.49	J	6G
		1-Ethyl-4-methylbenzene	2.4	7.7	0.46	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW32B-01	12/04/2020 09:30	Trichlorofluoromethane	1.5	7.7	0.72	J	6G
(continued)		1,2,4-Trimethylbenzene	4.0	7.7	0.62	J	6G
		1,3,5-Trimethylbenzene	1.2	7.7	0.62	J	6G
		o-Xylene	3.5	7.7	0.46	J	6G
SG-VW33A-01	12/29/2020 16:00	Dichlorodifluoromethane	2.8	7.8	0.70	J	6G
		Ethylbenzene	6.7	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	5.2	7.8	0.46	J	6G
		Hexachlorobutadiene	ND	16	2.3	UJ	5B
		Methyl isobutyl ketone	3.3	7.8	0.40	J	6G
		Tetrachloroethene	2.9	7.8	0.78	J	6G
		1,2,4-Trimethylbenzene	7.0	7.8	0.62	J	6G
		1,3,5-Trimethylbenzene	2.2	7.8	0.62	J	6G
		o-Xylene	7.3	7.8	0.46	J	6G
SG-VW33B-01	12/29/2020 15:55	Acetone	2.8	7.6	0.65	J	6G
		Ethanol	2.6	3.0	0.64	J	6G
		Hexachlorobutadiene	ND	15	2.3	UJ	5B
		Toluene	2.5	3.0	0.41	J	6G
		Trichlorofluoromethane	1.7	7.6	0.71	J	6G
		TPH - Gasoline	190	300	32	J	6G
		Total Petroleum Hydrocarbons	190	300	32	J	6G
SG-VW34A-01	12/02/2020 15:30	Chloroform	2.8	7.3	0.79	J	6G
		Chloromethane	0.71	2.9	0.31	J	6G
		Dichlorodifluoromethane	2.8	7.3	0.66	J	6G
		Trichlorofluoromethane	2.8	7.3	0.69	J	6G
		1,1,2-Trichloro-1,2,2-trifluoroethane	3.1	7.3	0.80	J	6G
SG-VW34B-01	12/02/2020 15:20	Acetone	4.7	7.6	0.65	J	6G
		Chloroform	5.6	7.6	0.82	J	6G
		Ethyl t-butyl ether	7.3	7.6	0.50	J	6G
		Isopropyl alcohol	1.5	3.0	0.48	J	6G
		Trichlorofluoromethane	1.7	7.6	0.71	J	6G
SG-VW35A-01	12/01/2020 16:09	Benzene	1.4	3.0	0.32	J	6G
		Ethylbenzene	7.4	7.6	0.49	J	6G
		Isooctane	1.9	7.6	0.53	J	6G
		Methyl isobutyl ketone	1.9	7.6	0.40	J	6G
		Tetrahydrofuran	1.2	3.0	0.41	J	6G
		1,1,1-Trichloroethane	1.1	7.6	0.59	J	6G
		Trichlorofluoromethane	1.2	7.6	0.71	J	6G
		1,3,5-Trimethylbenzene	4.3	7.6	0.61	J	6G
SG-VW35B-01	12/01/2020 15:59	1,2-Dibromoethane	1.8	7.8	0.90	J	6G
		Toluene	1.1	3.1	0.42	J	6G
		1,1,1-Trichloroethane	1.4	7.8	0.61	J	6G
		Trichloroethene	1.7	7.8	0.84	J	6G
		Trichlorofluoromethane	1.6	7.8	0.73	J	6G
		1,2,4-Trimethylbenzene	0.77	7.8	0.62	J	6G
		p- & m-Xylenes	1.5	7.8	0.95	J	6G
		o-Xylene	0.75	7.8	0.47	J	6G
		Total Xylenes	2.2	16	1.4	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW36A-01	12/02/2020 07:50	Dibromomethane	2.7	7.5	0.86	J	6G
		Styrene	1.7	7.5	0.36	J	6G
		Trichlorofluoromethane	1.3	7.5	0.70	J	6G
SG-VW36B-01	12/02/2020 07:52	Acetone	4.7	9.8	0.85	J	6G
		Carbon disulfide	1.7	3.9	0.37	J	6G
		Chloroform	4.7	9.8	1.1	J	6G
		Ethylbenzene	1.0	9.8	0.63	J	6G
		Tetrahydrofuran	1.2	3.9	0.53	J	6G
		1,1,1-Trichloroethane	2.0	9.8	0.77	J	6G
		Trichloroethene	1.7	9.8	1.1	J	6G
		Trichlorofluoromethane	1.3	9.8	0.93	J	6G
		1,2,4-Trimethylbenzene	1.6	9.8	0.79	J	6G
		p- & m-Xylenes	3.4	9.8	1.2	J	6G
		o-Xylene	1.7	9.8	0.59	J	6G
		Total Xylenes	5.1	20	1.8	J	6G
SG-VW37A-01	12/02/2020 09:44	Dichlorodifluoromethane	2.6	8.0	0.72	J	6G
		Ethylbenzene	2.3	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	2.7	8.0	0.48	J	6G
		Tetrahydrofuran	0.75	3.2	0.43	J	6G
		Trichlorofluoromethane	1.4	8.0	0.75	J	6G
		1,2,4-Trimethylbenzene	5.2	8.0	0.64	J	6G
		1,3,5-Trimethylbenzene	1.4	8.0	0.64	J	6G
		o-Xylene	3.9	8.0	0.48	J	6G
		Total Xylenes	13	16	1.4	J	6G
SG-VW37B-01	12/02/2020 09:47	Acrolein	ND	14	1.1	UJ	4A
		Acetone	21	6.8	0.58	J-	4A
		Acrylonitrile	ND	2.7	0.36	UJ	4A
		Allyl chloride	ND	2.7	0.38	UJ	4A
		t-Amyl Methyl ether	ND	6.8	0.42	UJ	4A
		Benzene	6.3	2.7	0.28	J-	4A
		Benzyl chloride	ND	14	0.35	UJ	4A
		Bromodichloromethane	ND	6.8	0.61	UJ	4A
		Bromoform	ND	14	1.2	UJ	4A
		Bromomethane	ND	2.7	0.63	UJ	4A
		1,3-Butadiene	ND	2.7	0.30	UJ	4A
		t-Butyl alcohol	ND	6.8	0.94	UJ	4A
		Carbon disulfide	4.9	2.7	0.26	J-	3D, 4A
		Carbon tetrachloride	ND	6.8	0.61	UJ	4A
		Chlorobenzene	ND	6.8	0.54	UJ	4A
		Chloroethane	ND	2.7	0.72	UJ	4A
		Chloroform	ND	6.8	0.73	UJ	4A
		Chloromethane	ND	2.7	0.28	UJ	4A
		Cyclohexane	ND	2.7	0.51	UJ	4A
		Dibromochloromethane	ND	6.8	0.58	UJ	4A
		1,2-Dibromo-3-chloropropane	ND	6.8	2.3	UJ	4A
		1,2-Dibromoethane	ND	6.8	0.78	UJ	4A
		Dibromomethane	ND	6.8	0.77	UJ	4A

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW37B-01 (continued)	12/02/2020 09:47	1,2-Dichlorobenzene	ND	6.8	0.68	UJ	4A
		1,3-Dichlorobenzene	ND	6.8	0.42	UJ	4A
		1,4-Dichlorobenzene	ND	6.8	0.68	UJ	4A
		Dichlorodifluoromethane	2.7	6.8	0.61	J-	4A,6G
		1,1-Dichloroethane	ND	6.8	0.31	UJ	4A
		1,2-Dichloroethane	ND	6.8	0.35	UJ	4A
		1,1-Dichloroethene	ND	6.8	0.42	UJ	4A
		cis-1,2-Dichloroethene	ND	2.7	0.43	UJ	4A
		trans-1,2-Dichloroethene	ND	2.7	0.36	UJ	4A
		1,2-Dichloropropane	ND	6.8	0.43	UJ	4A
		cis-1,3-Dichloropropene	ND	6.8	0.40	UJ	4A
		trans-1,3-Dichloropropene	ND	6.8	0.54	UJ	4A
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6.8	1.2	UJ	4A
		1,1-Difluoroethane	ND	6.8	2.7	UJ	4A
		Diisopropyl ether	ND	6.8	0.53	UJ	4A
		1,4-Dioxane	ND	2.7	0.45	UJ	4A
		Ethanol	22	2.7	0.57	J-	3D, 4A
		Ethyl acetate	ND	2.7	0.45	UJ	4A
		Ethylbenzene	36	6.8	0.43	J-	4A
		1-Ethyl-4-methylbenzene	39	6.8	0.40	J-	4A
		Ethyl t-butyl ether	ND	6.8	0.45	UJ	4A
		n-Heptane	ND	2.7	0.46	UJ	4A
		Hexachlorobutadiene	ND	14	2.0	UJ	4A
		Hexachloroethane	ND	2.7	0.99	UJ	4A
		Hexane	ND	6.8	0.27	UJ	4A
		2-Hexanone	ND	6.8	0.39	UJ	4A
		Isooctane	1.4	6.8	0.47	J-	4A,6G
		Isopropyl alcohol	ND	2.7	0.43	UJ	4A
		Methylene chloride	ND	14	0.54	UJ	4A
		Methyl ethyl ketone	10	2.7	0.26	J-	3D, 4A
		Methyl iodide	ND	14	0.78	UJ	4A
		Methyl isobutyl ketone	16	6.8	0.35	J-	4A
		Methyl t-butyl ether	ND	2.7	0.38	UJ	4A
		Naphthalene	ND	27	1.9	UJ	4A
		Propylene	ND	2.7	0.34	UJ	4A
		Styrene	2.6	6.8	0.32	J-	4A,6G
		1,1,1,2-Tetrachloroethane	ND	6.8	0.82	UJ	4A
		1,1,2,2-Tetrachloroethane	ND	6.8	0.63	UJ	4A
		Tetrachloroethene	2.9	6.8	0.68	J-	4A,6G
		1,1,1,2-Tetrafluoroethane	ND	6.8	0.90	UJ	4A
		Tetrahydrofuran	22	2.7	0.36	J-	4A
		Toluene	140	27	3.6	J-	4A
		1,2,4-Trichlorobenzene	ND	14	1.1	UJ	4A
		1,1,1-Trichloroethane	ND	6.8	0.53	UJ	4A
		1,1,2-Trichloroethane	ND	6.8	0.82	UJ	4A
		Trichloroethene	16	6.8	0.73	J-	3D, 4A
		Trichlorofluoromethane	1.6	6.8	0.63	J-	4A,6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW37B-01 (continued)	12/02/2020 09:47	1,2,3-Trichloropropane	ND	6.8	0.65	UJ	4A
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.8	0.74	UJ	4A
		1,2,4-Trimethylbenzene	67	6.8	0.54	J-	4A
		1,3,5-Trimethylbenzene	19	6.8	0.54	J-	4A
		Vinyl acetate	ND	2.7	0.45	UJ	4A
		Vinyl bromide	ND	6.8	0.43	UJ	4A
		Vinyl chloride	ND	2.7	0.53	UJ	4A
		p- & m-Xylenes	120	6.8	0.82	J-	4A
		o-Xylene	55	6.8	0.40	J-	4A
		Total Xylenes	180	14	1.2	J-	4A
		TPH - Gasoline	1,800	270	28	J-	4A
		Total Petroleum Hydrocarbons	1,800	270	28	J-	4A
SG-VW37B-02	12/02/2020 09:47	Carbon disulfide	7.6	3.1	0.29	J	3D
		Dichlorodifluoromethane	2.7	7.6	0.69	J	6G
		Ethanol	ND	3.1	0.64	UJ	3D
		Isooctane	1.4	7.6	0.54	J	6G
		Methyl ethyl ketone	5.4	3.1	0.29	J	3D
		Styrene	1.8	7.6	0.37	J	6G
		Tetrachloroethene	4.7	7.6	0.76	J	6G
		Trichloroethene	22	7.6	0.83	J	3D
		Trichlorofluoromethane	1.5	7.6	0.72	J	6G
SG-VW38A-01	12/04/2020 13:45	Acetone	6.2	8.2	0.71	J	6G
		Carbon disulfide	1.6	3.3	0.31	J	6G
		Dichlorodifluoromethane	2.7	8.2	0.74	J	6G
		Ethylbenzene	3.8	8.2	0.52	J	6G
		1-Ethyl-4-methylbenzene	3.0	8.2	0.49	J	6G
		Methyl ethyl ketone	2.1	3.3	0.31	J	6G
		Naphthalene	9.7	33	2.3	J	6G
		Tetrahydrofuran	0.77	3.3	0.44	J	6G
		Trichlorofluoromethane	1.4	8.2	0.77	J	6G
		1,2,4-Trimethylbenzene	5.6	8.2	0.66	J	6G
		1,3,5-Trimethylbenzene	1.6	8.2	0.66	J	6G
		o-Xylene	7.0	8.2	0.49	J	6G
		TPH - Gasoline	280	330	34	J	6G
		Total Petroleum Hydrocarbons	280	330	34	J	6G
		Acetone	6.0	8.0	0.69	J	6G
		Carbon disulfide	1.4	3.2	0.31	J	6G
		Chloroform	6.3	8.0	0.87	J	6G
		Dichlorodifluoromethane	2.7	8.0	0.72	J	6G
		Ethanol	ND	3.2	0.68	UJ	3D
		Ethylbenzene	6.7	8.0	0.52	J	6G
		1-Ethyl-4-methylbenzene	16	8.0	0.48	J	3D
		Naphthalene	12	32	2.3	J	6G
		Toluene	5.9	3.2	0.43	J	3D
		Trichloroethene	0.95	8.0	0.87	J	6G
		Trichlorofluoromethane	1.6	8.0	0.76	J	6G
		1,2,4-Trimethylbenzene	41	8.0	0.64	J	3D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW38A-01 (continued)	12/04/2020 13:45	1,3,5-Trimethylbenzene	8.2	8.0	0.64	J	3D
		p- & m-Xylenes	20	8.0	0.98	J	3D
		o-Xylene	10	8.0	0.48	J	3D
		Total Xylenes	30	16	1.5	J	3D
		TPH - Gasoline	750	320	34	J	3D
		Total Petroleum Hydrocarbons	750	320	34	J	3D
SG-VW38B-02	12/04/2020 13:30	Acetone	3.7	7.6	0.65	J	6G
		Carbon disulfide	1.2	3.0	0.29	J	6G
		Chloroform	6.1	7.6	0.82	J	6G
		Dichlorodifluoromethane	2.6	7.6	0.68	J	6G
		Ethanol	10	3.0	0.63	J	3D
		Ethylbenzene	0.92	7.6	0.48	J	6G
		1-Ethyl-4-methylbenzene	1.4	7.6	0.45	J	6G,3D
		Methyl ethyl ketone	0.80	3.0	0.29	J	6G
		Naphthalene	9.3	30	2.1	J	6G
		Toluene	3.7	3.0	0.41	J	3D
		Trichlorofluoromethane	1.5	7.6	0.71	J	6G
		1,2,4-Trimethylbenzene	3.3	7.6	0.60	J	6G,3D
		1,3,5-Trimethylbenzene	ND	7.6	0.60	UJ	3D
		p- & m-Xylenes	3.7	7.6	0.92	J	6G,3D
		o-Xylene	1.1	7.6	0.45	J	6G,3D
		Total Xylenes	4.8	15	1.4	J	6G,3D
		TPH - Gasoline	200	300	32	J	6G,3D
		Total Petroleum Hydrocarbons	200	300	32	J	6G,3D
SG-VW39A-01	12/03/2020 09:14	Acetone	5.2	7.8	0.67	J	6G
		Carbon disulfide	2.2	3.1	0.29	J	6G
		Chloroform	3.0	7.8	0.84	J	6G
		Ethanol	2.0	3.1	0.65	J	6G
		Ethylbenzene	4.0	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	2.7	7.8	0.46	J	6G
		Methyl ethyl ketone	1.3	3.1	0.29	J	6G
		Tetrahydrofuran	1.4	3.1	0.42	J	6G
		1,2,4-Trimethylbenzene	4.0	7.8	0.62	J	6G
		1,3,5-Trimethylbenzene	1.8	7.8	0.62	J	6G
		o-Xylene	7.0	7.8	0.46	J	6G
SG-VW39B-01	12/03/2020 09:01	Acetone	4.2	7.6	0.65	J	6G
		Toluene	2.7	3.0	0.41	J	6G
		TPH - Gasoline	230	300	32	J	6G
		Total Petroleum Hydrocarbons	230	300	32	J	6G
SG-VW40A-01	12/02/2020 08:55	Acetone	5.3	8.1	0.70	J	6G
		Carbon disulfide	1.4	3.2	0.31	J	6G
		Dichlorodifluoromethane	2.5	8.1	0.73	J	6G
		Isooctane	1.2	8.1	0.57	J	6G
		Methyl ethyl ketone	1.6	3.2	0.31	J	6G
		Tetrachloroethene	3.3	8.1	0.81	J	6G
		Trichlorofluoromethane	1.3	8.1	0.76	J	6G
		1,3,5-Trimethylbenzene	6.8	8.1	0.65	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW40B-01	12/02/2020 08:42	Acetone	1.9	7.8	0.67	J	6G
		Methyl ethyl ketone	1.0	3.1	0.29	J	6G
		Tetrachloroethene	6.7	7.8	0.78	J	6G
		Toluene	1.3	3.1	0.42	J	6G
		Trichlorofluoromethane	1.4	7.8	0.73	J	6G
		1,2,4-Trimethylbenzene	2.1	7.8	0.62	J	6G
		p- & m-Xylenes	3.5	7.8	0.95	J	6G
		o-Xylene	1.1	7.8	0.46	J	6G
		Total Xylenes	4.6	16	1.4	J	6G
		TPH - Gasoline	150	310	33	J	6G
		Total Petroleum Hydrocarbons	150	310	33	J	6G
SG-VW41A-01	12/04/2020 11:10	Dichlorodifluoromethane	2.6	7.8	0.70	J	6G
		Ethanol	11	3.1	0.65	J	3D
		1-Ethyl-4-methylbenzene	7.4	7.8	0.46	J	6G
		Methyl isobutyl ketone	6.7	7.8	0.40	J	6G
		Naphthalene	9.6	31	2.2	J	6G
		Trichloroethene	0.92	7.8	0.84	J	6G
		Trichlorofluoromethane	1.3	7.8	0.73	J	6G
		1,3,5-Trimethylbenzene	2.7	7.8	0.62	J	6G
		Vinyl acetate	1.4	3.1	0.51	J	6G
		Dichlorodifluoromethane	2.7	7.8	0.70	J	6G
		Ethanol	7.4	3.1	0.65	J	3D
		Ethylbenzene	7.7	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	6.7	7.8	0.46	J	6G
		n-Heptane	1.1	3.1	0.53	J	6G
		Methyl isobutyl ketone	7.4	7.8	0.40	J	6G
		Naphthalene	9.4	31	2.2	J	6G
		Trichloroethene	0.92	7.8	0.84	J	6G
		Trichlorofluoromethane	1.4	7.8	0.73	J	6G
		1,3,5-Trimethylbenzene	3.1	7.8	0.62	J	6G
SG-VW41B-01	12/04/2020 11:00	Acetone	5.1	8.0	0.69	J	6G
		Benzene	1.1	3.2	0.34	J	6G
		Bromodichloromethane	5.3	8.0	0.72	J	6G
		Carbon disulfide	1.9	3.2	0.30	J	6G
		Dichlorodifluoromethane	2.5	8.0	0.72	J	6G
		Ethylbenzene	1.9	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	0.87	8.0	0.48	J	6G
		Methyl ethyl ketone	2.8	3.2	0.30	J	6G
		Tetrahydrofuran	1.6	3.2	0.43	J	6G
		Trichloroethene	1.9	8.0	0.86	J	6G
		Trichlorofluoromethane	1.5	8.0	0.75	J	6G
		1,2,4-Trimethylbenzene	3.1	8.0	0.64	J	6G
		1,3,5-Trimethylbenzene	0.79	8.0	0.64	J	6G
		o-Xylene	2.4	8.0	0.48	J	6G
		Total Xylenes	12	16	1.5	J	6G
SG-VW42A-01	12/02/2020 10:59	Styrene	310	740	36	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW42A-02	03/04/2021 13:55	Acetone	2.1	8.0	0.69	J	6G
		Dichlorodifluoromethane	3.0	8.0	0.72	J	6G
		Ethanol	1.4	3.2	0.67	J	6G
		Isopropyl alcohol	0.87	3.2	0.51	J	6G
		Tetrachloroethene	6.7	8.0	0.80	J	6G
		TPH - Gasoline	91	320	34	J	6G
		Total Petroleum Hydrocarbons	91	320	34	J	6G
SG-VW42B-01	12/02/2020 10:50	Acetone	3.1	8.7	0.75	J	6G
		Carbon disulfide	0.60	3.5	0.33	J	6G
		Dichlorodifluoromethane	2.4	8.7	0.78	J	6G
		Ethylbenzene	1.3	8.7	0.56	J	6G
		1-Ethyl-4-methylbenzene	2.3	8.7	0.52	J	6G
		Naphthalene	11	35	2.4	J	6G
		Tetrachloroethene	6.4	8.7	0.87	J	6G
		Trichlorofluoromethane	1.3	8.7	0.82	J	6G
		1,2,4-Trimethylbenzene	5.6	8.7	0.70	J	6G
		1,3,5-Trimethylbenzene	1.0	8.7	0.70	J	6G
		p- & m-Xylenes	6.4	8.7	1.1	J	6G
		o-Xylene	2.2	8.7	0.52	J	6G
		Total Xylenes	8.6	17	1.6	J	6G
		TPH - Gasoline	300	350	37	J	6G
		Total Petroleum Hydrocarbons	300	350	37	J	6G
SG-VW43A-01	12/22/2020 13:08	Acetone	4.3	7.6	0.66	J	6G
		Benzene	1.8	3.1	0.32	J	6G
		Dichlorodifluoromethane	3.1	7.6	0.69	J	6G
		Ethylbenzene	3.6	7.6	0.49	J	6G
		1-Ethyl-4-methylbenzene	4.9	7.6	0.46	J	6G
		Methyl ethyl ketone	2.0	3.1	0.29	J	6G
		Tetrachloroethene	5.5	7.6	0.76	J	6G
		Tetrahydrofuran	2.3	3.1	0.41	J	6G
		1,2,4-Trimethylbenzene	7.2	7.6	0.61	J	6G
		1,3,5-Trimethylbenzene	2.2	7.6	0.61	J	6G
		o-Xylene	4.3	7.6	0.46	J	6G
		TPH - Gasoline	220	310	32	J	6G
		Total Petroleum Hydrocarbons	220	310	32	J	6G
SG-VW43B-01	12/22/2020 12:56	Dichlorodifluoromethane	3.8	7.6	0.69	J	6G
		Methyl isobutyl ketone	3.3	7.6	0.40	J	6G
		Tetrahydrofuran	2.7	3.1	0.41	J	6G
		Trichlorofluoromethane	2.3	7.6	0.72	J	6G
		1,3,5-Trimethylbenzene	4.8	7.6	0.61	J	6G
SG-VW44A-01	12/22/2020 12:08	Dichlorodifluoromethane	4.3	7.4	0.67	J	6G
		n-Heptane	2.1	3.0	0.51	J	6G
		Isooctane	2.4	7.4	0.52	J	6G
		Methyl isobutyl ketone	5.6	7.4	0.39	J	6G
		Trichloroethene	5.5	7.4	0.80	J	6G
		Trichlorofluoromethane	2.3	7.4	0.70	J	6G
		1,3,5-Trimethylbenzene	3.9	7.4	0.60	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW44B-01	12/22/2020 11:57	Benzene	1.1	2.9	0.31	J	6G
		Dichlorodifluoromethane	4.7	7.4	0.66	J	6G
		Ethylbenzene	3.1	7.4	0.47	J	6G
		1-Ethyl-4-methylbenzene	2.8	7.4	0.44	J	6G
		Methyl isobutyl ketone	2.4	7.4	0.38	J	6G
		Tetrahydrofuran	2.5	2.9	0.40	J	6G
		Trichloroethene	5.9	7.4	0.79	J	6G
		Trichlorofluoromethane	2.7	7.4	0.69	J	6G
		1,2,4-Trimethylbenzene	4.1	7.4	0.59	J	6G
		o-Xylene	3.1	7.4	0.44	J	6G
		TPH - Gasoline	270	290	31	J	6G
		Total Petroleum Hydrocarbons	270	290	31	J	6G
SG-VW45A-01	12/23/2020 08:54	Chloroform	2.4	7.8	0.84	J	6G
		Dichlorodifluoromethane	2.9	7.8	0.70	J	6G
		Isooctane	5.0	7.8	0.54	J	6G
		Methyl isobutyl ketone	6.1	7.8	0.40	J	6G
		Styrene	2.6	7.8	0.37	J	6G
		Tetrachloroethene	5.1	7.8	0.78	J	6G
		Trichlorofluoromethane	1.7	7.8	0.73	J	6G
SG-VW45A-02	03/03/2021 12:40	Acetone	2.1	8.3	0.71	J	6G
		t-Butyl alcohol	3.9	8.3	1.2	J	6G
		1,2-Dibromoethane	4.0	8.3	0.96	J	6G
		Dichlorodifluoromethane	2.8	8.3	0.75	J	6G
		Isopropyl alcohol	0.84	3.3	0.53	J	6G
		Toluene	2.0	3.3	0.45	J	6G
		Trichloroethene	2.0	8.3	0.90	J	6G
		p- & m-Xylenes	3.2	8.3	1.0	J	6G
		Total Xylenes	3.2	17	1.5	J	6G
		TPH - Gasoline	94	330	35	J	6G
		Total Petroleum Hydrocarbons	94	330	35	J	6G
SG-VW45B-01	12/23/2020 08:43	Carbon disulfide	2.8	2.9	0.28	J	6G
		Dichlorodifluoromethane	3.0	7.4	0.66	J	6G
		Ethanol	1.9	2.9	0.62	J	6G
		Ethylbenzene	2.2	7.4	0.47	J	6G
		1-Ethyl-4-methylbenzene	3.2	7.4	0.44	J	6G
		Isopropyl alcohol	1.7	2.9	0.47	J	6G
		Methyl isobutyl ketone	2.7	7.4	0.38	J	6G
		Tetrahydrofuran	1.9	2.9	0.40	J	6G
		Trichlorofluoromethane	1.7	7.4	0.69	J	6G
		1,2,4-Trimethylbenzene	5.8	7.4	0.59	J	6G
		1,3,5-Trimethylbenzene	1.7	7.4	0.59	J	6G
		o-Xylene	3.9	7.4	0.44	J	6G
		Total Xylenes	13	15	1.3	J	6G
		TPH - Gasoline	260	290	31	J	6G
		Total Petroleum Hydrocarbons	260	290	31	J	6G
SG-VW46A-01	12/23/2020 09:59	Benzene	1.8	3.0	0.32	J	6G
		Dichlorodifluoromethane	2.8	7.5	0.68	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW46A-01 (continued)	12/23/2020 09:59	Ethanol	2.0	3.0	0.63	J	6G
		Ethylbenzene	5.6	7.5	0.48	J	6G
		1-Ethyl-4-methylbenzene	5.6	7.5	0.45	J	6G
		Methyl isobutyl ketone	3.4	7.5	0.39	J	6G
		Tetrachloroethene	5.3	7.5	0.75	J	6G
		1,3,5-Trimethylbenzene	2.9	7.5	0.60	J	6G
SG-VW46B-01	12/23/2020 09:47	Acrolein	ND	15	1.2	UJ	4D
		Acetone	32	7.5	0.64	J-	4D
		Acrylonitrile	ND	3.0	0.40	UJ	4D
		Allyl chloride	ND	3.0	0.42	UJ	4D
		t-Amyl Methyl ether	ND	7.5	0.46	UJ	4D
		Benzene	1.1	3.0	0.32	J-	4D,6G
		Benzyl chloride	ND	15	0.39	UJ	4D
		Bromodichloromethane	ND	7.5	0.68	UJ	4D
		Bromoform	ND	15	1.3	UJ	4D
		Bromomethane	ND	3.0	0.70	UJ	4D
		1,3-Butadiene	ND	3.0	0.33	UJ	4D
		t-Butyl alcohol	2.2	7.5	1.0	J-	4D,6G
		Carbon disulfide	5.9	3.0	0.28	J-	4D
		Carbon tetrachloride	ND	7.5	0.68	UJ	4D
		Chlorobenzene	ND	7.5	0.60	UJ	4D
		Chloroethane	ND	3.0	0.80	UJ	4D
		Chloroform	15	7.5	0.81	J-	4D
		Chloromethane	ND	3.0	0.32	UJ	4D
		Cyclohexane	ND	3.0	0.57	UJ	4D
		Dibromochloromethane	ND	7.5	0.64	UJ	4D
		1,2-Dibromo-3-chloropropane	ND	7.5	2.6	UJ	4D
		1,2-Dibromoethane	ND	7.5	0.87	UJ	4D
		Dibromomethane	ND	7.5	0.86	UJ	4D
		1,2-Dichlorobenzene	ND	7.5	0.75	UJ	4D
		1,3-Dichlorobenzene	ND	7.5	0.46	UJ	4D
		1,4-Dichlorobenzene	2.6	7.5	0.75	J-	4D,6G
		Dichlorodifluoromethane	2.5	7.5	0.68	J-	4D,6G
		1,1-Dichloroethane	ND	7.5	0.34	UJ	4D
		1,2-Dichloroethane	ND	7.5	0.39	UJ	4D
		1,1-Dichloroethene	ND	7.5	0.46	UJ	4D
		cis-1,2-Dichloroethene	ND	3.0	0.48	UJ	4D
		trans-1,2-Dichloroethene	ND	3.0	0.40	UJ	4D
		1,2-Dichloropropane	ND	7.5	0.48	UJ	4D
		cis-1,3-Dichloropropene	ND	7.5	0.45	UJ	4D
		trans-1,3-Dichloropropene	ND	7.5	0.60	UJ	4D
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.5	1.4	UJ	4D
		1,1-Difluoroethane	ND	7.5	3.0	UJ	4D
		Diisopropyl ether	ND	7.5	0.58	UJ	4D
		1,4-Dioxane	ND	3.0	0.50	UJ	4D
		Ethanol	130	3.0	0.63	J-	4D
		Ethyl acetate	ND	3.0	0.50	UJ	4D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW46B-01	12/23/2020 09:47	Ethylbenzene	7.7	7.5	0.48	J-	4D
(continued)		1-Ethyl-4-methylbenzene	3.8	7.5	0.45	J-	4D,6G
		Ethyl t-butyl ether	ND	7.5	0.50	UJ	4D
		n-Heptane	ND	3.0	0.51	UJ	4D
		Hexachlorobutadiene	ND	15	2.2	UJ	4D
		Hexachloroethane	ND	3.0	1.1	UJ	4D
		Hexane	ND	7.5	0.30	UJ	4D
		2-Hexanone	ND	7.5	0.44	UJ	4D
		Isooctane	ND	7.5	0.52	UJ	4D
		Isopropyl alcohol	35	3.0	0.48	J-	4D
		Methylene chloride	ND	15	0.60	UJ	4D
		Methyl ethyl ketone	40	3.0	0.28	J-	4D
		Methyl iodide	ND	15	0.87	UJ	4D
		Methyl isobutyl ketone	7.0	7.5	0.39	J-	4D,6G
		Methyl t-butyl ether	ND	3.0	0.42	UJ	4D
		Naphthalene	7.5	30	2.1	J-	4D,6G
		Propylene	ND	3.0	0.38	UJ	4D
		Styrene	1.8	7.5	0.36	J-	4D,6G
		1,1,1,2-Tetrachloroethane	ND	7.5	0.92	UJ	4D
		1,1,2,2-Tetrachloroethane	ND	7.5	0.70	UJ	4D
		Tetrachloroethene	11	7.5	0.75	J-	4D
		1,1,1,2-Tetrafluoroethane	ND	7.5	1.0	UJ	4D
		Tetrahydrofuran	7.8	3.0	0.40	J-	4D
		Toluene	13	3.0	0.40	J-	4D
		1,2,4-Trichlorobenzene	ND	15	1.2	UJ	4D
		1,1,1-Trichloroethane	ND	7.5	0.58	UJ	4D
		1,1,2-Trichloroethane	ND	7.5	0.92	UJ	4D
		Trichloroethene	ND	7.5	0.81	UJ	4D
		Trichlorofluoromethane	ND	7.5	0.70	UJ	4D
		1,2,3-Trichloropropane	ND	7.5	0.72	UJ	4D
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	7.5	0.82	UJ	4D
		1,2,4-Trimethylbenzene	5.7	7.5	0.60	J-	4D,6G
		1,3,5-Trimethylbenzene	1.6	7.5	0.60	J-	4D,6G
		Vinyl acetate	ND	3.0	0.50	UJ	4D
		Vinyl bromide	ND	7.5	0.48	UJ	4D
		Vinyl chloride	ND	3.0	0.58	UJ	4D
		p- & m-Xylenes	17	7.5	0.92	J-	4D
		o-Xylene	5.4	7.5	0.45	J-	4D,6G
		Total Xylenes	22	15	1.4	J-	4D
		TPH - Gasoline	720	300	32	J-	4D
		Total Petroleum Hydrocarbons	720	300	32	J-	4D
SG-VW47A-01	12/23/2020 10:49	Acetone	6.4	7.5	0.64	J	6G
		Dichlorodifluoromethane	2.7	7.5	0.68	J	6G
		Ethanol	2.0	3.0	0.63	J	6G
		Methyl ethyl ketone	2.8	3.0	0.28	J	6G
		o-Xylene	1.7	7.5	0.45	J	6G
		Total Xylenes	1.7	15	1.4	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW47A-01	12/23/2020 10:49	TPH - Gasoline	130	300	32	J	6G
(continued)		Total Petroleum Hydrocarbons	130	300	32	J	6G
SG-VW47B-01	12/23/2020 10:38	Bromodichloromethane	2.3	7.6	0.68	J	6G
		Dichlorodifluoromethane	2.7	7.6	0.68	J	6G
		Ethanol	1.7	3.0	0.63	J	6G
		Ethylbenzene	2.4	7.6	0.48	J	6G
		1-Ethyl-4-methylbenzene	1.9	7.6	0.45	J	6G
		Methyl isobutyl ketone	1.8	7.6	0.39	J	6G
		Tetrahydrofuran	1.5	3.0	0.41	J	6G
		1,2,4-Trimethylbenzene	3.4	7.6	0.60	J	6G
		p- & m-Xylenes	7.5	7.6	0.92	J	6G
		o-Xylene	3.1	7.6	0.45	J	6G
		Total Xylenes	11	15	1.4	J	6G
		TPH - Gasoline	240	300	32	J	6G
		Total Petroleum Hydrocarbons	240	300	32	J	6G
SG-VW48A-01	12/23/2020 12:07	Chloroform	3.5	7.6	0.83	J	6G
		Dichlorodifluoromethane	2.9	7.6	0.69	J	6G
		Ethanol	2.8	3.1	0.64	J	6G
		Ethylbenzene	5.2	7.6	0.49	J	6G
		1-Ethyl-4-methylbenzene	6.4	7.6	0.46	J	6G
		Isopropyl alcohol	1.4	3.1	0.49	J	6G
		Methyl isobutyl ketone	4.8	7.6	0.40	J	6G
		1,3,5-Trimethylbenzene	3.0	7.6	0.61	J	6G
		o-Xylene	7.5	7.6	0.46	J	6G
SG-VW48A-02	03/03/2021 13:50	Acetone	2.1	7.9	0.68	J	6G
		Carbon disulfide	1.3	3.2	0.30	J	6G
		Chloroform	5.4	7.9	0.85	J	6G
		1,2-Dibromoethane	2.8	7.9	0.92	J	6G
		Dichlorodifluoromethane	2.7	7.9	0.71	J	6G
		Ethanol	2.2	3.2	0.66	J	6G
		Toluene	1.9	3.2	0.43	J	6G
		p- & m-Xylenes	2.8	7.9	0.96	J	6G
		o-Xylene	1.6	7.9	0.47	J	6G
		Total Xylenes	4.4	16	1.4	J	6G
SG-VW48B-01	12/23/2020 11:56	Acetone	7.4	7.5	0.64	J	6G
		Carbon disulfide	1.7	3.0	0.28	J	6G
		Dichlorodifluoromethane	2.8	7.5	0.68	J	6G
		Methyl ethyl ketone	1.0	3.0	0.28	J	6G
		Tetrahydrofuran	1.2	3.0	0.40	J	6G
		Toluene	1.5	3.0	0.40	J	6G
		p- & m-Xylenes	2.1	7.5	0.92	J	6G
		Total Xylenes	2.1	15	1.4	J	6G
		TPH - Gasoline	180	300	32	J	6G
		Total Petroleum Hydrocarbons	180	300	32	J	6G
SG-VW49A-01	12/23/2020 12:59	Benzene	1.0	3.1	0.33	J	6G
		Chloroform	4.7	7.8	0.84	J	6G
		Dichlorodifluoromethane	3.0	7.8	0.70	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW49A-01 (continued)	12/23/2020 12:59	Ethylbenzene	3.3	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	2.0	7.8	0.47	J	6G
		2-Hexanone	2.5	7.8	0.45	J	6G
		Methyl isobutyl ketone	2.4	7.8	0.41	J	6G
		1,2,4-Trimethylbenzene	3.5	7.8	0.62	J	6G
		p- & m-Xylenes	7.6	7.8	0.95	J	6G
		o-Xylene	4.7	7.8	0.47	J	6G
		Total Xylenes	12	16	1.4	J	6G
		TPH - Gasoline	190	310	33	J	6G
		Total Petroleum Hydrocarbons	190	310	33	J	6G
SG-VW49A-02	03/03/2021 14:45	Acetone	1.7	7.6	0.65	J	6G
		Carbon disulfide	1.1	3.0	0.29	J	6G
		Dichlorodifluoromethane	2.8	7.6	0.68	J	6G
		Ethanol	2.6	3.0	0.64	J	6G
		TPH - Gasoline	120	300	32	J	6G
		Total Petroleum Hydrocarbons	120	300	32	J	6G
SG-VW49B-01	12/23/2020 12:49	Carbon disulfide	1.9	3.1	0.30	J	6G
		Dichlorodifluoromethane	2.7	7.8	0.70	J	6G
		Ethanol	2.6	3.1	0.66	J	6G
		Toluene	1.3	3.1	0.42	J	6G
		p- & m-Xylenes	2.0	7.8	0.95	J	6G
		o-Xylene	1.4	7.8	0.47	J	6G
		Total Xylenes	3.3	16	1.4	J	6G
		TPH - Gasoline	180	310	33	J	6G
		Total Petroleum Hydrocarbons	180	310	33	J	6G
SG-VW50A-01	12/23/2020 13:55	Benzene	2.0	3.0	0.32	J	6G
		Chloroform	2.6	7.6	0.82	J	6G
		Dichlorodifluoromethane	2.9	7.6	0.68	J	6G
		1,3,5-Trimethylbenzene	4.0	7.6	0.61	J	6G
SG-VW50A-02	12/23/2020 13:55	Benzene	1.9	3.0	0.32	J	6G
		Chloroform	1.7	7.5	0.81	J	6G
		Dichlorodifluoromethane	3.0	7.5	0.68	J	6G
		Isopropyl alcohol	2.8	3.0	0.48	J	6G
		1,3,5-Trimethylbenzene	4.3	7.5	0.60	J	6G
SG-VW50B-01	12/23/2020 13:43	Dichlorodifluoromethane	3.0	7.4	0.66	J	6G
		2-Hexanone	3.9	7.4	0.43	J	6G
		Toluene	2.0	2.9	0.40	J	6G
		p- & m-Xylenes	1.8	7.4	0.90	J	6G
		Total Xylenes	1.8	15	1.3	J	6G
SG-VW51A-01	12/23/2020 15:07	Dichlorodifluoromethane	2.9	8.2	0.73	J	6G
		Methyl isobutyl ketone	4.2	8.2	0.42	J	6G
		1,3,5-Trimethylbenzene	3.7	8.2	0.65	J	6G
SG-VW51B-01	12/23/2020 14:55	Dichlorodifluoromethane	3.1	8.0	0.72	J	6G
		Ethylbenzene	1.5	8.0	0.51	J	6G
		Tetrahydrofuran	0.94	3.2	0.43	J	6G
		1,2,4-Trimethylbenzene	2.2	8.0	0.64	J	6G
		p- & m-Xylenes	5.8	8.0	0.97	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW51B-01	12/23/2020 14:55	o-Xylene	1.8	8.0	0.48	J	6G
(continued)		Total Xylenes	7.6	16	1.4	J	6G
		TPH - Gasoline	240	320	33	J	6G
		Total Petroleum Hydrocarbons	240	320	33	J	6G
SG-VW52A-01	12/22/2020 11:13	Benzene	1.5	3.1	0.32	J	6G
		Ethylbenzene	5.0	7.6	0.49	J	6G
		Methyl isobutyl ketone	3.8	7.6	0.40	J	6G
		Tetrahydrofuran	2.9	3.1	0.41	J	6G
		1,3,5-Trimethylbenzene	3.1	7.6	0.61	J	6G
		o-Xylene	7.0	7.6	0.46	J	6G
SG-VW52B-01	12/22/2020 11:02	Ethylbenzene	2.0	7.4	0.47	J	6G
		1-Ethyl-4-methylbenzene	5.4	7.4	0.44	J	6G
		Tetrahydrofuran	1.1	3.0	0.40	J	6G
		1,3,5-Trimethylbenzene	2.6	7.4	0.59	J	6G
		o-Xylene	5.1	7.4	0.44	J	6G
SG-VW53A-01	12/29/2020 12:00	Acetone	13	8.0	0.69	J	3D
		Ethanol	6.1	3.2	0.67	J	3D
		Ethylbenzene	4.3	8.0	0.51	J	6G
		1-Ethyl-4-methylbenzene	4.9	8.0	0.48	J	6G
		Isopropyl alcohol	ND	3.2	0.51	UJ	3D
		Methyl ethyl ketone	6.8	3.2	0.30	J	3D
		Tetrahydrofuran	1.8	3.2	0.43	J	6G,3D
		Toluene	13	3.2	0.43	J	3D
		1,2,4-Trimethylbenzene	7.4	8.0	0.64	J	6G
		1,3,5-Trimethylbenzene	2.3	8.0	0.64	J	6G
		p- & m-Xylenes	15	8.0	0.98	J	3D
		o-Xylene	5.6	8.0	0.48	J	6G,3D
		Total Xylenes	21	16	1.5	J	3D
		TPH - Gasoline	330	320	34	J	3D
		Total Petroleum Hydrocarbons	330	320	34	J	3D
SG-VW53A-02	12/29/2020 12:00	Acetone	34	7.8	0.67	J	3D
		Benzene	1.7	3.1	0.33	J	6G
		Ethanol	49	3.1	0.65	J	3D
		Ethylbenzene	7.3	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	6.2	7.8	0.46	J	6G
		Hexachlorobutadiene	ND	16	2.3	UJ	5B
		Isopropyl alcohol	10	3.1	0.50	J	3D
		Methyl ethyl ketone	26	3.1	0.29	J	3D
		Methyl isobutyl ketone	2.1	7.8	0.40	J	6G
		Naphthalene	4.9	31	2.2	J	6G
		Tetrahydrofuran	4.9	3.1	0.42	J	3D
		Toluene	22	3.1	0.42	J	3D
		Trichlorofluoromethane	1.9	7.8	0.73	J	6G
		1,3,5-Trimethylbenzene	2.8	7.8	0.62	J	6G
		p- & m-Xylenes	22	7.8	0.95	J	3D
		o-Xylene	7.7	7.8	0.46	J	6G,3D
		Total Xylenes	29	16	1.4	J	3D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW53A-02	12/29/2020 12:00	TPH - Gasoline	490	310	33	J	3D
(continued)		Total Petroleum Hydrocarbons	490	310	33	J	3D
SG-VW53B-01	12/29/2020 11:50	Acetone	3.5	8.2	0.70	J	6G
		Carbon disulfide	3.2	3.3	0.31	J	6G
		Chloroform	2.8	8.2	0.88	J	6G
		Hexachlorobutadiene	ND	16	2.4	UJ	5B
		Trichlorofluoromethane	2.0	8.2	0.77	J	6G
		TPH - Gasoline	140	330	34	J	6G
		Total Petroleum Hydrocarbons	140	330	34	J	6G
SG-VW54A-01	12/29/2020 13:35	Chloroform	6.7	8.0	0.86	J	6G
		1,2-Dichloroethane	1.3	8.0	0.42	J	6G
		Hexachlorobutadiene	ND	16	2.4	UJ	5B
		Methyl isobutyl ketone	2.5	8.0	0.42	J	6G
		Trichlorofluoromethane	2.5	8.0	0.75	J	6G
SG-VW54B-01	12/29/2020 13:25	Acetone	3.6	7.8	0.68	J	6G
		Carbon disulfide	1.2	3.1	0.30	J	6G
		Chloroform	3.8	7.8	0.85	J	6G
		Hexachlorobutadiene	ND	16	2.4	UJ	5B
		Trichlorofluoromethane	2.4	7.8	0.74	J	6G
		TPH - Gasoline	94	310	33	J	6G
		Total Petroleum Hydrocarbons	94	310	33	J	6G
SG-VW55A-01	12/29/2020 14:55	Dichlorodifluoromethane	2.8	7.6	0.69	J	6G
		Ethanol	2.1	3.1	0.64	J	6G
		Ethylbenzene	6.7	7.6	0.49	J	6G
		1-Ethyl-4-methylbenzene	6.1	7.6	0.46	J	6G
		Hexachlorobutadiene	ND	15	2.3	UJ	5B
		Methyl isobutyl ketone	4.7	7.6	0.40	J	6G
		1,3,5-Trimethylbenzene	2.8	7.6	0.61	J	6G
SG-VW55B-01	12/29/2020 14:45	Acetone	7.3	7.8	0.67	J	6G
		Carbon disulfide	2.5	3.1	0.29	J	6G
		Dichlorodifluoromethane	4.4	7.8	0.70	J	6G
		Hexachlorobutadiene	ND	16	2.3	UJ	5B
		Toluene	3.0	3.1	0.42	J	6G
		1,2,4-Trimethylbenzene	2.1	7.8	0.62	J	6G
		p- & m-Xylenes	3.6	7.8	0.95	J	6G
		o-Xylene	1.5	7.8	0.46	J	6G
		Total Xylenes	5.1	16	1.4	J	6G
		TPH - Gasoline	96	310	33	J	6G
		Total Petroleum Hydrocarbons	96	310	33	J	6G
SG-VW56A-01	12/30/2020 12:50	Acrolein	ND	15	1.2	UJ	4D
		Acetone	5.9	7.4	0.63	J-	4D,6G
		Acrylonitrile	ND	2.9	0.40	UJ	4D
		Allyl chloride	ND	2.9	0.41	UJ	4D
		t-Amyl Methyl ether	ND	7.4	0.46	UJ	4D
		Benzene	13	2.9	0.31	J-	4D
		Benzyl chloride	ND	15	0.38	UJ	4D
		Bromodichloromethane	ND	7.4	0.66	UJ	4D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW56A-01 (continued)	12/30/2020 12:50	Bromoform	ND	15	1.3	UJ	4D
		Bromomethane	ND	2.9	0.69	UJ	4D
		1,3-Butadiene	ND	2.9	0.32	UJ	4D
		t-Butyl alcohol	ND	7.4	1.0	UJ	4D
		Carbon disulfide	3.4	2.9	0.28	J-	4D
		Carbon tetrachloride	ND	7.4	0.66	UJ	4D
		Chlorobenzene	ND	7.4	0.59	UJ	4D
		Chloroethane	ND	2.9	0.78	UJ	4D
		Chloroform	ND	7.4	0.79	UJ	4D
		Chloromethane	ND	2.9	0.31	UJ	4D
		Cyclohexane	ND	2.9	0.56	UJ	4D
		Dibromochloromethane	ND	7.4	0.63	UJ	4D
		1,2-Dibromo-3-chloropropane	ND	7.4	2.5	UJ	4D
		1,2-Dibromoethane	ND	7.4	0.85	UJ	4D
		Dibromomethane	ND	7.4	0.84	UJ	4D
		1,2-Dichlorobenzene	ND	7.4	0.74	UJ	4D
		1,3-Dichlorobenzene	ND	7.4	0.46	UJ	4D
		1,4-Dichlorobenzene	ND	7.4	0.74	UJ	4D
		Dichlorodifluoromethane	3.1	7.4	0.66	J-	4D,6G
		1,1-Dichloroethane	ND	7.4	0.34	UJ	4D
		1,2-Dichloroethane	ND	7.4	0.38	UJ	4D
		1,1-Dichloroethene	ND	7.4	0.46	UJ	4D
		cis-1,2-Dichloroethene	ND	2.9	0.47	UJ	4D
		trans-1,2-Dichloroethene	ND	2.9	0.40	UJ	4D
		1,2-Dichloropropane	ND	7.4	0.47	UJ	4D
		cis-1,3-Dichloropropene	ND	7.4	0.44	UJ	4D
		trans-1,3-Dichloropropene	ND	7.4	0.59	UJ	4D
		1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.4	1.3	UJ	4D
		1,1-Difluoroethane	ND	7.4	2.9	UJ	4D
		Diisopropyl ether	ND	7.4	0.57	UJ	4D
		1,4-Dioxane	ND	2.9	0.49	UJ	4D
		Ethanol	3.5	2.9	0.62	J-	4D
		Ethyl acetate	ND	2.9	0.49	UJ	4D
		Ethylbenzene	9.7	7.4	0.47	J-	4D
		1-Ethyl-4-methylbenzene	1.9	7.4	0.44	J-	4D,6G
		Ethyl t-butyl ether	ND	7.4	0.49	UJ	4D
		n-Heptane	3.8	2.9	0.50	J-	4D
		Hexachlorobutadiene	ND	15	2.2	UJ	4D,5B
		Hexachloroethane	ND	2.9	1.1	UJ	4D
		Hexane	ND	7.4	0.29	UJ	4D
		2-Hexanone	ND	7.4	0.43	UJ	4D
		Isooctane	ND	7.4	0.51	UJ	4D
		Isopropyl alcohol	94	31	4.9	J-	4D
		Methylene chloride	ND	15	0.59	UJ	4D
		Methyl ethyl ketone	1.7	2.9	0.28	J-	4D,6G
		Methyl iodide	ND	15	0.85	UJ	4D
		Methyl isobutyl ketone	ND	7.4	0.38	UJ	4D

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW56A-01 (continued)	12/30/2020 12:50	Methyl t-butyl ether	ND	2.9	0.41	UJ	4D
		Naphthalene	ND	29	2.1	UJ	4D
		Propylene	ND	2.9	0.37	UJ	4D
		Styrene	ND	7.4	0.35	UJ	4D
		1,1,1,2-Tetrachloroethane	ND	7.4	0.90	UJ	4D
		1,1,2,2-Tetrachloroethane	ND	7.4	0.69	UJ	4D
		Tetrachloroethene	8.6	7.4	0.74	J-	4D
		1,1,1,2-Tetrafluoroethane	ND	7.4	0.98	UJ	4D
		Tetrahydrofuran	ND	2.9	0.40	UJ	4D
		Toluene	14	2.9	0.40	J-	4D
		1,2,4-Trichlorobenzene	ND	15	1.2	UJ	4D
		1,1,1-Trichloroethane	ND	7.4	0.57	UJ	4D
		1,1,2-Trichloroethane	ND	7.4	0.90	UJ	4D
		Trichloroethene	ND	7.4	0.79	UJ	4D
		Trichlorofluoromethane	ND	7.4	0.69	UJ	4D
		1,2,3-Trichloropropane	ND	7.4	0.71	UJ	4D
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	7.4	0.81	UJ	4D
		1,2,4-Trimethylbenzene	2.7	7.4	0.59	J-	4D,6G
		1,3,5-Trimethylbenzene	ND	7.4	0.59	UJ	4D
		Vinyl acetate	ND	2.9	0.49	UJ	4D
		Vinyl bromide	ND	7.4	0.47	UJ	4D
		Vinyl chloride	ND	2.9	0.57	UJ	4D
		p- & m-Xylenes	14	7.4	0.90	J-	4D
		o-Xylene	3.3	7.4	0.44	J-	4D,6G
		Total Xylenes	17	15	1.3	J-	4D
		TPH - Gasoline	200	290	31	J-	4D,6G
		Total Petroleum Hydrocarbons	200	290	31	J-	4D,6G
SG-VW56B-01	12/30/2020 12:40	Bromodichloromethane	2.6	7.6	0.69	J	6G
		Carbon disulfide	2.3	3.1	0.29	J	6G
		1,4-Dichlorobenzene	2.6	7.6	0.76	J	6G
		Dichlorodifluoromethane	2.6	7.6	0.69	J	6G
		1-Ethyl-4-methylbenzene	2.4	7.6	0.46	J	6G
		n-Heptane	1.6	3.1	0.52	J	6G
		Hexachlorobutadiene	ND	15	2.3	UJ	5B
		Methyl isobutyl ketone	3.2	7.6	0.40	J	6G
		Naphthalene	10	31	2.1	J	6G
		Styrene	1.7	7.6	0.37	J	6G
		1,2,4-Trimethylbenzene	4.1	7.6	0.61	J	6G
		o-Xylene	3.8	7.6	0.46	J	6G
SG-VW57A-01	12/30/2020 11:40	Benzene	2.0	3.1	0.33	J	6G
		Ethylbenzene	5.0	7.8	0.50	J	6G
		1-Ethyl-4-methylbenzene	3.1	7.8	0.47	J	6G
		n-Heptane	1.8	3.1	0.53	J	6G
		Hexachlorobutadiene	ND	16	2.3	UJ	5B
		Hexane	7.0	7.8	0.31	J	6G
		Tetrahydrofuran	1.2	3.1	0.42	J	6G

TABLE 1. QUALIFIED RESULTS

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flags	Reason Code
TO-15 (µg/m³) (continued)							
SG-VW57A-01	12/30/2020 11:40	1,2,4-Trimethylbenzene	4.0	7.8	0.62	J	6G
(continued)		o-Xylene	4.1	7.8	0.47	J	6G
SG-VW57B-01	12/30/2020 11:30	Ethylbenzene	180	740	48	J	6G
		Hexachlorobutadiene	ND	1,500	220	UJ	5B
		p- & m-Xylenes	340	740	91	J	6G
		Total Xylenes	340	1,500	140	J	6G
SG-VW57B-02	12/30/2020 11:30	Ethylbenzene	220	740	47	J	6G
		Hexachlorobutadiene	ND	1,500	220	UJ	5B
		p- & m-Xylenes	420	740	90	J	6G
		Total Xylenes	420	1,500	130	J	6G
SG-VW57B-03	03/04/2021 15:10	Acetone	1.7	8.3	0.71	J	6G
		Chloroform	2.0	8.3	0.90	J	6G
		Dichlorodifluoromethane	3.0	8.3	0.75	J	6G
		Isopropyl alcohol	1.5	3.3	0.53	J	6G
		Trichloroethene	5.6	8.3	0.90	J	6G
		TPH - Gasoline	100	330	35	J	6G
		Total Petroleum Hydrocarbons	100	330	35	J	6G
SVE-EFF	03/03/2021 09:00	t-Butyl alcohol	7.5	8.0	1.1	J	6G
		Dichlorodifluoromethane	2.2	8.0	0.72	J	6G
		cis-1,2-Dichloroethene	1.8	3.2	0.52	J	6G
		Methyl ethyl ketone	2.2	3.2	0.31	J	6G
		1,1,1,2-Tetrafluoroethane	5.9	8.0	1.1	J	6G
		TPH - Gasoline	150	320	34	J	6G
		Total Petroleum Hydrocarbons	150	320	34	J	6G
SVM-3-5	03/03/2021 10:20	t-Butyl alcohol	2.1	7.8	1.1	J	6G
		Chloromethane	1.0	3.1	0.33	J	6G
		Dichlorodifluoromethane	3.2	7.8	0.70	J	6G
		Ethylbenzene	3.8	7.8	0.50	J	6G
		Methyl isobutyl ketone	3.1	7.8	0.41	J	6G
		1,2,4-Trimethylbenzene	2.3	7.8	0.62	J	6G
		o-Xylene	2.9	7.8	0.47	J	6G
		Total Xylenes	12	16	1.4	J	6G

Notes:
EPA = United States Environmental Protection Agency
MDL = method detection limit
ND = not detected above the MDL
PQL = practical quantitation limit
TPH – Gasoline = total petroleum hydrocarbons as gasoline

Reason Codes:
3D = field duplicate imprecision
4A = sample arrived at ambient pressure
4D = leak check compound greater than ten times the lowest PQL; potential leak
5B = low continuing calibration recovery
6G = reported between the MDL and PQL

EPA Flags:
J = estimated concentration
J- = estimated concentration; potential low bias
UJ = estimated PQL; analyte not detected; potential for false negative result at the PQL

Validated Soil Gas Data Set

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
(Page 1 of 33)

Location ID			VW14				VW15				VW16A				VW16B				VW17A				VW17B				VW17B			
Sampling Date/Time			12/30/2020 9:00				12/30/2020 10:20				11/30/2020 11:07				11/30/2020 9:46				12/22/2020 9:07				12/22/2020 8:56				12/22/2020 8:56			
Sample Depth (feet)			26				23.5				5.5				14.5				5.5				14.5				14.5			
Sample Type			N				N				N				N				N				N				FD			
Field Sample ID			SG-VW14-01				SG-VW15-01				SG-VW16A-01				SG-VW16B-01				SG-VW17A-01				SG-VW17B-01				SG-VW17B-02			
Lab Sample ID			2100036-18				2100036-19				2035147-01				2035147-02				2037849-01				2037849-02				2037849-03			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND	UJ 4A	1.1	14	ND		13	160	ND		1.2	15	ND		1.3	15	ND		1.2	14	ND		1.2	14	ND		1.2	14
Acetone	TO-15	µg/m^3	**23**	**J- 4A**	0.60	7.0	ND		6.7	78	**210**		6.5	76	**9.7**		0.66	7.6	**98**		6.1	72	**6.6**	**J 6G**	0.62	7.2	**5.4**	**J 6G**	0.62	7.2
Acrylonitrile	TO-15	µg/m^3	ND	UJ 4A	0.38	2.8	ND		4.2	31	ND		0.41	3.0	ND		0.41	3.1	ND		0.39	2.9	ND		0.39	2.9	ND		0.39	2.9
Allyl chloride	TO-15	µg/m^3	ND	UJ 4A	0.39	2.8	ND		4.4	31	ND		0.43	3.0	ND		0.43	3.1	ND		0.40	2.9	ND		0.40	2.9	ND		0.40	2.9
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND	UJ 4A	0.43	7.0	ND		4.8	78	ND		0.47	7.6	ND		0.47	7.6	ND		0.44	7.2	ND		0.45	7.2	ND		0.45	7.2
Benzene	TO-15	µg/m^3	ND	UJ 4A	0.29	2.8	**12**	**J 6G**	3.3	31	**37**		0.32	3.0	**0.59**	**J 6G**	0.32	3.1	**12**		0.30	2.9	ND		0.30	2.9	ND		0.30	2.9
Benzyl chloride	TO-15	µg/m^3	ND	UJ 4A	0.36	14	ND		4.1	160	ND		0.40	15	ND		0.40	15	ND		0.37	14	ND		0.37	14	ND		0.37	14
Bromodichloromethane	TO-15	µg/m^3	ND	UJ 4A	0.63	7.0	ND		7.0	78	ND		0.68	7.6	ND		0.69	7.6	ND		0.64	7.2	**3.5**	**J 6G**	0.65	7.2	**3.5**	**J 6G**	0.65	7.2
Bromoform	TO-15	µg/m^3	ND	UJ 4A	1.2	14	ND		13	160	ND		1.3	15	ND		1.3	15	ND		1.2	14	ND		1.2	14	ND		1.2	14
Bromomethane	TO-15	µg/m^3	ND	UJ 4A	0.66	2.8	ND		7.3	31	ND		0.71	3.0	ND		0.72	3.1	ND		0.67	2.9	ND		0.68	2.9	ND		0.68	2.9
1,3-Butadiene	TO-15	µg/m^3	ND	UJ 4A	0.31	2.8	ND		3.4	31	ND		0.33	3.0	ND		0.34	3.1	ND		0.31	2.9	ND		0.32	2.9	ND		0.32	2.9
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND	UJ 4A	0.98	7.0	ND		11	78	ND		1.1	7.6	ND		1.1	7.6	ND		1.0	7.2	ND		1.0	7.2	ND		1.0	7.2
Carbon disulfide	TO-15	µg/m^3	**3.4**	**J- 4A**	0.27	2.8	**38**		3.0	31	**14**		0.29	3.0	ND		0.29	3.1	**26**		0.27	2.9	**1.5**	**J 6G**	0.27	2.9	**1.5**	**J 6G**	0.27	2.9
Carbon tetrachloride	TO-15	µg/m^3	ND	UJ 4A	0.63	7.0	ND		7.0	78	ND		0.68	7.6	**2.7**	**J 6G**	0.69	7.6	**2.5**	**J 6G**	0.64	7.2	**9.2**		0.65	7.2	**9.4**		0.65	7.2
Chlorobenzene	TO-15	µg/m^3	ND	UJ 4A	0.56	7.0	ND		6.2	78	ND		0.61	7.6	ND		0.61	7.6	ND		0.57	7.2	ND		0.58	7.2	ND		0.58	7.2
Chloroethane	TO-15	µg/m^3	ND	UJ 4A	0.74	2.8	ND		8.3	31	ND		0.81	3.0	ND		0.81	3.1	ND		0.76	2.9	ND		0.76	2.9	ND		0.76	2.9
Chloroform	TO-15	µg/m^3	**10**	**J- 4A**	0.76	7.0	ND		8.4	78	**12**		0.82	7.6	**130**		0.83	7.6	**89**		0.77	7.2	**610**		7.8	72	**630**		7.8	72
Chloromethane	TO-15	µg/m^3	ND	UJ 4A	0.29	2.8	ND		3.3	31	ND		0.32	3.0	ND		0.32	3.1	ND		0.30	2.9	ND		0.30	2.9	ND		0.30	2.9
Cyclohexane	TO-15	µg/m^3	ND	UJ 4A	0.53	2.8	ND		5.9	31	**5.9**		0.58	3.0	ND		0.58	3.1	ND		0.54	2.9	ND		0.55	2.9	ND		0.55	2.9
Dibromochloromethane	TO-15	µg/m^3	ND	UJ 4A	0.60	7.0	ND		6.7	78	ND		0.65	7.6	ND		0.66	7.6	ND		0.61	7.2	ND		0.62	7.2	ND		0.62	7.2
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND	UJ 4A	2.4	7.0	ND		27	78	ND		2.6	7.6	ND		2.6	7.6	ND		2.4	7.2	ND		2.4	7.2	ND		2.4	7.2
1,2-Dibromoethane	TO-15	µg/m^3	ND	UJ 4A	0.81	7.0	ND		9.0	78	ND		0.88	7.6	ND		0.89	7.6	ND		0.83	7.2	**2.4**	**J 6G**	0.84	7.2	ND		0.84	7.2
Dibromomethane	TO-15	µg/m^3	ND	UJ 4A	0.80	7.0	ND		8.9	78	ND		0.87	7.6	ND		0.87	7.6	ND		0.82	7.2	ND		0.82	7.2	ND		0.82	7.2
1,2-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4A	0.70	7.0	ND		7.8	78	ND		0.76	7.6	ND		0.76	7.6	ND		0.72	7.2	ND		0.72	7.2	ND		0.72	7.2
1,3-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4A	0.43	7.0	ND		4.8	78	ND		0.47	7.6	ND		0.47	7.6	ND		0.44	7.2	ND		0.45	7.2	ND		0.45	7.2
1,4-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4A	0.70	7.0	ND		7.8	78	ND		0.76	7.6	ND		0.76	7.6	ND		0.72	7.2	ND		0.72	7.2	ND		0.72	7.2
Dichlorodifluoromethane	TO-15	µg/m^3	**4.4**	**J- 4A, 6G**	0.63	7.0	ND		7.0	78	**3.1**	**J 6G**	0.68	7.6	ND		0.69	7.6	**7.3**		0.64	7.2	**8.0**		0.65	7.2	**7.9**		0.65	7.2
1,1-Dichloroethane	TO-15	µg/m^3	ND	UJ 4A	0.32	7.0	ND		3.6	78	ND		0.35	7.6	ND		0.35	7.6	ND		0.33	7.2	ND		0.33	7.2	ND		0.33	7.2
1,2-Dichloroethane	TO-15	µg/m^3	**4.6**	**J- 4A, 6G**	0.36	7.0	ND		4.1	78	ND		0.40	7.6	ND		0.40	7.6	ND		0.37	7.2	ND		0.37	7.2	ND		0.37	7.2
1,1-Dichloroethene	TO-15	µg/m^3	ND	UJ 4A	0.43	7.0	ND		4.8	78	ND		0.47	7.6	ND		0.47	7.6	ND		0.44	7.2	ND		0.45	7.2	ND		0.45	7.2
cis-1,2-Dichloroethene	TO-15	µg/m^3	**4.3**	**J- 4A**	0.45	2.8	ND		5.0	31	ND		0.49	3.0	ND		0.49	3.1	ND		0.46	2.9	ND		0.46	2.9	ND		0.46	2.9
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND	UJ 4A	0.38	2.8	ND		4.2	31	ND		0.41	3.0	ND		0.41	3.1	ND		0.39	2.9	ND		0.39	2.9	ND		0.39	2.9
1,2-Dichloropropane	TO-15	µg/m^3	ND	UJ 4A	0.45	7.0	ND		5.0	78	ND		0.49	7.6	ND		0.49	7.6	ND		0.46	7.2	ND		0.46	7.2	ND		0.46	7.2
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND	UJ 4A	0.42	7.0	ND		4.7	78	ND		0.46	7.6	ND		0.46	7.6	ND		0.43	7.2	ND		0.43	7.2	ND		0.43	7.2
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND	UJ 4A	0.56	7.0	ND		6.2	78	ND		0.61	7.6	ND		0.61	7.6	ND		0.57	7.2	ND		0.58	7.2	ND		0.58	7.2
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND	UJ 4A	1.3	7.0	ND		14	78	ND		1.4	7.6	ND		1.4	7.6	ND		1.3	7.2	ND		1.3	7.2	ND		1.3	7.2
1,1-Difluoroethane	TO-15	µg/m^3	ND	UJ 4A	2.8	7.0	ND		31	78	ND		3.0	7.6	ND		3.1	7.6	ND		2.9	7.2	ND		2.9	7.2	ND		2.9	7.2
Diisopropyl ether	TO-15	µg/m^3	ND	UJ 4A	0.55	7.0	ND		6.1	78	ND		0.59	7.6	ND		0.60	7.6	ND		0.56	7.2	ND		0.56	7.2	ND		0.56	7.2
1,4-Dioxane	TO-15	µg/m^3	ND	UJ 4A	0.46	2.8	ND		5.1	31	ND		0.50	3.0	ND		0.50	3.1	ND		0.47	2.9	ND		0.48	2.9	ND		0.48	2.9
Ethanol	TO-15	µg/m^3	**13**	**J- 4A**	0.59	2.8	ND		6.6	31	ND		0.64	3.0	ND		0.64	3.1	**7.1**		0.60	2.9	**4.0**		0.60	2.9	**5.4**		0.60	2.9
Ethyl acetate	TO-15	µg/m^3	ND	UJ 4A	0.46	2.8	ND		5.1	31	ND		0.50	3.0	ND		0.50	3.1	ND		0.47	2.9	ND		0.48	2.9	ND		0.48	2.9
Ethylbenzene	TO-15	µg/m^3	**2.7**	**J- 4A, 6G**	0.45	7.0	ND		5.0	78	**66**		0.49	7.6	**2.8**	**J 6G**	0.49	7.6	**15**		0.46	7.2	**1.7**	**J 6G**	0.46	7.2	ND		0.46	7.2
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	ND	UJ 4A	0.42	7.0	ND		4.7	78	**53**		0.46	7.6	**3.7**	**J 6G**	0.46	7.6	**17**		0.43	7.2	ND		0.43	7.2	ND		0.43	7.2
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND	UJ 4A	0.46	7.0	ND		5.1	78	ND		0.50	7.6	ND		0.50	7.6	ND		0.47	7.2	ND		0.48	7.2	ND		0.48	7.2
n-Heptane	TO-15	µg/m^3	**160**	**J- 4A**	4.8	28	ND		5.3	31	**10**		0.52	3.0	ND		0.52	3.1	**3.9**		0.49	2.9	ND		0.49	2.9	ND		0.49	2.9
Hexachlorobutadiene	TO-15	µg/m^3	ND	UJ 4DA, 5B	2.1	14	ND		23	160	ND		2.3	15	ND		2.3	15	ND		2.1	14	ND		2.2	14	ND		2.2	14

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS

Location ID			VW14				VW15				VW16A				VW16B				VW17A				VW17B				VW17B			
Sampling Date/Time			12/30/2020 9:00				12/30/2020 10:20				11/30/2020 11:07				11/30/2020 9:46				12/22/2020 9:07				12/22/2020 8:56				12/22/2020 8:56			
Sample Depth (feet)			26				23.5				5.5				14.5				5.5				14.5				14.5			
Sample Type			N				N				N				N				N				N				FD			
Field Sample ID			SG-VW14-01				SG-VW15-01				SG-VW16A-01				SG-VW16B-01				SG-VW17A-01				SG-VW17B-01				SG-VW17B-02			
Lab Sample ID			2100036-18				2100036-19				2035147-01				2035147-02				2037849-01				2037849-02				2037849-03			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND	UJ 4A	1.0	2.8	ND	UJ 5B	11	31	ND		1.1	3.0	ND		1.1	3.1	ND		1.0	2.9	ND		1.1	2.9	ND		1.1	2.9
Hexane	TO-15	µg/m^3	**7.9**	**J- 4A**	0.28	7.0	**25**	**J 6G**	3.1	78	ND		0.30	7.6	ND		0.31	7.6	ND		0.29	7.2	ND		0.29	7.2	ND		0.29	7.2
2-Hexanone	TO-15	µg/m^3	ND	UJ 4A	0.41	7.0	ND		4.5	78	ND		0.44	7.6	ND		0.44	7.6	ND		0.41	7.2	ND		0.42	7.2	ND		0.42	7.2
Isooctane	TO-15	µg/m^3	ND	UJ 4A	0.49	7.0	**33**	**J 6G**	5.5	78	**12**		0.53	7.6	ND		0.54	7.6	**4.4**	**J 6G**	0.50	7.2	ND		0.50	7.2	ND		0.50	7.2
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND	UJ 4A	0.45	2.8	ND		5.0	31	ND		0.49	3.0	ND		0.49	3.1	ND		0.46	2.9	**2.0**	**J 6G**	0.46	2.9	ND		0.46	2.9
Methylene chloride	TO-15	µg/m^3	ND	UJ 4A	0.56	14	ND		6.2	160	ND		0.61	15	ND		0.61	15	ND		0.57	14	ND		0.58	14	ND		0.58	14
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	ND	UJ 4A	0.27	2.8	ND		3.0	31	**93**		0.29	3.0	**3.3**		0.29	3.1	**67**		0.27	2.9	**1.8**	**J 6G**	0.27	2.9	**1.5**	**J 6G**	0.27	2.9
Methyl iodide	TO-15	µg/m^3	ND	UJ 4A	0.81	14	ND		9.0	160	ND		0.88	15	ND		0.89	15	ND		0.83	14	ND		0.84	14	ND		0.84	14
Methyl isobutyl ketone	TO-15	µg/m^3	ND	UJ 4A	0.36	7.0	ND		4.1	78	**46**		0.40	7.6	**2.0**	**J 6G**	0.40	7.6	**6.6**	**J 6G**	0.37	7.2	ND		0.37	7.2	ND		0.37	7.2
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND	UJ 4A	0.39	2.8	ND		4.4	31	**0.60**	**J 6G**	0.43	3.0	ND		0.43	3.1	ND		0.40	2.9	ND		0.40	2.9	ND		0.40	2.9
Naphthalene	TO-15	µg/m^3	ND	UJ 4A	2.0	28	ND		22	310	ND		2.1	30	ND		2.1	31	ND		2.0	29	ND		2.0	29	ND		2.0	29
Propylene	TO-15	µg/m^3	ND	UJ 4A	0.35	2.8	ND		3.9	31	ND		0.38	3.0	ND		0.38	3.1	ND		0.36	2.9	ND		0.36	2.9	ND		0.36	2.9
Styrene	TO-15	µg/m^3	ND	UJ 4A	0.34	7.0	ND		3.7	78	**2.6**	**J 6G**	0.36	7.6	ND		0.37	7.6	ND		0.34	7.2	ND		0.35	7.2	ND		0.35	7.2
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND	UJ 4A	0.85	7.0	ND		9.5	78	ND		0.93	7.6	ND		0.93	7.6	ND		0.87	7.2	ND		0.88	7.2	ND		0.88	7.2
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND	UJ 4A	0.66	7.0	ND		7.3	78	ND		0.71	7.6	ND		0.72	7.6	ND		0.67	7.2	ND		0.68	7.2	ND		0.68	7.2
Tetrachloroethene (PCE)	TO-15	µg/m^3	**880**	**J- 4A**	7.0	70	ND		7.8	78	**20**		0.76	7.6	**100**		0.76	7.6	**61**		0.72	7.2	**220**		7.2	72	**230**		7.2	72
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND	UJ 4A	0.94	7.0	ND		10	78	ND		1.0	7.6	ND		1.0	7.6	**23**		0.96	7.2	ND		0.96	7.2	ND		0.96	7.2
Tetrahydrofuran	TO-15	µg/m^3	**7.1**	**J- 4A**	0.38	2.8	ND		4.2	31	**40**		0.41	3.0	ND		0.41	3.1	**8.2**		0.39	2.9	ND		0.39	2.9	ND		0.39	2.9
Toluene	TO-15	µg/m^3	**210**	**J- 4A**	3.8	28	**92**		4.2	31	**310**		4.1	30	**15**		0.41	3.1	**130**		0.39	2.9	**4.4**		0.39	2.9	**3.6**		0.39	2.9
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND	UJ 4A	1.1	14	ND		13	160	ND		1.2	15	ND		1.3	15	ND		1.2	14	ND		1.2	14	ND		1.2	14
1,1,1-Trichloroethane	TO-15	µg/m^3	**1.6**	**J- 4A, 6G**	0.55	7.0	ND		6.1	78	ND		0.59	7.6	**1.4**	**J 6G**	0.60	7.6	ND		0.56	7.2	ND		0.56	7.2	ND		0.56	7.2
1,1,2-Trichloroethane	TO-15	µg/m^3	ND	UJ 4A	0.85	7.0	ND		9.5	78	ND		0.93	7.6	ND		0.93	7.6	ND		0.87	7.2	ND		0.88	7.2	ND		0.88	7.2
Trichloroethene (TCE)	TO-15	µg/m^3	**23**	**J- 4A**	0.76	7.0	ND		8.4	78	ND		0.82	7.6	**11**		0.83	7.6	ND		0.77	7.2	**2.9**	**J 6G**	0.78	7.2	**2.9**	**J 6G**	0.78	7.2
Trichlorofluoromethane	TO-15	µg/m^3	**1.9**	**J- 4A, 6G**	0.66	7.0	ND		7.3	78	**1.7**	**J 6G**	0.71	7.6	**2.7**	**J 6G**	0.72	7.6	**2.6**	**J 6G**	0.67	7.2	**3.4**	**J 6G**	0.68	7.2	**3.3**	**J 6G**	0.68	7.2
1,2,3-Trichloropropane	TO-15	µg/m^3	ND	UJ 4A	0.67	7.0	ND		7.5	78	ND		0.73	7.6	ND		0.73	7.6	ND		0.69	7.2	ND		0.69	7.2	**5.3**	**J 6G**	0.69	7.2
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND	UJ 4A	0.77	7.0	ND		8.6	78	ND		0.84	7.6	ND		0.84	7.6	ND		0.79	7.2	ND		0.79	7.2	ND		0.79	7.2
1,2,4-Trimethylbenzene	TO-15	µg/m^3	ND	UJ 4A	0.56	7.0	ND		6.2	78	**69**		0.61	7.6	**6.2**	**J 6G**	0.61	7.6	**28**		0.57	7.2	ND		0.58	7.2	ND		0.58	7.2
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND	UJ 4A	0.56	7.0	ND		6.2	78	**28**		0.61	7.6	**2.1**	**J 6G**	0.61	7.6	**7.0**	**J 6G**	0.57	7.2	ND		0.58	7.2	ND		0.58	7.2
Vinyl acetate	TO-15	µg/m^3	ND	UJ 4A	0.46	2.8	ND		5.1	31	ND		0.50	3.0	ND		0.50	3.1	ND		0.47	2.9	ND		0.48	2.9	ND		0.48	2.9
Vinyl bromide	TO-15	µg/m^3	ND	UJ 4A	0.45	7.0	ND		5.0	78	ND		0.49	7.6	ND		0.49	7.6	ND		0.46	7.2	ND		0.46	7.2	ND		0.46	7.2
Vinyl chloride	TO-15	µg/m^3	ND	UJ 4A	0.55	2.8	ND		6.1	31	ND		0.59	3.0	ND		0.60	3.1	ND		0.56	2.9	ND		0.56	2.9	ND		0.56	2.9
p- & *m*-Xylenes	TO-15	µg/m^3	**8.6**	**J- 4A**	0.85	7.0	**27**	**J 6G**	9.5	78	**210**		0.93	7.6	**13**		0.93	7.6	**57**		0.87	7.2	**4.3**	**J 6G**	0.88	7.2	**1.5**	**J 6G**	0.88	7.2
o-Xylene	TO-15	µg/m^3	**2.7**	**J- 4A, 6G**	0.42	7.0	ND		4.7	78	**75**		0.46	7.6	**4.3**	**J 6G**	0.46	7.6	**19**		0.43	7.2	**2.1**	**J 6G**	0.43	7.2	ND		0.43	7.2
Total Xylenes	TO-15	µg/m^3	**11**	**J- 4A, 6G**	1.3	14	**27**	**J 6G**	14	160	**280**		1.4	15	**17**		1.4	15	**76**		1.3	14	**6.5**	**J 6G**	1.3	14	**1.5**	**J 6G**	1.3	14
TPH - Gasoline	TO-15	µg/m^3	**2,100**	**J- 4A, 6G**	29	280	**1,600**	**J 6G**	330	3,100	**3,400**		32	300	**490**		32	310	**5,700**		300	2,900	**1,200**		30	290	**1,200**		30	290
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**2,100**	**J- 4A, 6G**	29	280	**1,600**	**J 6G**	330	3,100	**3,400**		32	300	**490**		32	310	**5,700**		300	2,900	**1,200**		30	290	**1,200**		30	290

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW18A				VW18B				VW19A				VW19B				VW20A				VW20B				VW21A			
			Sampling Date/Time	12/22/2020 10:09				12/22/2020 9:58				12/2/2020 12:10				12/2/2020 11:55				11/30/2020 13:51				11/30/2020 14:10				12/22/2020 14:17			
			Sample Depth (feet)	5.5				14.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW18A-01				SG-VW18B-01				SG-VW19A-01				SG-VW19B-01				SG-VW20A-01				SG-VW20B-01				SG-VW21A-01			
			Lab Sample ID	2037849-04				2037849-05				2035335-12				2035335-13				2035147-05				2035147-06				2037849-12			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		1.2	15	ND		1.2	15	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		13	160	ND		1.3	16
Acetone	TO-15	µg/m^3	**74**		0.63	7.4	**10**		0.64	7.4	**260**		6.8	79	**4.6**	**J 6G**	0.68	8.0	**16**		0.67	7.8	ND		6.9	80	**140**		6.7	78
Acrylonitrile	TO-15	µg/m^3	ND		0.40	2.9	ND		0.40	3.0	ND		0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		4.3	32	ND		0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND		0.41	2.9	ND		0.41	3.0	ND		0.44	3.2	ND		0.45	3.2	ND		0.44	3.1	ND		4.5	32	ND		0.44	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		0.46	7.4	ND		0.46	7.4	ND		0.49	7.9	ND		0.49	8.0	ND		0.48	7.8	ND		5.0	80	ND		0.48	7.8
Benzene	TO-15	µg/m^3	**31**		0.31	2.9	ND		0.31	3.0	**3.2**		0.33	3.2	ND		0.33	3.2	**8.7**		0.33	3.1	**34**		3.4	32	**7.6**		0.33	3.1
Benzyl chloride	TO-15	µg/m^3	ND		0.38	15	ND		0.38	15	ND		0.41	16	ND		0.41	16	ND		0.41	16	ND		4.2	160	ND		0.41	16
Bromodichloromethane	TO-15	µg/m^3	ND		0.66	7.4	ND		0.67	7.4	ND		0.71	7.9	ND		0.72	8.0	ND		0.70	7.8	ND		7.2	80	ND		0.70	7.8
Bromoform	TO-15	µg/m^3	ND		1.3	15	ND		1.3	15	ND		1.4	16	ND		1.4	16	ND		1.3	16	ND		14	160	ND		1.3	16
Bromomethane	TO-15	µg/m^3	ND		0.69	2.9	ND		0.70	3.0	ND		0.74	3.2	ND		0.75	3.2	ND		0.73	3.1	ND		7.5	32	ND		0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND		0.32	2.9	ND		0.33	3.0	ND		0.35	3.2	ND		0.35	3.2	ND		0.34	3.1	ND		3.5	32	ND		0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND		1.0	7.4	ND		1.0	7.4	**10**		1.1	7.9	**5.0**	**J 6G**	1.1	8.0	ND		1.1	7.8	ND		11	80	**1.5**	**J 6G**	1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**93**		0.28	2.9	**13**		0.28	3.0	**74**		0.30	3.2	**1.8**	**J 6G**	0.30	3.2	**30**		0.30	3.1	**130**		3.0	32	**25**		0.30	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND		0.66	7.4	ND		0.67	7.4	ND		0.71	7.9	ND		0.72	8.0	ND		0.70	7.8	ND		7.2	80	ND		0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND		0.59	7.4	ND		0.59	7.4	ND		0.63	7.9	ND		0.64	8.0	ND		0.62	7.8	ND		6.4	80	ND		0.62	7.8
Chloroethane	TO-15	µg/m^3	ND		0.78	2.9	ND		0.78	3.0	ND		0.84	3.2	ND		0.84	3.2	ND		0.83	3.1	ND		8.5	32	ND		0.83	3.1
Chloroform	TO-15	µg/m^3	**5.3**	**J 6G**	0.79	7.4	**140**		0.80	7.4	**10**		0.85	7.9	**44**		0.86	8.0	**0.91**	**J 6G**	0.84	7.8	ND		8.6	80	**4.7**	**J 6G**	0.84	7.8
Chloromethane	TO-15	µg/m^3	ND		0.31	2.9	ND		0.31	3.0	ND		0.33	3.2	ND		0.33	3.2	ND		0.33	3.1	ND		3.4	32	ND		0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND		0.56	2.9	ND		0.56	3.0	ND		0.60	3.2	ND		0.60	3.2	ND		0.59	3.1	ND		6.1	32	ND		0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND		0.63	7.4	ND		0.64	7.4	ND		0.68	7.9	ND		0.68	8.0	ND		0.67	7.8	ND		6.9	80	ND		0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		2.5	7.4	ND		2.5	7.4	ND		2.7	7.9	ND		2.7	8.0	ND		2.7	7.8	ND		27	80	ND		2.7	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND		0.85	7.4	ND		0.86	7.4	**5.1**	**J 6G**	0.92	7.9	ND		0.92	8.0	ND		0.90	7.8	ND		9.3	80	ND		0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND		0.84	7.4	ND		0.84	7.4	ND		0.90	7.9	ND		0.91	8.0	ND		0.89	7.8	ND		9.1	80	ND		0.89	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		0.74	7.4	ND		0.74	7.4	ND		0.79	7.9	ND		0.80	8.0	ND		0.78	7.8	ND		8.0	80	ND		0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		0.46	7.4	ND		0.46	7.4	ND		0.49	7.9	ND		0.49	8.0	ND		0.48	7.8	ND		5.0	80	ND		0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		0.74	7.4	ND		0.74	7.4	ND		0.79	7.9	ND		0.80	8.0	ND		0.78	7.8	ND		8.0	80	ND		0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**16**		0.66	7.4	**32**		0.67	7.4	**50**		0.71	7.9	**56**		0.72	8.0	ND		0.70	7.8	ND		7.2	80	**3.9**	**J 6G**	0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND		0.34	7.4	ND		0.34	7.4	ND		0.36	7.9	ND		0.37	8.0	ND		0.36	7.8	ND		3.7	80	ND		0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND		0.38	7.4	ND		0.38	7.4	**0.83**	**J 6G**	0.41	7.9	ND		0.41	8.0	ND		0.41	7.8	ND		4.2	80	ND		0.41	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND		0.46	7.4	ND		0.46	7.4	ND		0.49	7.9	ND		0.49	8.0	ND		0.48	7.8	ND		5.0	80	ND		0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.47	2.9	ND		0.47	3.0	ND		0.51	3.2	ND		0.51	3.2	ND		0.50	3.1	ND		5.1	32	ND		0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.40	2.9	ND		0.40	3.0	ND		0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		4.3	32	ND		0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND		0.47	7.4	ND		0.47	7.4	ND		0.51	7.9	ND		0.51	8.0	ND		0.50	7.8	ND		5.1	80	ND		0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.44	7.4	ND		0.44	7.4	ND		0.47	7.9	ND		0.48	8.0	ND		0.47	7.8	ND		4.8	80	ND		0.47	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.59	7.4	ND		0.59	7.4	ND		0.63	7.9	ND		0.64	8.0	ND		0.62	7.8	ND		6.4	80	ND		0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		1.3	7.4	ND		1.3	7.4	ND		1.4	7.9	ND		1.4	8.0	ND		1.4	7.8	ND		15	80	ND		1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND		2.9	7.4	ND		3.0	7.4	ND		3.2	7.9	ND		3.2	8.0	ND		3.1	7.8	ND		32	80	ND		3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND		0.57	7.4	ND		0.58	7.4	ND		0.62	7.9	ND		0.62	8.0	ND		0.61	7.8	ND		6.2	80	ND		0.61	7.8
1,4-Dioxane	TO-15	µg/m^3	ND		0.49	2.9	ND		0.49	3.0	ND		0.52	3.2	ND		0.52	3.2	ND		0.51	3.1	ND		5.3	32	ND		0.51	3.1
Ethanol	TO-15	µg/m^3	**2.7**	**J 6G**	0.62	2.9	**15**		0.62	3.0	ND		0.66	3.2	ND		0.67	3.2	**25**		0.66	3.1	ND		6.7	32	**4.6**		0.66	3.1
Ethyl acetate	TO-15	µg/m^3	ND		0.49	2.9	ND		0.49	3.0	ND		0.52	3.2	ND		0.52	3.2	ND		0.51	3.1	ND		5.3	32	ND		0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**25**		0.47	7.4	ND		0.47	7.4	**13**		0.51	7.9	ND		0.51	8.0	**54**		0.50	7.8	**14**	**J 6G**	5.1	80	**15**		0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**19**		0.44	7.4	ND		0.44	7.4	**17**		0.47	7.9	ND		0.48	8.0	**46**		0.47	7.8	ND		4.8	80	**12**		0.47	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		0.49	7.4	ND		0.49	7.4	ND		0.52	7.9	ND		0.52	8.0	ND		0.51	7.8	ND		5.3	80	ND		0.51	7.8
n-Heptane	TO-15	µg/m^3	**4.9**		0.50	2.9	ND		0.50	3.0	ND		0.54	3.2	ND		0.54	3.2	**0.77**	**J 6G**	0.53	3.1	ND		5.4	32	**2.0**	**J 3D, 6G**	0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND		2.2	15	ND		2.2	15	ND		2.4	16	ND		2.4	16	ND		2.3	16	ND		24	160	ND		2.3	16

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW18A				VW18B				VW19A				VW19B				VW20A				VW20B				VW21A			
Sampling Date/Time			12/22/2020 10:09				12/22/2020 9:58				12/2/2020 12:10				12/2/2020 11:55				11/30/2020 13:51				11/30/2020 14:10				12/22/2020 14:17			
Sample Depth (feet)			5.5				14.5				5.5				14.5				5.5				14.5				5.5			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			SG-VW18A-01				SG-VW18B-01				SG-VW19A-01				SG-VW19B-01				SG-VW20A-01				SG-VW20B-01				SG-VW21A-01			
Lab Sample ID			2037849-04				2037849-05				2035335-12				2035335-13				2035147-05				2035147-06				2037849-12			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.1	2.9	ND		1.1	3.0	ND		1.2	3.2	ND		1.2	3.2	ND		1.1	3.1	ND		12	32	ND		1.1	3.1
Hexane	TO-15	µg/m^3	**6.9**	**J 6G**	0.29	7.4	ND		0.30	7.4	ND		0.32	7.9	ND		0.32	8.0	ND		0.31	7.8	ND		3.2	80	ND		0.31	7.8
2-Hexanone	TO-15	µg/m^3	ND		0.43	7.4	ND		0.43	7.4	ND		0.46	7.9	ND		0.46	8.0	ND		0.45	7.8	ND		4.6	80	ND		0.45	7.8
Isooctane	TO-15	µg/m^3	**5.9**	**J 6G**	0.51	7.4	ND		0.52	7.4	**6.2**	**J 6G**	0.55	7.9	ND		0.56	8.0	ND		0.55	7.8	**89**		5.6	80	**1.7**	**J 6G**	0.55	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		0.47	2.9	**7.0**		0.47	3.0	ND		0.51	3.2	ND		0.51	3.2	ND		0.50	3.1	ND		5.1	32	ND		0.50	3.1
Methylene chloride	TO-15	µg/m^3	ND		0.59	15	ND		0.59	15	ND		0.63	16	ND		0.64	16	ND		0.62	16	ND		6.4	160	ND		0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**36**		0.28	2.9	**6.9**		0.28	3.0	**33**		0.30	3.2	ND		0.30	3.2	**13**		0.30	3.1	ND		3.0	32	**87**		0.30	3.1
Methyl iodide	TO-15	µg/m^3	ND		0.85	15	ND		0.86	15	ND		0.92	16	ND		0.92	16	ND		0.90	16	ND		9.3	160	ND		0.90	16
Methyl isobutyl ketone	TO-15	µg/m^3	**5.9**	**J 6G**	0.38	7.4	ND		0.38	7.4	**31**		0.41	7.9	**0.72**	**J 6G**	0.41	8.0	**12**		0.41	7.8	ND		4.2	80	**4.8**	**J 6G**	0.41	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.41	2.9	ND		0.41	3.0	ND		0.44	3.2	ND		0.45	3.2	ND		0.44	3.1	ND		4.5	32	ND		0.44	3.1
Naphthalene	TO-15	µg/m^3	ND		2.1	29	ND		2.1	30	**11**	**J 6G**	2.2	32	ND		2.2	32	ND		2.2	31	ND		22	320	ND		2.2	31
Propylene	TO-15	µg/m^3	**110**		0.37	2.9	ND		0.37	3.0	ND		0.40	3.2	ND		0.40	3.2	ND		0.39	3.1	ND		4.0	32	ND		0.39	3.1
Styrene	TO-15	µg/m^3	**1.3**	**J 6G**	0.35	7.4	ND		0.36	7.4	ND		0.38	7.9	ND		0.38	8.0	**1.9**	**J 6G**	0.37	7.8	ND		3.8	80	ND		0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.90	7.4	ND		0.90	7.4	ND		0.96	7.9	ND		0.97	8.0	ND		0.95	7.8	ND		9.8	80	ND		0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.69	7.4	ND		0.70	7.4	ND		0.74	7.9	ND		0.75	8.0	ND		0.73	7.8	ND		7.5	80	ND		0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m^3	**33**		0.74	7.4	**460**		7.4	74	**260**		0.79	7.9	**340**		7.4	74	**28**		0.78	7.8	**39**	**J 6G**	8.0	80	**130**		0.78	7.8
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		0.98	7.4	ND		0.99	7.4	ND		1.1	7.9	ND		1.1	8.0	ND		1.0	7.8	ND		11	80	ND		1.0	7.8
Tetrahydrofuran	TO-15	µg/m^3	**3.6**		0.40	2.9	**1.8**	**J 6G**	0.40	3.0	**13**		0.43	3.2	ND		0.43	3.2	**24**		0.42	3.1	ND		4.3	32	**8.4**		0.42	3.1
Toluene	TO-15	µg/m^3	**230**		0.40	2.9	**5.2**		0.40	3.0	**60**		0.43	3.2	**0.72**	**J 6G**	0.43	3.2	**360**		4.2	31	**270**		4.3	32	**140**		4.2	31
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.2	15	ND		1.2	15	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		13	160	ND		1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		0.57	7.4	ND		0.58	7.4	ND		0.62	7.9	**1.2**	**J 6G**	0.62	8.0	ND		0.61	7.8	ND		6.2	80	**7.1**	**J 6G**	0.61	7.8
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.90	7.4	ND		0.90	7.4	ND		0.96	7.9	ND		0.97	8.0	ND		0.95	7.8	ND		9.8	80	ND		0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m^3	ND		0.79	7.4	ND		0.80	7.4	ND		0.85	7.9	ND		0.86	8.0	**0.92**	**J 6G**	0.84	7.8	**70**	**J 6G**	8.6	80	**13**		0.84	7.8
Trichlorofluoromethane	TO-15	µg/m^3	**2.9**	**J 6G**	0.69	7.4	**4.7**	**J 6G**	0.70	7.4	**7.5**	**J 6G**	0.74	7.9	**9.7**		0.75	8.0	ND		0.73	7.8	ND		7.5	80	**1.8**	**J 6G**	0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.71	7.4	ND		0.71	7.4	ND		0.76	7.9	ND		0.76	8.0	ND		0.75	7.8	ND		7.7	80	ND		0.75	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	**2.6**	**J 6G**	0.81	7.4	ND		0.81	7.4	ND		0.87	7.9	ND		0.87	8.0	ND		0.86	7.8	ND		8.8	80	ND		0.86	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**25**		0.59	7.4	ND		0.59	7.4	**29**		0.63	7.9	ND		0.64	8.0	**71**		0.62	7.8	ND		6.4	80	**16**		0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**8.2**		0.59	7.4	ND		0.59	7.4	**7.6**	**J 6G**	0.63	7.9	ND		0.64	8.0	**20**		0.62	7.8	ND		6.4	80	**5.3**	**J 6G**	0.62	7.8
Vinyl acetate	TO-15	µg/m^3	ND		0.49	2.9	ND		0.49	3.0	ND		0.52	3.2	ND		0.52	3.2	ND		0.51	3.1	ND		5.3	32	ND		0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND		0.47	7.4	ND		0.47	7.4	ND		0.51	7.9	ND		0.51	8.0	ND		0.50	7.8	ND		5.1	80	ND		0.50	7.8
Vinyl chloride	TO-15	µg/m^3	ND		0.57	2.9	ND		0.58	3.0	ND		0.62	3.2	ND		0.62	3.2	ND		0.61	3.1	ND		6.2	32	ND		0.61	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**92**		0.90	7.4	ND		0.90	7.4	**47**		0.96	7.9	ND		0.97	8.0	**170**		0.95	7.8	**42**	**J 6G**	9.8	80	**50**		0.95	7.8
o-Xylene	TO-15	µg/m^3	**28**		0.44	7.4	ND		0.44	7.4	**16**		0.47	7.9	ND		0.48	8.0	**67**		0.47	7.8	**20**	**J 6G**	4.8	80	**16**		0.47	7.8
Total Xylenes	TO-15	µg/m^3	**120**		1.3	15	ND		1.3	15	**63**		1.4	16	ND		1.4	16	**240**		1.4	16	**62**	**J 6G**	15	160	**66**		1.4	16
TPH - Gasoline	TO-15	µg/m^3	**2,700**		31	290	**1,100**		31	300	**1,300**		33	320	**430**		33	320	**2,200**		33	310	**8,200**		340	3,200	**1,400**		33	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**2,700**		31	290	**1,100**		31	300	**1,300**		33	320	**430**		33	320	**2,200**		33	310	**8,200**		340	3,200	**1,400**		33	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW21A				VW21B				VW22A				VW22B				VW23A				VW23B				VW24A			
			Sampling Date/Time	12/22/2020 14:17				12/22/2020 14:06				12/22/2020 15:25				12/22/2020 15:15				12/29/2020 9:40				12/29/2020 9:30				12/3/2020 16:30			
			Sample Depth (feet)	5.5				14.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	FD				N				N				N				N				N				N			
			Field Sample ID	SG-VW21A-02				SG-VW21B-01				SG-VW22A-01				SG-VW22B-01				SG-VW23A-01				SG-VW23B-01				SG-VW24A-01			
			Lab Sample ID	2037849-13				2037849-14				2037849-15				2037849-16				2100036-05				2100036-06				2035587-01			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			6.4	78	ND			1.3	16	ND			1.3	16	ND			1.3	16
Acetone	TO-15	µg/m^3	**160**			6.6	76	**8.3**			0.68	7.8	**260**			3.3	39	**20**			0.67	7.8	**18**			0.66	7.6	**10**			0.68	8.0	ND			0.67	7.8
Acrylonitrile	TO-15	µg/m^3	ND			0.41	3.1	ND			0.42	3.1	ND			2.1	16	ND			0.42	3.1	ND			0.41	3.1	ND			0.43	3.2	ND			0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND			0.43	3.1	ND			0.44	3.1	ND			2.2	16	ND			0.43	3.1	ND			0.43	3.1	ND			0.45	3.2	ND			0.43	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.47	7.6	ND			0.49	7.8	ND			2.4	39	ND			0.48	7.8	ND			0.47	7.6	ND			0.49	8.0	ND			0.48	7.8
Benzene	TO-15	µg/m^3	**7.6**			0.32	3.1	ND			0.33	3.1	**7.5**	**J**	**6G**	1.6	16	ND			0.33	3.1	**10**			0.32	3.1	ND			0.33	3.2	ND			0.33	3.1
Benzyl chloride	TO-15	µg/m^3	ND			0.40	15	ND			0.41	16	ND			2.0	78	ND			0.40	16	ND			0.40	15	ND			0.41	16	ND			0.40	16
Bromodichloromethane	TO-15	µg/m^3	ND			0.69	7.6	ND			0.71	7.8	ND			3.5	39	ND			0.70	7.8	ND			0.69	7.6	ND			0.72	8.0	ND			0.70	7.8
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.4	16	ND			6.7	78	ND			1.3	16	ND			1.3	15	ND			1.4	16	ND			1.3	16
Bromomethane	TO-15	µg/m^3	ND			0.72	3.1	ND			0.74	3.1	ND			3.6	16	ND			0.73	3.1	ND			0.72	3.1	ND			0.75	3.2	ND			0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND			0.34	3.1	ND			0.35	3.1	ND			1.7	16	ND			0.34	3.1	ND			0.34	3.1	ND			0.35	3.2	ND			0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	7.6	ND			1.1	7.8	ND			5.4	39	ND			1.1	7.8	ND			1.1	7.6	ND			1.1	8.0	ND			1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**26**			0.29	3.1	**2.6**	**J**	**6G**	0.30	3.1	**18**			1.5	16	**3.5**			0.29	3.1	**34**			0.29	3.1	ND			0.30	3.2	**2.5**	**J**	**6G**	0.29	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND			0.69	7.6	ND			0.71	7.8	ND			3.5	39	ND			0.70	7.8	ND			0.69	7.6	ND			0.72	8.0	ND			0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND			0.61	7.6	ND			0.63	7.8	ND			3.1	39	ND			0.62	7.8	ND			0.61	7.6	ND			0.64	8.0	ND			0.62	7.8
Chloroethane	TO-15	µg/m^3	ND			0.81	3.1	ND			0.83	3.1	ND			4.1	16	ND			0.82	3.1	ND			0.81	3.1	ND			0.84	3.2	ND			0.82	3.1
Chloroform	TO-15	µg/m^3	**6.3**	**J**	**6G**	0.83	7.6	**24**			0.85	7.8	**10**	**J**	**6G**	4.2	39	**29**			0.84	7.8	**3.2**	**J**	**6G**	0.83	7.6	**2.9**	**J**	**6G**	0.86	8.0	**9.3**			0.84	7.8
Chloromethane	TO-15	µg/m^3	ND			0.32	3.1	ND			0.33	3.1	ND			1.6	16	ND			0.33	3.1	ND			0.32	3.1	ND			0.33	3.2	ND			0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND			0.58	3.1	ND			0.60	3.1	ND			2.9	16	ND			0.59	3.1	ND			0.58	3.1	ND			0.60	3.2	ND			0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND			0.66	7.6	ND			0.68	7.8	ND			3.3	39	ND			0.67	7.8	ND			0.66	7.6	ND			0.68	8.0	ND			0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.6	7.6	ND			2.7	7.8	ND			13	39	ND			2.6	7.8	ND			2.6	7.6	ND			2.7	8.0	ND			2.6	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.89	7.6	ND			0.91	7.8	ND			4.5	39	ND			0.90	7.8	ND			0.89	7.6	ND			0.92	8.0	ND			0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND			0.87	7.6	ND			0.89	7.8	ND			4.4	39	ND			0.88	7.8	ND			0.87	7.6	ND			0.91	8.0	ND			0.88	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.78	7.8	ND			3.9	39	ND			0.78	7.8	ND			0.76	7.6	ND			0.80	8.0	ND			0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.49	7.8	ND			2.4	39	ND			0.48	7.8	ND			0.47	7.6	ND			0.49	8.0	ND			0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.78	7.8	ND			3.9	39	ND			0.78	7.8	ND			0.76	7.6	ND			0.80	8.0	ND			0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**4.0**	**J**	**6G**	0.69	7.6	**4.6**	**J**	**6G**	0.71	7.8	ND			3.5	39	**8.5**			0.70	7.8	**3.6**	**J**	**6G**	0.69	7.6	**6.0**	**J**	**6G**	0.72	8.0	**18**			0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.35	7.6	ND			0.36	7.8	ND			1.8	39	ND			0.36	7.8	ND			0.35	7.6	ND			0.37	8.0	ND			0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.40	7.6	ND			0.41	7.8	ND			2.0	39	ND			0.40	7.8	ND			0.40	7.6	ND			0.41	8.0	ND			0.40	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.49	7.8	ND			2.4	39	ND			0.48	7.8	ND			0.47	7.6	ND			0.49	8.0	ND			0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.49	3.1	ND			0.50	3.1	ND			2.5	16	ND			0.50	3.1	ND			0.49	3.1	ND			0.51	3.2	ND			0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.41	3.1	ND			0.42	3.1	ND			2.1	16	ND			0.42	3.1	ND			0.41	3.1	ND			0.43	3.2	ND			0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.49	7.6	ND			0.50	7.8	ND			2.5	39	ND			0.50	7.8	ND			0.49	7.6	ND			0.51	8.0	ND			0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.46	7.6	ND			0.47	7.8	ND			2.3	39	ND			0.46	7.8	ND			0.46	7.6	ND			0.48	8.0	ND			0.46	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.61	7.6	ND			0.63	7.8	ND			3.1	39	ND			0.62	7.8	ND			0.61	7.6	ND			0.64	8.0	ND			0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.6	ND			1.4	7.8	ND			7.1	39	ND			1.4	7.8	ND			1.4	7.6	ND			1.4	8.0	ND			1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.1	7.6	ND			3.1	7.8	ND			16	39	ND			3.1	7.8	ND			3.1	7.6	ND			3.2	8.0	ND			3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND			0.60	7.6	ND			0.61	7.8	ND			3.0	39	ND			0.60	7.8	ND			0.60	7.6	ND			0.62	8.0	ND			0.60	7.8
1,4-Dioxane	TO-15	µg/m^3	ND			0.50	3.1	ND			0.52	3.1	ND			2.6	16	ND			0.51	3.1	ND			0.50	3.1	ND			0.52	3.2	ND			0.51	3.1
Ethanol	TO-15	µg/m^3	**4.2**			0.64	3.1	ND			0.66	3.1	ND			3.3	16	**4.8**			0.65	3.1	**2.6**	**J**	**6G**	0.64	3.1	**51**			0.67	3.2	ND			0.65	3.1
Ethyl acetate	TO-15	µg/m^3	ND			0.50	3.1	ND			0.52	3.1	ND			2.6	16	ND			0.51	3.1	ND			0.50	3.1	ND			0.52	3.2	ND			0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**15**			0.49	7.6	ND			0.50	7.8	**18**	**J**	**6G**	2.5	39	**2.5**	**J**	**6G**	0.50	7.8	**15**			0.49	7.6	ND			0.51	8.0	ND			0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**12**			0.46	7.6	ND			0.47	7.8	**16**	**J**	**6G**	2.3	39	**2.7**	**J**	**6G**	0.46	7.8	**9.4**			0.46	7.6	ND			0.48	8.0	ND			0.46	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.50	7.6	ND			0.52	7.8	ND			2.6	39	ND			0.51	7.8	ND			0.50	7.6	ND			0.52	8.0	ND			0.51	7.8
n-Heptane	TO-15	µg/m^3	**4.1**	**J**	**3D**	0.52	3.1	ND			0.53	3.1	ND			2.6	16	ND			0.53	3.1	**2.1**	**J**	**6G**	0.52	3.1	ND			0.54	3.2	ND			0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.3	15	ND			2.4	16	ND			12	78	ND			2.3	16	ND			2.3	15	ND			2.4	16	ND			2.3	16

Location ID			VW21A				VW21B				VW22A				VW22B				VW23A				VW23B				VW24A			
Sampling Date/Time			12/22/2020 14:17				12/22/2020 14:06				12/22/2020 15:25				12/22/2020 15:15				12/29/2020 9:40				12/29/2020 9:30				12/3/2020 16:30			
Sample Depth (feet)			5.5				14.5				5.5				14.5				5.5				14.5				5.5			
Sample Type			FD				N				N				N				N				N				N			
Field Sample ID			SG-VW21A-02				SG-VW21B-01				SG-VW22A-01				SG-VW22B-01				SG-VW23A-01				SG-VW23B-01				SG-VW24A-01			
Lab Sample ID			2037849-13				2037849-14				2037849-15				2037849-16				2100036-05				2100036-06				2035587-01			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.1	3.1	ND		1.1	3.1	ND		5.7	16	ND		1.1	3.1	ND		1.1	3.1	ND		1.2	3.2	ND		1.1	3.1
Hexane	TO-15	µg/m^3	ND		0.31	7.6	ND		0.31	7.8	ND		1.6	39	ND		0.31	7.8	**3.0**	**J 6G**	0.31	7.6	ND		0.32	8.0	ND		0.31	7.8
2-Hexanone	TO-15	µg/m^3	ND		0.44	7.6	ND		0.46	7.8	ND		2.2	39	ND		0.45	7.8	ND		0.44	7.6	ND		0.46	8.0	ND		0.45	7.8
Isooctane	TO-15	µg/m^3	**1.4**	**J 6G**	0.54	7.6	ND		0.55	7.8	ND		2.7	39	ND		0.54	7.8	ND		0.54	7.6	ND		0.56	8.0	ND		0.54	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	**3.5**		0.49	3.1	ND		0.50	3.1	ND		2.5	16	ND		0.50	3.1	ND		0.49	3.1	ND		0.51	3.2	ND		0.50	3.1
Methylene chloride	TO-15	µg/m^3	ND		0.61	15	ND		0.63	16	ND		3.1	78	ND		0.62	16	ND		0.61	15	ND		0.64	16	ND		0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**84**		0.29	3.1	**3.3**		0.30	3.1	**170**		1.5	16	**6.3**		0.29	3.1	**6.2**		0.29	3.1	ND		0.30	3.2	ND		0.29	3.1
Methyl iodide	TO-15	µg/m^3	ND		0.89	15	ND		0.91	16	ND		4.5	78	ND		0.90	16	ND		0.89	15	ND		0.92	16	ND		0.90	16
Methyl isobutyl ketone	TO-15	µg/m^3	**4.8**	**J 6G**	0.40	7.6	ND		0.41	7.8	**15**	**J 6G**	2.0	39	ND		0.40	7.8	**1.6**	**J 6G**	0.40	7.6	ND		0.41	8.0	ND		0.40	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.43	3.1	ND		0.44	3.1	ND		2.2	16	ND		0.43	3.1	ND		0.43	3.1	ND		0.45	3.2	ND		0.43	3.1
Naphthalene	TO-15	µg/m^3	ND		2.1	31	ND		2.2	31	ND		11	160	ND		2.2	31	**4.3**	**J 6G**	2.1	31	ND		2.2	32	**9.8**	**J 6G**	2.2	31
Propylene	TO-15	µg/m^3	ND		0.38	3.1	ND		0.39	3.1	ND		1.9	16	ND		0.39	3.1	ND		0.38	3.1	ND		0.40	3.2	ND		0.39	3.1
Styrene	TO-15	µg/m^3	ND		0.37	7.6	ND		0.38	7.8	ND		1.9	39	ND		0.37	7.8	ND		0.37	7.6	ND		0.38	8.0	ND		0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.93	7.6	ND		0.96	7.8	ND		4.7	39	ND		0.95	7.8	ND		0.93	7.6	ND		0.97	8.0	ND		0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.72	7.6	ND		0.74	7.8	ND		3.6	39	ND		0.73	7.8	ND		0.72	7.6	ND		0.75	8.0	ND		0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m^3	**130**		0.76	7.6	**210**		7.8	78	**93**		3.9	39	**210**		7.8	78	**54**		0.76	7.6	**210**		0.80	8.0	**650**		7.8	78
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		1.0	7.6	ND		1.1	7.8	ND		5.2	39	ND		1.0	7.8	ND		1.0	7.6	ND		1.1	8.0	ND		1.0	7.8
Tetrahydrofuran	TO-15	µg/m^3	**8.3**		0.41	3.1	ND		0.42	3.1	**13**	**J 6G**	2.1	16	ND		0.42	3.1	**2.7**	**J 6G**	0.41	3.1	ND		0.43	3.2	ND		0.42	3.1
Toluene	TO-15	µg/m^3	**150**		4.1	31	**3.8**		0.42	3.1	**1,200**		4.2	31	**20**		0.42	3.1	**100**		4.1	31	**3.2**		0.43	3.2	**1.2**	**J 6G**	0.42	3.1
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.3	15	ND		1.3	16	ND		6.4	78	ND		1.3	16	ND		1.3	15	ND		1.3	16	ND		1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	**7.8**		0.60	7.6	**9.4**		0.61	7.8	ND		3.0	39	ND		0.60	7.8	ND		0.60	7.6	ND		0.62	8.0	**0.93**	**J 6G**	0.60	7.8
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.93	7.6	ND		0.96	7.8	ND		4.7	39	ND		0.95	7.8	ND		0.93	7.6	ND		0.97	8.0	ND		0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m^3	**14**		0.83	7.6	**46**		0.85	7.8	ND		4.2	39	**13**		0.84	7.8	**6.8**	**J 6G**	0.83	7.6	ND		0.86	8.0	ND		0.84	7.8
Trichlorofluoromethane	TO-15	µg/m^3	**2.5**	**J 6G**	0.72	7.6	**2.1**	**J 6G**	0.74	7.8	ND		3.6	39	**2.5**	**J 6G**	0.73	7.8	ND		0.72	7.6	**2.2**	**J 6G**	0.75	8.0	**3.4**	**J 6G**	0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.73	7.6	ND		0.75	7.8	ND		3.7	39	ND		0.74	7.8	ND		0.73	7.6	**3.0**	**J 6G**	0.76	8.0	ND		0.74	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		0.84	7.6	ND		0.86	7.8	ND		4.3	39	ND		0.85	7.8	ND		0.84	7.6	ND		0.87	8.0	**2.0**	**J 6G**	0.85	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**16**		0.61	7.6	**2.2**	**J 6G**	0.63	7.8	**23**	**J 6G**	3.1	39	**3.8**	**J 6G**	0.62	7.8	**12**		0.61	7.6	ND		0.64	8.0	**0.84**	**J 6G**	0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**5.1**	**J 6G**	0.61	7.6	ND		0.63	7.8	ND		3.1	39	ND		0.62	7.8	**4.4**	**J 6G**	0.61	7.6	ND		0.64	8.0	ND		0.62	7.8
Vinyl acetate	TO-15	µg/m^3	ND		0.50	3.1	ND		0.52	3.1	ND		2.6	16	ND		0.51	3.1	ND		0.50	3.1	ND		0.52	3.2	ND		0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND		0.49	7.6	ND		0.50	7.8	ND		2.5	39	ND		0.50	7.8	ND		0.49	7.6	ND		0.51	8.0	ND		0.50	7.8
Vinyl chloride	TO-15	µg/m^3	ND		0.60	3.1	ND		0.61	3.1	ND		3.0	16	ND		0.60	3.1	ND		0.60	3.1	ND		0.62	3.2	ND		0.60	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**48**		0.93	7.6	**3.5**	**J 6G**	0.96	7.8	**58**		4.7	39	**8.8**		0.95	7.8	**50**		0.93	7.6	**1.5**	**J 6G**	0.97	8.0	ND		0.95	7.8
o-Xylene	TO-15	µg/m^3	**15**		0.46	7.6	**1.4**	**J 6G**	0.47	7.8	**19**	**J 6G**	2.3	39	**3.1**	**J 6G**	0.46	7.8	**16**		0.46	7.6	ND		0.48	8.0	ND		0.46	7.8
Total Xylenes	TO-15	µg/m^3	**64**		1.4	15	**4.9**	**J 6G**	1.4	16	**77**	**J 6G**	7.1	78	**12**	**J 6G**	1.4	16	**66**		1.4	15	**1.5**	**J 6G**	1.4	16	ND		1.4	16
TPH - Gasoline	TO-15	µg/m^3	**1,500**		32	310	**400**		33	310	**2,800**		160	1,600	**520**		33	310	**1,400**		32	310	**300**	**J 6G**	33	320	**810**		33	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**1,500**		32	310	**400**		33	310	**2,800**		160	1,600	**520**		33	310	**1,400**		32	310	**300**	**J 6G**	33	320	**810**		33	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW24A				VW24A				VW24B				VW25A				VW25B				VW26A				VW26B			
			Sampling Date/Time	3/3/2021 15:50				3/3/2021 15:50				12/3/2020 16:20				12/3/2020 10:35				12/3/2020 10:21				11/30/2020 12:28				11/30/2020 12:51			
			Sample Depth (feet)	5.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type	N				FD				N				N				N				N				N			
			Field Sample ID	SG-VW24A-02				SG-VW24A-03				SG-VW24B-01				SG-VW25A-01				SG-VW25B-01				SG-VW26A-01				SG-VW26B-01			
			Lab Sample ID	2107220-04				2107220-05				2035587-02				2035539-05				2035539-06				2035147-03				2035147-04			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.3	16	ND			1.3	16	ND			1.2	15	ND			1.3	16	ND			1.3	16	ND			1.2	15	ND			13	160
Acetone	TO-15	µg/m^3	**6.0**	**J**	**6G**	0.68	7.8	**6.7**	**J**	**6G**	0.68	8.0	**190**			6.5	76	**3.6**	**J**	**6G**	0.69	8.0	**2.3**	**J**	**6G**	0.69	8.0	**460**			6.4	75	**19**	**J**	**6G**	6.8	78
Acrylonitrile	TO-15	µg/m^3	ND			0.42	3.1	ND			0.43	3.2	ND			0.41	3.0	ND			0.43	3.2	ND			0.43	3.2	ND			0.40	3.0	ND			4.2	31
Allyl chloride	TO-15	µg/m^3	ND			0.44	3.1	ND			0.45	3.2	ND			0.42	3.0	ND			0.45	3.2	ND			0.45	3.2	ND			0.42	3.0	ND			4.4	31
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.49	7.8	ND			0.49	8.0	ND			0.47	7.6	ND			0.50	8.0	ND			0.50	8.0	ND			0.46	7.5	ND			4.9	78
Benzene	TO-15	µg/m^3	**1.8**	**J**	**6G**	0.33	3.1	**1.5**	**J**	**6G**	0.33	3.2	**16**			0.32	3.0	ND			0.34	3.2	ND			0.34	3.2	**20**			0.32	3.0	ND			3.3	31
Benzyl chloride	TO-15	µg/m^3	ND			0.41	16	ND			0.41	16	ND			0.39	15	ND			0.42	16	ND			0.42	16	ND			0.39	15	ND			4.1	160
Bromodichloromethane	TO-15	µg/m^3	ND			0.71	7.8	ND			0.72	8.0	ND			0.68	7.6	ND			0.72	8.0	ND			0.72	8.0	ND			0.68	7.5	ND			7.1	78
Bromoform	TO-15	µg/m^3	ND			1.4	16	ND			1.4	16	ND			1.3	15	ND			1.4	16	ND			1.4	16	ND			1.3	15	ND			14	160
Bromomethane	TO-15	µg/m^3	ND			0.74	3.1	ND			0.75	3.2	ND			0.71	3.0	ND			0.75	3.2	ND			0.75	3.2	ND			0.70	3.0	ND			7.4	31
1,3-Butadiene	TO-15	µg/m^3	ND			0.35	3.1	ND			0.35	3.2	ND			0.33	3.0	ND			0.35	3.2	ND			0.35	3.2	ND			0.33	3.0	ND			3.5	31
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	**3.3**	**J**	**6G**	1.1	7.8	**2.7**	**J**	**6G**	1.1	8.0	**7.6**			1.1	7.6	**2.3**	**J**	**6G**	1.1	8.0	**1.4**	**J**	**6G**	1.1	8.0	ND			1.0	7.5	ND			11	78
Carbon disulfide	TO-15	µg/m^3	**1.5**	**J**	**6G**	0.30	3.1	ND			0.30	3.2	**32**			0.29	3.0	**11**			0.30	3.2	**1.7**	**J**	**6G**	0.30	3.2	**11**			0.28	3.0	ND			3.0	31
Carbon tetrachloride	TO-15	µg/m^3	ND			0.71	7.8	ND			0.72	8.0	ND			0.68	7.6	ND			0.72	8.0	ND			0.72	8.0	ND			0.68	7.5	ND			7.1	78
Chlorobenzene	TO-15	µg/m^3	ND			0.63	7.8	ND			0.64	8.0	ND			0.60	7.6	ND			0.64	8.0	ND			0.64	8.0	ND			0.60	7.5	ND			6.3	78
Chloroethane	TO-15	µg/m^3	ND			0.83	3.1	ND			0.84	3.2	ND			0.80	3.0	ND			0.85	3.2	ND			0.85	3.2	ND			0.80	3.0	ND			8.3	31
Chloroform	TO-15	µg/m^3	ND			0.85	7.8	ND			0.86	8.0	ND			0.82	7.6	**5.7**	**J**	**6G**	0.86	8.0	**6.8**	**J**	**6G**	0.86	8.0	**0.95**	**J**	**6G**	0.81	7.5	ND			8.5	78
Chloromethane	TO-15	µg/m^3	ND			0.33	3.1	ND			0.33	3.2	ND			0.32	3.0	ND			0.34	3.2	ND			0.34	3.2	ND			0.32	3.0	ND			3.3	31
Cyclohexane	TO-15	µg/m^3	ND			0.60	3.1	ND			0.60	3.2	ND			0.57	3.0	ND			0.61	3.2	ND			0.61	3.2	ND			0.57	3.0	ND			6.0	31
Dibromochloromethane	TO-15	µg/m^3	ND			0.68	7.8	ND			0.68	8.0	ND			0.65	7.6	ND			0.69	8.0	ND			0.69	8.0	ND			0.64	7.5	ND			6.8	78
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.7	7.8	ND			2.7	8.0	ND			2.6	7.6	ND			2.7	8.0	ND			2.7	8.0	ND			2.6	7.5	ND			27	78
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.91	7.8	ND			0.92	8.0	**24**			0.88	7.6	ND			0.93	8.0	ND			0.93	8.0	ND			0.87	7.5	ND			9.1	78
Dibromomethane	TO-15	µg/m^3	ND			0.89	7.8	ND			0.91	8.0	ND			0.86	7.6	ND			0.91	8.0	ND			0.91	8.0	ND			0.86	7.5	ND			8.9	78
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.78	7.8	ND			0.80	8.0	ND			0.76	7.6	ND			0.80	8.0	ND			0.80	8.0	ND			0.75	7.5	ND			7.8	78
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.49	7.8	ND			0.49	8.0	ND			0.47	7.6	ND			0.50	8.0	ND			0.50	8.0	ND			0.46	7.5	ND			4.9	78
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.78	7.8	ND			0.80	8.0	ND			0.76	7.6	ND			0.80	8.0	ND			0.80	8.0	ND			0.75	7.5	ND			7.8	78
Dichlorodifluoromethane	TO-15	µg/m^3	**7.5**	**J**	**6G**	0.71	7.8	**7.2**	**J**	**6G**	0.72	8.0	**3.7**	**J**	**6G**	0.68	7.6	**10**			0.72	8.0	**24**			0.72	8.0	ND			0.68	7.5	ND			7.1	78
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.36	7.8	ND			0.37	8.0	ND			0.35	7.6	ND			0.37	8.0	ND			0.37	8.0	ND			0.34	7.5	ND			3.6	78
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.41	7.8	ND			0.41	8.0	**5.0**	**J**	**6G**	0.39	7.6	ND			0.42	8.0	ND			0.42	8.0	ND			0.39	7.5	ND			4.1	78
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.49	7.8	ND			0.49	8.0	ND			0.47	7.6	ND			0.50	8.0	ND			0.50	8.0	ND			0.46	7.5	ND			4.9	78
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.50	3.1	ND			0.51	3.2	ND			0.48	3.0	ND			0.51	3.2	ND			0.51	3.2	ND			0.48	3.0	ND			5.0	31
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.42	3.1	ND			0.43	3.2	ND			0.41	3.0	ND			0.43	3.2	ND			0.43	3.2	ND			0.40	3.0	ND			4.2	31
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.50	7.8	ND			0.51	8.0	ND			0.48	7.6	ND			0.51	8.0	ND			0.51	8.0	ND			0.48	7.5	ND			5.0	78
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.47	7.8	ND			0.48	8.0	ND			0.45	7.6	ND			0.48	8.0	ND			0.48	8.0	ND			0.45	7.5	ND			4.7	78
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.63	7.8	ND			0.64	8.0	ND			0.60	7.6	ND			0.64	8.0	ND			0.64	8.0	ND			0.60	7.5	ND			6.3	78
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.8	ND			1.4	8.0	ND			1.4	7.6	ND			1.5	8.0	ND			1.5	8.0	ND			1.4	7.5	ND			14	78
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.1	7.8	ND			3.2	8.0	ND			3.0	7.6	ND			3.2	8.0	ND			3.2	8.0	ND			3.0	7.5	ND			31	78
Diisopropyl ether	TO-15	µg/m^3	ND			0.61	7.8	ND			0.62	8.0	ND			0.59	7.6	ND			0.62	8.0	ND			0.62	8.0	ND			0.58	7.5	ND			6.1	78
1,4-Dioxane	TO-15	µg/m^3	ND			0.52	3.1	ND			0.52	3.2	ND			0.50	3.0	ND			0.53	3.2	ND			0.53	3.2	ND			0.50	3.0	ND			5.2	31
Ethanol	TO-15	µg/m^3	**49**	**J**	**3D**	0.66	3.1	**7.1**	**J**	**3D**	0.67	3.2	**13**			0.63	3.0	ND			0.67	3.2	**3.9**			0.67	3.2	**16**			0.63	3.0	ND			6.6	31
Ethyl acetate	TO-15	µg/m^3	ND			0.52	3.1	ND			0.52	3.2	ND			0.50	3.0	ND			0.53	3.2	ND			0.53	3.2	ND			0.50	3.0	ND			5.2	31
Ethylbenzene	TO-15	µg/m^3	**5.5**	**J**	**6G**	0.50	7.8	**1.9**	**J**	**6G**	0.51	8.0	**52**			0.48	7.6	**3.0**	**J**	**6G**	0.51	8.0	ND			0.51	8.0	**51**			0.48	7.5	ND			5.0	78
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**15**	**J**	**3D**	0.47	7.8	**4.1**	**J**	**3D, 6G**	0.48	8.0	**50**			0.45	7.6	**3.6**	**J**	**6G**	0.48	8.0	ND			0.48	8.0	**46**			0.45	7.5	ND			4.7	78
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.52	7.8	ND			0.52	8.0	ND			0.50	7.6	ND			0.53	8.0	ND			0.53	8.0	ND			0.50	7.5	ND			5.2	78
n-Heptane	TO-15	µg/m^3	ND			0.53	3.1	ND			0.54	3.2	ND			0.51	3.0	ND			0.54	3.2	ND			0.54	3.2	**4.7**			0.51	3.0	ND			5.3	31
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.4	16	ND			2.4	16	ND			2.3	15	ND			2.4	16	ND			2.4	16	ND			2.2	15	ND			24	160

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID				VW24A				VW24A				VW24B				VW25A				VW25B				VW26A				VW26B			
			Sampling Date/Time				3/3/2021 15:50				3/3/2021 15:50				12/3/2020 16:20				12/3/2020 10:35				12/3/2020 10:21				11/30/2020 12:28				11/30/2020 12:51			
			Sample Depth (feet)				5.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type				N				FD				N				N				N				N				N			
			Field Sample ID				SG-VW24A-02				SG-VW24A-03				SG-VW24B-01				SG-VW25A-01				SG-VW25B-01				SG-VW26A-01				SG-VW26B-01			
			Lab Sample ID				2107220-04				2107220-05				2035587-02				2035539-05				2035539-06				2035147-03				2035147-04			
			Status				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND			1.1	3.1	ND			1.2	3.2	ND			1.1	3.0	ND			1.2	3.2	ND			1.2	3.2	ND			1.1	3.0	ND			11	31
Hexane	TO-15	µg/m^3	ND			0.31	7.8	ND			0.32	8.0	ND			0.30	7.6	ND			0.32	8.0	ND			0.32	8.0	ND			0.30	7.5	ND			3.1	78
2-Hexanone	TO-15	µg/m^3	ND			0.46	7.8	ND			0.46	8.0	ND			0.44	7.6	ND			0.46	8.0	ND			0.46	8.0	ND			0.44	7.5	ND			4.6	78
Isooctane	TO-15	µg/m^3	**1.6**	**J**	**6G**	0.55	7.8	ND			0.56	8.0	**7.4**	**J**	**6G**	0.53	7.6	ND			0.56	8.0	ND			0.56	8.0	**3.6**	**J**	**6G**	0.52	7.5	ND			5.5	78
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	**3.2**			0.50	3.1	**3.6**			0.51	3.2	ND			0.48	3.0	ND			0.51	3.2	**1.9**	**J**	**6G**	0.51	3.2	ND			0.48	3.0	ND			5.0	31
Methylene chloride	TO-15	µg/m^3	ND			0.63	16	ND			0.64	16	ND			0.60	15	ND			0.64	16	ND			0.64	16	ND			0.60	15	ND			6.3	160
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**1.0**	**J**	**6G**	0.30	3.1	ND			0.30	3.2	**37**			0.29	3.0	ND			0.30	3.2	ND			0.30	3.2	**180**			2.8	30	ND			3.0	31
Methyl iodide	TO-15	µg/m^3	ND			0.91	16	ND			0.92	16	ND			0.88	15	ND			0.93	16	ND			0.93	16	ND			0.87	15	ND			9.1	160
Methyl isobutyl ketone	TO-15	µg/m^3	ND			0.41	7.8	ND			0.41	8.0	**47**			0.39	7.6	ND			0.42	8.0	ND			0.42	8.0	**95**			0.39	7.5	ND			4.1	78
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND			0.44	3.1	ND			0.45	3.2	**1.1**	**J**	**6G**	0.42	3.0	ND			0.45	3.2	ND			0.45	3.2	ND			0.42	3.0	ND			4.4	31
Naphthalene	TO-15	µg/m^3	**17**	**J**	**6G**	2.2	31	**6.9**	**J**	**6G**	2.2	32	**14**	**J**	**6G**	2.1	30	ND			2.2	32	ND			2.2	32	ND			2.1	30	ND			22	310
Propylene	TO-15	µg/m^3	ND			0.39	3.1	ND			0.40	3.2	ND			0.38	3.0	ND			0.40	3.2	ND			0.40	3.2	ND			0.38	3.0	ND			3.9	31
Styrene	TO-15	µg/m^3	ND			0.38	7.8	ND			0.38	8.0	ND			0.36	7.6	ND			0.38	8.0	ND			0.38	8.0	**2.5**	**J**	**6G**	0.36	7.5	ND			3.8	78
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.96	7.8	ND			0.97	8.0	ND			0.92	7.6	ND			0.98	8.0	ND			0.98	8.0	ND			0.92	7.5	ND			9.6	78
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.74	7.8	ND			0.75	8.0	ND			0.71	7.6	ND			0.75	8.0	ND			0.75	8.0	ND			0.70	7.5	ND			7.4	78
Tetrachloroethene (PCE)	TO-15	µg/m^3	**120**			0.78	7.8	**110**			0.80	8.0	**160**			0.76	7.6	**96**			0.80	8.0	**210**			0.80	8.0	**42**			0.75	7.5	**53**	**J**	**6G**	7.8	78
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND			1.1	7.8	ND			1.1	8.0	ND			1.0	7.6	ND			1.1	8.0	ND			1.1	8.0	ND			1.0	7.5	ND			11	78
Tetrahydrofuran	TO-15	µg/m^3	ND			0.42	3.1	ND			0.43	3.2	**24**			0.41	3.0	**2.5**	**J**	**6G**	0.43	3.2	ND			0.43	3.2	**64**			0.40	3.0	ND			4.2	31
Toluene	TO-15	µg/m^3	**14**	**J**	**3D**	0.42	3.1	**6.0**	**J**	**3D**	0.43	3.2	**210**			4.1	30	**7.0**			0.43	3.2	**1.2**	**J**	**6G**	0.43	3.2	**210**			4.0	30	**32**			4.2	31
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND			1.3	16	ND			1.3	16	ND			1.2	15	ND			1.3	16	ND			1.3	16	ND			1.2	15	ND			13	160
1,1,1-Trichloroethane	TO-15	µg/m^3	ND			0.61	7.8	ND			0.62	8.0	**1.6**	**J**	**6G**	0.59	7.6	ND			0.62	8.0	ND			0.62	8.0	ND			0.58	7.5	ND			6.1	78
1,1,2-Trichloroethane	TO-15	µg/m^3	ND			0.96	7.8	ND			0.97	8.0	ND			0.92	7.6	ND			0.98	8.0	ND			0.98	8.0	ND			0.92	7.5	ND			9.6	78
Trichloroethene (TCE)	TO-15	µg/m^3	ND			0.85	7.8	ND			0.86	8.0	ND			0.82	7.6	ND			0.86	8.0	ND			0.86	8.0	ND			0.81	7.5	ND			8.5	78
Trichlorofluoromethane	TO-15	µg/m^3	**2.3**	**J**	**6G**	0.74	7.8	**2.1**	**J**	**6G**	0.75	8.0	**1.6**	**J**	**6G**	0.71	7.6	**1.9**	**J**	**6G**	0.75	8.0	**3.1**	**J**	**6G**	0.75	8.0	**1.5**	**J**	**6G**	0.70	7.5	ND			7.4	78
1,2,3-Trichloropropane	TO-15	µg/m^3	ND			0.75	7.8	ND			0.76	8.0	ND			0.72	7.6	ND			0.77	8.0	ND			0.77	8.0	ND			0.72	7.5	ND			7.5	78
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	**3.0**	**J**	**6G**	0.86	7.8	ND			0.87	8.0	**1.5**	**J**	**6G**	0.83	7.6	ND			0.88	8.0	ND			0.88	8.0	ND			0.82	7.5	ND			8.6	78
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**33**	**J**	**3D**	0.63	7.8	**8.2**	**J**	**3D**	0.64	8.0	**78**			0.60	7.6	**7.7**	**J**	**6G**	0.64	8.0	ND			0.64	8.0	**69**			0.60	7.5	ND			6.3	78
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**6.8**	**J**	**6G**	0.63	7.8	**1.9**	**J**	**6G**	0.64	8.0	**17**			0.60	7.6	**2.5**	**J**	**6G**	0.64	8.0	ND			0.64	8.0	**22**			0.60	7.5	ND			6.3	78
Vinyl acetate	TO-15	µg/m^3	ND			0.52	3.1	ND			0.52	3.2	**4.8**			0.50	3.0	ND			0.53	3.2	ND			0.53	3.2	ND			0.50	3.0	ND			5.2	31
Vinyl bromide	TO-15	µg/m^3	ND			0.50	7.8	ND			0.51	8.0	ND			0.48	7.6	ND			0.51	8.0	ND			0.51	8.0	ND			0.48	7.5	ND			5.0	78
Vinyl chloride	TO-15	µg/m^3	ND			0.61	3.1	ND			0.62	3.2	ND			0.59	3.0	ND			0.62	3.2	ND			0.62	3.2	ND			0.58	3.0	ND			6.1	31
p- & *m*-Xylenes	TO-15	µg/m^3	**29**	**J**	**3D**	0.96	7.8	**8.4**	**J**	**3D**	0.97	8.0	**170**			0.92	7.6	**12**			0.98	8.0	**4.3**	**J**	**6G**	0.98	8.0	**170**			0.92	7.5	ND			9.6	78
o-Xylene	TO-15	µg/m^3	**13**	**J**	**3D**	0.47	7.8	**3.7**	**J**	**3D, 6G**	0.48	8.0	**59**			0.45	7.6	**5.2**	**J**	**6G**	0.48	8.0	ND			0.48	8.0	**63**			0.45	7.5	ND			4.7	78
Total Xylenes	TO-15	µg/m^3	**42**	**J**	**3D**	1.4	16	**12**	**J**	**3D, 6G**	1.4	16	**230**			1.4	15	**17**			1.5	16	**4.3**	**J**	**6G**	1.5	16	**230**			1.4	15	ND			14	160
TPH - Gasoline	TO-15	µg/m^3	**860**	**J**	**3D**	33	310	**580**	**J**	**3D**	33	320	**2,000**			32	300	**420**			34	320	**420**			34	320	**2,700**			32	300	**3,400**			330	3,100
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**860**	**J**	**3D**	33	310	**580**	**J**	**3D**	33	320	**2,000**			32	300	**420**			34	320	**420**			34	320	**2,700**			32	300	**3,400**			330	3,100

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW27A				VW27B				VW28A				VW28B				VW29A				VW29B				VW30A			
			Sampling Date/Time	12/23/2020 15:57				12/23/2020 15:47				12/29/2020 8:40				12/29/2020 8:30				12/29/2020 10:55				12/29/2020 10:45				12/3/2020 15:03			
			Sample Depth (feet)	5.5				14.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW27A-01				SG-VW27B-01				SG-VW28A-01				SG-VW28B-01				SG-VW29A-01				SG-VW29B-01				SG-VW30A-01			
			Lab Sample ID	2100036-01				2100036-02				2100036-03				2100036-04				2100036-07				2100036-08				2035539-07			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		12	150	ND		1.2	15	ND		13	150	ND	UJ 4D	1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	15
Acetone	TO-15	µg/m^3	ND		6.5	76	ND		0.65	7.6	ND		6.6	77	**27**	**J- 4D**	0.68	8.0	**5.5**	**J 6G**	0.69	8.0	**4.1**	**J 6G**	0.67	7.8	**30**		0.66	7.7
Acrylonitrile	TO-15	µg/m^3	ND		4.1	30	ND		0.41	3.0	ND		4.2	31	ND	UJ 4D	0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND		4.3	30	ND		0.43	3.0	ND		4.3	31	ND	UJ 4D	0.45	3.2	ND		0.45	3.2	ND		0.43	3.1	ND		0.43	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		4.7	76	ND		0.47	7.6	ND		4.8	77	ND	UJ 4D	0.49	8.0	ND		0.50	8.0	ND		0.48	7.8	ND		0.48	7.7
Benzene	TO-15	µg/m^3	**39**		3.2	30	**7.6**		0.32	3.0	ND		3.2	31	ND	UJ 4D	0.33	3.2	**9.4**		0.34	3.2	ND		0.33	3.1	**3.7**		0.32	3.1
Benzyl chloride	TO-15	µg/m^3	ND		4.0	150	ND		0.40	15	ND		4.0	150	ND	UJ 4D	0.41	16	ND		0.42	16	ND		0.40	16	ND		0.40	15
Bromodichloromethane	TO-15	µg/m^3	ND		6.8	76	ND		0.68	7.6	ND		6.9	77	ND	UJ 4D	0.72	8.0	ND		0.72	8.0	ND		0.70	7.8	**12**		0.69	7.7
Bromoform	TO-15	µg/m^3	ND		13	150	ND		1.3	15	ND		13	150	ND	UJ 4D	1.4	16	ND		1.4	16	ND		1.3	16	ND		1.3	15
Bromomethane	TO-15	µg/m^3	ND		7.1	30	ND		0.71	3.0	ND		7.2	31	ND	UJ 4D	0.75	3.2	ND		0.76	3.2	ND		0.73	3.1	ND		0.72	3.1
1,3-Butadiene	TO-15	µg/m^3	ND		3.3	30	ND		0.33	3.0	ND		3.4	31	ND	UJ 4D	0.35	3.2	ND		0.35	3.2	ND		0.34	3.1	ND		0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND		11	76	ND		1.1	7.6	ND		11	77	ND	UJ 4D	1.1	8.0	ND		1.1	8.0	ND		1.1	7.8	**1.2**	**J 6G**	1.1	7.7
Carbon disulfide	TO-15	µg/m^3	**28**	**J 6G**	2.9	30	**9.5**		0.29	3.0	**26**	**J 6G**	2.9	31	**1.1**	**J- 4D, 6G**	0.30	3.2	**37**		0.31	3.2	ND		0.29	3.1	**15**		0.29	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND		6.8	76	ND		0.68	7.6	ND		6.9	77	ND	UJ 4D	0.72	8.0	ND		0.72	8.0	ND		0.70	7.8	ND		0.69	7.7
Chlorobenzene	TO-15	µg/m^3	ND		6.1	76	ND		0.61	7.6	ND		6.2	77	ND	UJ 4D	0.64	8.0	ND		0.64	8.0	ND		0.62	7.8	ND		0.62	7.7
Chloroethane	TO-15	µg/m^3	ND		8.1	30	ND		0.81	3.0	ND		8.2	31	ND	UJ 4D	0.84	3.2	ND		0.85	3.2	ND		0.82	3.1	ND		0.82	3.1
Chloroform	TO-15	µg/m^3	ND		8.2	76	**2.3**	**J 6G**	0.82	7.6	ND		8.3	77	**12**	**J- 4D**	0.86	8.0	**4.1**	**J 6G**	0.87	8.0	**13**		0.84	7.8	**650**		8.3	77
Chloromethane	TO-15	µg/m^3	ND		3.2	30	ND		0.32	3.0	ND		3.2	31	ND	UJ 4D	0.33	3.2	ND		0.34	3.2	ND		0.33	3.1	ND		0.32	3.1
Cyclohexane	TO-15	µg/m^3	ND		5.8	30	**6.2**		0.58	3.0	ND		5.9	31	ND	UJ 4D	0.60	3.2	ND		0.61	3.2	ND		0.59	3.1	ND		0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND		6.5	76	ND		0.65	7.6	ND		6.6	77	ND	UJ 4D	0.68	8.0	ND		0.69	8.0	ND		0.67	7.8	ND		0.66	7.7
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		26	76	ND		2.6	7.6	ND		26	77	ND	UJ 4D	2.7	8.0	ND		2.7	8.0	ND		2.6	7.8	ND		2.6	7.7
1,2-Dibromoethane	TO-15	µg/m^3	ND		8.8	76	**3.2**	**J 6G**	0.88	7.6	ND		8.9	77	ND	UJ 4D	0.92	8.0	ND		0.93	8.0	ND		0.90	7.8	ND		0.89	7.7
Dibromomethane	TO-15	µg/m^3	ND		8.7	76	ND		0.87	7.6	ND		8.8	77	ND	UJ 4D	0.91	8.0	ND		0.92	8.0	ND		0.88	7.8	ND		0.88	7.7
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		7.6	76	ND		0.76	7.6	ND		7.7	77	ND	UJ 4D	0.80	8.0	ND		0.80	8.0	ND		0.78	7.8	ND		0.77	7.7
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		4.7	76	ND		0.47	7.6	ND		4.8	77	ND	UJ 4D	0.49	8.0	ND		0.50	8.0	ND		0.48	7.8	ND		0.48	7.7
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		7.6	76	ND		0.76	7.6	ND		7.7	77	ND	UJ 4D	0.80	8.0	ND		0.80	8.0	ND		0.78	7.8	ND		0.77	7.7
Dichlorodifluoromethane	TO-15	µg/m^3	ND		6.8	76	**2.4**	**J 6G**	0.68	7.6	ND		6.9	77	**4.4**	**J- 4D, 6G**	0.72	8.0	**4.0**	**J 6G**	0.72	8.0	**16**		0.70	7.8	**6.5**	**J 6G**	0.69	7.7
1,1-Dichloroethane	TO-15	µg/m^3	ND		3.5	76	ND		0.35	7.6	ND		3.5	77	ND	UJ 4D	0.37	8.0	ND		0.37	8.0	ND		0.36	7.8	ND		0.35	7.7
1,2-Dichloroethane	TO-15	µg/m^3	ND		4.0	76	**4.4**	**J 6G**	0.40	7.6	ND		4.0	77	ND	UJ 4D	0.41	8.0	ND		0.42	8.0	ND		0.40	7.8	ND		0.40	7.7
1,1-Dichloroethene	TO-15	µg/m^3	ND		4.7	76	ND		0.47	7.6	ND		4.8	77	ND	UJ 4D	0.49	8.0	ND		0.50	8.0	ND		0.48	7.8	ND		0.48	7.7
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND		4.9	30	ND		0.49	3.0	ND		4.9	31	ND	UJ 4D	0.51	3.2	ND		0.52	3.2	ND		0.50	3.1	ND		0.49	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND		4.1	30	ND		0.41	3.0	ND		4.2	31	ND	UJ 4D	0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND		4.9	76	ND		0.49	7.6	ND		4.9	77	ND	UJ 4D	0.51	8.0	ND		0.52	8.0	ND		0.50	7.8	ND		0.49	7.7
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		4.6	76	ND		0.46	7.6	ND		4.6	77	ND	UJ 4D	0.48	8.0	ND		0.48	8.0	ND		0.46	7.8	ND		0.46	7.7
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		6.1	76	ND		0.61	7.6	ND		6.2	77	ND	UJ 4D	0.64	8.0	ND		0.64	8.0	ND		0.62	7.8	ND		0.62	7.7
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		14	76	ND		1.4	7.6	ND		14	77	ND	UJ 4D	1.4	8.0	ND		1.5	8.0	ND		1.4	7.8	ND		1.4	7.7
1,1-Difluoroethane	TO-15	µg/m^3	ND		30	76	ND		3.0	7.6	ND		31	77	ND	UJ 4D	3.2	8.0	ND		3.2	8.0	ND		3.1	7.8	ND		3.1	7.7
Diisopropyl ether	TO-15	µg/m^3	ND		5.9	76	ND		0.59	7.6	ND		6.0	77	ND	UJ 4D	0.62	8.0	ND		0.63	8.0	ND		0.60	7.8	ND		0.60	7.7
1,4-Dioxane	TO-15	µg/m^3	ND		5.0	30	ND		0.50	3.0	ND		5.1	31	ND	UJ 4D	0.52	3.2	ND		0.53	3.2	ND		0.51	3.1	ND		0.51	3.1
Ethanol	TO-15	µg/m^3	**41**		6.4	30	**1.8**	**J 6G**	0.64	3.0	ND		6.5	31	**100**	**J- 4D**	0.67	3.2	ND		0.68	3.2	ND		0.65	3.1	**4.0**		0.65	3.1
Ethyl acetate	TO-15	µg/m^3	ND		5.0	30	ND		0.50	3.0	ND		5.1	31	ND	UJ 4D	0.52	3.2	ND		0.53	3.2	ND		0.51	3.1	ND		0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**19**	**J 6G**	4.9	76	**3.3**	**J 6G**	0.49	7.6	**17**	**J 6G**	4.9	77	**1.4**	**J- 4D, 6G**	0.51	8.0	**22**		0.52	8.0	ND		0.50	7.8	**20**		0.49	7.7
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	ND		4.6	76	**1.7**	**J 6G**	0.46	7.6	ND		4.6	77	ND	UJ 4D	0.48	8.0	**15**		0.48	8.0	ND		0.46	7.8	**22**		0.46	7.7
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		5.0	76	ND		0.50	7.6	ND		5.1	77	ND	UJ 4D	0.52	8.0	ND		0.53	8.0	ND		0.51	7.8	ND		0.51	7.7
n-Heptane	TO-15	µg/m^3	**29**	**J 6G**	5.2	30	**5.2**		0.52	3.0	ND		5.2	31	ND	UJ 4D	0.54	3.2	ND		0.55	3.2	ND		0.53	3.1	**2.1**	**J 6G**	0.52	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND		23	150	ND		2.3	15	ND		23	150	ND	UJ 4D	2.4	16	ND		2.4	16	ND		2.3	16	ND		2.3	15

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			Location ID	VW27A				VW27B				VW28A				VW28B				VW29A				VW29B				VW30A			
			Sampling Date/Time	12/23/2020 15:57				12/23/2020 15:47				12/29/2020 8:40				12/29/2020 8:30				12/29/2020 10:55				12/29/2020 10:45				12/3/2020 15:03			
			Sample Depth (feet)	5.5				14.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW27A-01				SG-VW27B-01				SG-VW28A-01				SG-VW28B-01				SG-VW29A-01				SG-VW29B-01				SG-VW30A-01			
			Lab Sample ID	2100036-01				2100036-02				2100036-03				2100036-04				2100036-07				2100036-08				2035539-07			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		11	30	ND		1.1	3.0	ND		11	31	ND	UJ 4D	1.2	3.2	ND		1.2	3.2	ND		1.1	3.1	ND		1.1	3.1
Hexane	TO-15	µg/m^3	**85**		3.0	76	**20**		0.30	7.6	ND		3.1	77	ND	UJ 4D	0.32	8.0	ND		0.32	8.0	ND		0.31	7.8	ND		0.31	7.7
2-Hexanone	TO-15	µg/m^3	ND		4.4	76	ND		0.44	7.6	ND		4.5	77	ND	UJ 4D	0.46	8.0	ND		0.47	8.0	ND		0.45	7.8	ND		0.45	7.7
Isooctane	TO-15	µg/m^3	**17**	**J 6G**	5.3	76	**3.8**	**J 6G**	0.53	7.6	ND		5.4	77	ND	UJ 4D	0.56	8.0	ND		0.56	8.0	ND		0.54	7.8	**3.8**	**J 6G**	0.54	7.7
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		4.9	30	ND		0.49	3.0	ND		4.9	31	**42**	**J- 4D**	0.51	3.2	ND		0.52	3.2	ND		0.50	3.1	**6.5**		0.49	3.1
Methylene chloride	TO-15	µg/m^3	ND		6.1	150	ND		0.61	15	ND		6.2	150	ND	UJ 4D	0.64	16	ND		0.64	16	ND		0.62	16	ND		0.62	15
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**24**	**J 6G**	2.9	30	ND		0.29	3.0	ND		2.9	31	**69**	**J- 4D**	0.30	3.2	**2.5**	**J 6G**	0.31	3.2	ND		0.29	3.1	**18**		0.29	3.1
Methyl iodide	TO-15	µg/m^3	ND		8.8	150	ND		0.88	15	ND		8.9	150	ND	UJ 4D	0.92	16	ND		0.93	16	ND		0.90	16	ND		0.89	15
Methyl isobutyl ketone	TO-15	µg/m^3	ND		4.0	76	ND		0.40	7.6	ND		4.0	77	**4.8**	**J- 4D, 6G**	0.41	8.0	ND		0.42	8.0	ND		0.40	7.8	**6.0**	**J 6G**	0.40	7.7
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		4.3	30	ND		0.43	3.0	ND		4.3	31	ND	UJ 4D	0.45	3.2	ND		0.45	3.2	ND		0.43	3.1	ND		0.43	3.1
Naphthalene	TO-15	µg/m^3	ND		21	300	ND		2.1	30	ND		22	310	**4.4**	**J- 4D, 6G**	2.2	32	ND		2.3	32	ND		2.2	31	**7.5**	**J 6G**	2.2	31
Propylene	TO-15	µg/m^3	ND		3.8	30	ND		0.38	3.0	**8.5**	**J 6G**	3.8	31	ND	UJ 4D	0.40	3.2	ND		0.40	3.2	ND		0.39	3.1	ND		0.38	3.1
Styrene	TO-15	µg/m^3	ND		3.6	76	ND		0.36	7.6	ND		3.7	77	ND	UJ 4D	0.38	8.0	ND		0.39	8.0	ND		0.37	7.8	ND		0.37	7.7
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		9.3	76	ND		0.93	7.6	ND		9.4	77	ND	UJ 4D	0.97	8.0	ND		0.98	8.0	ND		0.95	7.8	ND		0.94	7.7
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		7.1	76	ND		0.71	7.6	ND		7.2	77	ND	UJ 4D	0.75	8.0	ND		0.76	8.0	ND		0.73	7.8	ND		0.72	7.7
Tetrachloroethene (PCE)	TO-15	µg/m^3	ND		7.6	76	**110**		0.76	7.6	**89**		7.7	77	**180**	**J- 4D**	0.80	8.0	**56**		0.80	8.0	**380**		7.8	78	**99**		0.77	7.7
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		10	76	ND		1.0	7.6	ND		10	77	ND	UJ 4D	1.1	8.0	ND		1.1	8.0	ND		1.0	7.8	ND		1.0	7.7
Tetrahydrofuran	TO-15	µg/m^3	ND		4.1	30	ND		0.41	3.0	ND		4.2	31	**4.7**	**J- 4D**	0.43	3.2	**3.0**	**J 6G**	0.43	3.2	ND		0.42	3.1	**21**		0.42	3.1
Toluene	TO-15	µg/m^3	**2500**		41	300	**56**		0.41	3.0	**3500**		42	310	**8.5**	**J- 4D**	0.43	3.2	**120**		4.3	32	**4.8**		0.42	3.1	**72**		0.42	3.1
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		12	150	ND		1.2	15	ND		13	150	ND	UJ 4D	1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	15
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		5.9	76	ND		0.59	7.6	ND		6.0	77	ND	UJ 4D	0.62	8.0	ND		0.63	8.0	ND		0.60	7.8	ND		0.60	7.7
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		9.3	76	ND		0.93	7.6	ND		9.4	77	ND	UJ 4D	0.97	8.0	ND		0.98	8.0	ND		0.95	7.8	ND		0.94	7.7
Trichloroethene (TCE)	TO-15	µg/m^3	ND		8.2	76	ND		0.82	7.6	ND		8.3	77	**11**	**J- 4D**	0.86	8.0	ND		0.87	8.0	ND		0.84	7.8	**2.7**	**J 6G**	0.83	7.7
Trichlorofluoromethane	TO-15	µg/m^3	ND		7.1	76	ND		0.71	7.6	ND		7.2	77	ND	UJ 4D	0.75	8.0	ND		0.76	8.0	**2.6**	**J 6G**	0.73	7.8	**1.8**	**J 6G**	0.72	7.7
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		7.3	76	ND		0.73	7.6	ND		7.4	77	ND	UJ 4D	0.76	8.0	ND		0.77	8.0	ND		0.74	7.8	ND		0.74	7.7
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		8.4	76	ND		0.84	7.6	ND		8.5	77	ND	UJ 4D	0.87	8.0	ND		0.89	8.0	ND		0.85	7.8	ND		0.85	7.7
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**20**	**J 6G**	6.1	76	**2.6**	**J 6G**	0.61	7.6	**16**	**J 6G**	6.2	77	**1.8**	**J- 4D, 6G**	0.64	8.0	**18**		0.64	8.0	ND		0.62	7.8	**32**		0.62	7.7
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND		6.1	76	ND		0.61	7.6	ND		6.2	77	ND	UJ 4D	0.64	8.0	**7.0**	**J 6G**	0.64	8.0	ND		0.62	7.8	**9.9**		0.62	7.7
Vinyl acetate	TO-15	µg/m^3	ND		5.0	30	ND		0.50	3.0	ND		5.1	31	ND	UJ 4D	0.52	3.2	ND		0.53	3.2	ND		0.51	3.1	ND		0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND		4.9	76	ND		0.49	7.6	ND		4.9	77	ND	UJ 4D	0.51	8.0	ND		0.52	8.0	ND		0.50	7.8	ND		0.49	7.7
Vinyl chloride	TO-15	µg/m^3	ND		5.9	30	ND		0.59	3.0	ND		6.0	31	ND	UJ 4D	0.62	3.2	ND		0.63	3.2	ND		0.60	3.1	ND		0.60	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**64**	**J 6G**	9.3	76	**9.1**		0.93	7.6	**56**	**J 6G**	9.4	77	**3.7**	**J- 4D, 6G**	0.97	8.0	**75**		0.98	8.0	**1.9**	**J 6G**	0.95	7.8	**75**		0.94	7.7
o-Xylene	TO-15	µg/m^3	**21**	**J 6G**	4.6	76	**3.3**	**J 6G**	0.46	7.6	**18**	**J 6G**	4.6	77	ND	UJ 4D	0.48	8.0	**23**		0.48	8.0	ND		0.46	7.8	**29**		0.46	7.7
Total Xylenes	TO-15	µg/m^3	**85**	**J 6G**	14	150	**12**	**J 6G**	1.4	15	**74**	**J 6G**	14	150	**3.7**	**J- 4D, 6G**	1.4	16	**98**		1.5	16	**1.9**	**J 6G**	1.4	16	**100**		1.4	15
TPH - Gasoline	TO-15	µg/m^3	**5,400**		320	3,000	**610**		32	300	**6,900**		320	3,100	**870**	**J- 4D**	33	320	**1,600**		34	320	**710**		33	310	**1,800**		32	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**5,400**		320	3,000	**610**		32	300	**6,900**		320	3,100	**870**	**J- 4D**	33	320	**1,600**		34	320	**710**		33	310	**1,800**		32	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW30A				VW30B				VW30B				VW31A				VW31B				VW32A				VW32A			
Sampling Date/Time			3/4/2021 12:40				12/3/2020 15:04				3/4/2021 12:55				12/1/2020 14:32				12/1/2020 14:22				12/4/2020 9:42				12/4/2020 9:42			
Sample Depth (feet)			5.5				14.5				14.5				5.5				14.5				5.5				5.5			
Sample Type			N				N				N				N				N				N				FD			
Field Sample ID			SG-VW30A-02				SG-VW30B-01				SG-VW30B-02				SG-VW31A-01				SG-VW31B-01				SG-VW32A-01				SG-VW32A-02			
Lab Sample ID			2107220-06				2035539-08				2107220-07				2035147-07				2035147-08				2035587-03				2035587-04			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		25	300	ND	UJ 4A	22	270
Acetone	TO-15	µg/m^3	**5.0**	**J 6G**	0.69	8.0	**8.2**		0.67	7.8	**17**		0.68	7.9	**38**		0.68	8.0	ND		0.68	7.8	**110**	**J 6G**	13	150	**120**	**J- 4A, 6G**	12	140
Acrylonitrile	TO-15	µg/m^3	ND		0.43	3.2	ND		0.42	3.1	ND		0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		8.1	60	ND	UJ 4A	7.3	54
Allyl chloride	TO-15	µg/m^3	ND		0.45	3.2	ND		0.43	3.1	ND		0.44	3.2	ND		0.45	3.2	ND		0.44	3.1	ND		8.4	60	ND	UJ 4A	7.6	54
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		0.50	8.0	ND		0.48	7.8	ND		0.49	7.9	ND		0.49	8.0	ND		0.49	7.8	ND		9.3	150	ND	UJ 4A	8.4	140
Benzene	TO-15	µg/m^3	ND		0.34	3.2	ND		0.33	3.1	ND		0.33	3.2	**1.5**	**J 6G**	0.33	3.2	ND		0.33	3.1	ND		6.3	60	ND	UJ 4A	5.7	54
Benzyl chloride	TO-15	µg/m^3	ND		0.42	16	ND		0.40	16	ND		0.41	16	ND		0.41	16	ND		0.41	16	ND		7.8	300	ND	UJ 4A	7.1	270
Bromodichloromethane	TO-15	µg/m^3	**24**		0.72	8.0	**60**		0.70	7.8	**43**		0.71	7.9	ND		0.72	8.0	ND		0.71	7.8	ND		14	150	ND	UJ 4A	12	140
Bromoform	TO-15	µg/m^3	ND		1.4	16	ND		1.3	16	ND		1.4	16	ND		1.4	16	ND		1.4	16	ND		26	300	ND	UJ 4A	23	270
Bromomethane	TO-15	µg/m^3	ND		0.75	3.2	ND		0.73	3.1	ND		0.74	3.2	ND		0.75	3.2	ND		0.74	3.1	ND		14	60	ND	UJ 4A	13	54
1,3-Butadiene	TO-15	µg/m^3	ND		0.35	3.2	ND		0.34	3.1	ND		0.35	3.2	ND		0.35	3.2	ND		0.35	3.1	ND		6.6	60	ND	UJ 4A	6.0	54
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	**1.3**	**J 6G**	1.1	8.0	ND		1.1	7.8	ND		1.1	7.9	ND		1.1	8.0	ND		1.1	7.8	ND		21	150	ND	UJ 4A	19	140
Carbon disulfide	TO-15	µg/m^3	**3.6**		0.30	3.2	**1.9**	**J 6G**	0.29	3.1	ND		0.30	3.2	**7.9**		0.30	3.2	**2.7**	**J 6G**	0.30	3.1	ND		5.7	60	ND	UJ 4A	5.2	54
Carbon tetrachloride	TO-15	µg/m^3	ND		0.72	8.0	ND		0.70	7.8	ND		0.71	7.9	ND		0.72	8.0	**1.4**	**J 6G**	0.71	7.8	ND		14	150	ND	UJ 4A	12	140
Chlorobenzene	TO-15	µg/m^3	ND		0.64	8.0	ND		0.62	7.8	ND		0.63	7.9	ND		0.64	8.0	ND		0.63	7.8	ND		12	150	ND	UJ 4A	11	140
Chloroethane	TO-15	µg/m^3	ND		0.85	3.2	ND		0.82	3.1	ND		0.84	3.2	ND		0.84	3.2	ND		0.83	3.1	ND		16	60	ND	UJ 4A	14	54
Chloroform	TO-15	µg/m^3	**1,400**		8.7	80	**1,300**		8.4	78	**920**		8.5	79	ND		0.86	8.0	**0.92**	**J 6G**	0.85	7.8	ND		16	150	ND	UJ 4A	15	140
Chloromethane	TO-15	µg/m^3	ND		0.34	3.2	ND		0.33	3.1	ND		0.33	3.2	ND		0.33	3.2	ND		0.33	3.1	ND		6.3	60	ND	UJ 4A	5.7	54
Cyclohexane	TO-15	µg/m^3	ND		0.61	3.2	ND		0.59	3.1	ND		0.60	3.2	ND		0.60	3.2	ND		0.60	3.1	ND		11	60	ND	UJ 4A	10	54
Dibromochloromethane	TO-15	µg/m^3	ND		0.69	8.0	ND		0.67	7.8	ND		0.68	7.9	ND		0.68	8.0	ND		0.68	7.8	ND		13	150	ND	UJ 4A	12	140
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		2.7	8.0	ND		2.6	7.8	ND		2.7	7.9	ND		2.7	8.0	ND		2.7	7.8	ND		51	150	ND	UJ 4A	46	140
1,2-Dibromoethane	TO-15	µg/m^3	ND		0.93	8.0	ND		0.90	7.8	ND		0.92	7.9	ND		0.92	8.0	ND		0.91	7.8	ND		17	150	ND	UJ 4A	16	140
Dibromomethane	TO-15	µg/m^3	ND		0.91	8.0	ND		0.88	7.8	**13**		0.90	7.9	ND		0.91	8.0	ND		0.89	7.8	ND		17	150	ND	UJ 4A	16	140
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		0.80	8.0	ND		0.78	7.8	ND		0.79	7.9	ND		0.80	8.0	ND		0.78	7.8	ND		15	150	ND	UJ 4A	14	140
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		0.50	8.0	ND		0.48	7.8	ND		0.49	7.9	ND		0.49	8.0	ND		0.49	7.8	ND		9.3	150	ND	UJ 4A	8.4	140
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		0.80	8.0	ND		0.78	7.8	ND		0.79	7.9	ND		0.80	8.0	ND		0.78	7.8	ND		15	150	ND	UJ 4A	14	140
Dichlorodifluoromethane	TO-15	µg/m^3	**8.9**		0.72	8.0	**15**		0.70	7.8	**16**		0.71	7.9	ND		0.72	8.0	ND		0.71	7.8	ND		14	150	ND	UJ 4A	12	140
1,1-Dichloroethane	TO-15	µg/m^3	ND		0.37	8.0	ND		0.36	7.8	ND		0.36	7.9	ND		0.37	8.0	ND		0.36	7.8	ND		6.9	150	ND	UJ 4A	6.3	140
1,2-Dichloroethane	TO-15	µg/m^3	ND		0.42	8.0	ND		0.40	7.8	ND		0.41	7.9	ND		0.41	8.0	ND		0.41	7.8	ND		7.8	150	ND	UJ 4A	7.1	140
1,1-Dichloroethene	TO-15	µg/m^3	ND		0.50	8.0	ND		0.48	7.8	ND		0.49	7.9	ND		0.49	8.0	ND		0.49	7.8	ND		9.3	150	ND	UJ 4A	8.4	140
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.51	3.2	ND		0.50	3.1	ND		0.51	3.2	ND		0.51	3.2	ND		0.50	3.1	ND		9.6	60	ND	UJ 4A	8.7	54
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.43	3.2	ND		0.42	3.1	ND		0.43	3.2	ND		0.43	3.2	ND		0.42	3.1	ND		8.1	60	ND	UJ 4A	7.3	54
1,2-Dichloropropane	TO-15	µg/m^3	ND		0.51	8.0	ND		0.50	7.8	ND		0.51	7.9	ND		0.51	8.0	ND		0.50	7.8	ND		9.6	150	ND	UJ 4A	8.7	140
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.48	8.0	ND		0.46	7.8	ND		0.47	7.9	ND		0.48	8.0	ND		0.47	7.8	ND		9.0	150	ND	UJ 4A	8.2	140
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.64	8.0	ND		0.62	7.8	ND		0.63	7.9	ND		0.64	8.0	ND		0.63	7.8	ND		12	150	ND	UJ 4A	11	140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		1.5	8.0	ND		1.4	7.8	ND		1.4	7.9	ND		1.4	8.0	ND		1.4	7.8	ND		27	150	ND	UJ 4A	25	140
1,1-Difluoroethane	TO-15	µg/m^3	ND		3.2	8.0	ND		3.1	7.8	ND		3.2	7.9	ND		3.2	8.0	ND		3.1	7.8	ND		60	150	ND	UJ 4A	54	140
Diisopropyl ether	TO-15	µg/m^3	ND		0.62	8.0	ND		0.60	7.8	ND		0.62	7.9	ND		0.62	8.0	ND		0.61	7.8	ND		12	150	ND	UJ 4A	11	140
1,4-Dioxane	TO-15	µg/m^3	ND		0.53	3.2	ND		0.51	3.1	ND		0.52	3.2	ND		0.52	3.2	ND		0.52	3.1	ND		9.9	60	ND	UJ 4A	9.0	54
Ethanol	TO-15	µg/m^3	**4.1**		0.67	3.2	**5.1**		0.65	3.1	**25**		0.66	3.2	**22**		0.67	3.2	ND		0.66	3.1	ND		13	60	ND	UJ 4A	11	54
Ethyl acetate	TO-15	µg/m^3	ND		0.53	3.2	ND		0.51	3.1	ND		0.52	3.2	ND		0.52	3.2	ND		0.52	3.1	ND		9.9	60	ND	UJ 4A	9.0	54
Ethylbenzene	TO-15	µg/m^3	**1.8**	**J 6G**	0.51	8.0	ND		0.50	7.8	ND		0.51	7.9	**7.0**	**J 6G**	0.51	8.0	**2.8**	**J 6G**	0.50	7.8	**23**	**J 6G**	9.6	150	**26**	**J- 4A, 6G**	8.7	140
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	ND		0.48	8.0	ND		0.46	7.8	ND		0.47	7.9	**4.9**	**J 6G**	0.48	8.0	**5.9**	**J 6G**	0.47	7.8	ND		9.0	150	**17**	**J- 4A, 6G**	8.2	140
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		0.53	8.0	ND		0.51	7.8	ND		0.52	7.9	ND		0.52	8.0	ND		0.52	7.8	ND		9.9	150	ND	UJ 4A	9.0	140
n-Heptane	TO-15	µg/m^3	ND		0.54	3.2	ND		0.53	3.1	ND		0.54	3.2	**0.85**	**J 6G**	0.54	3.2	ND		0.53	3.1	ND		10	60	ND	UJ 4A	9.2	54
Hexachlorobutadiene	TO-15	µg/m^3	ND		2.4	16	ND		2.3	16	ND		2.4	16	ND		2.4	16	ND		2.4	16	ND		45	300	ND	UJ 4A	41	270

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW30A				VW30B				VW30B				VW31A				VW31B				VW32A				VW32A			
Sampling Date/Time			3/4/2021 12:40				12/3/2020 15:04				3/4/2021 12:55				12/1/2020 14:32				12/1/2020 14:22				12/4/2020 9:42				12/4/2020 9:42			
Sample Depth (feet)			5.5				14.5				14.5				5.5				14.5				5.5				5.5			
Sample Type			N				N				N				N				N				N				FD			
Field Sample ID			SG-VW30A-02				SG-VW30B-01				SG-VW30B-02				SG-VW31A-01				SG-VW31B-01				SG-VW32A-01				SG-VW32A-02			
Lab Sample ID			2107220-06				2035539-08				2107220-07				2035147-07				2035147-08				2035587-03				2035587-04			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.2	3.2	ND		1.1	3.1	ND		1.2	3.2	ND		1.2	3.2	ND		1.1	3.1	ND		22	60	ND	UJ 4A	20	54
Hexane	TO-15	µg/m^3	ND		0.32	8.0	ND		0.31	7.8	ND		0.32	7.9	ND		0.32	8.0	ND		0.31	7.8	ND		6.0	150	ND	UJ 4A	5.4	140
2-Hexanone	TO-15	µg/m^3	ND		0.46	8.0	ND		0.45	7.8	ND		0.46	7.9	ND		0.46	8.0	ND		0.46	7.8	ND		8.7	150	ND	UJ 4A	7.9	140
Isooctane	TO-15	µg/m^3	ND		0.56	8.0	ND		0.54	7.8	ND		0.55	7.9	**0.97**	**J 6G**	0.56	8.0	ND		0.55	7.8	ND		10	150	ND	UJ 4A	9.5	140
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	**1.2**	**J 6G**	0.51	3.2	**1.2**	**J 6G**	0.50	3.1	**10**		0.51	3.2	ND		0.51	3.2	ND		0.50	3.1	ND		9.6	60	ND	UJ 4A	8.7	54
Methylene chloride	TO-15	µg/m^3	ND		0.64	16	ND		0.62	16	ND		0.63	16	ND		0.64	16	ND		0.63	16	ND		12	300	ND	UJ 4A	11	270
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**1.0**	**J 6G**	0.30	3.2	ND		0.29	3.1	**1.7**	**J 6G**	0.30	3.2	**17**		0.30	3.2	ND		0.30	3.1	**26**	**J 6G**	5.7	60	**28**	**J- 4A, 6G**	5.2	54
Methyl iodide	TO-15	µg/m^3	ND		0.93	16	ND		0.90	16	ND		0.92	16	ND		0.92	16	ND		0.91	16	ND		17	300	ND	UJ 4A	16	270
Methyl isobutyl ketone	TO-15	µg/m^3	ND		0.42	8.0	ND		0.40	7.8	ND		0.41	7.9	**2.3**	**J 6G**	0.41	8.0	ND		0.41	7.8	ND		7.8	150	**14**	**J- 4A, 6G**	7.1	140
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.45	3.2	ND		0.43	3.1	ND		0.44	3.2	ND		0.45	3.2	ND		0.44	3.1	ND		8.4	60	ND	UJ 4A	7.6	54
Naphthalene	TO-15	µg/m^3	ND		2.2	32	ND		2.2	31	ND		2.2	32	ND		2.2	32	ND		2.2	31	ND		42	600	ND	UJ 4A	38	540
Propylene	TO-15	µg/m^3	ND		0.40	3.2	ND		0.39	3.1	ND		0.40	3.2	ND		0.40	3.2	ND		0.39	3.1	ND		7.5	60	ND	UJ 4A	6.8	54
Styrene	TO-15	µg/m^3	ND		0.38	8.0	ND		0.37	7.8	ND		0.38	7.9	ND		0.38	8.0	ND		0.38	7.8	ND		7.2	150	ND	UJ 4A	6.5	140
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.98	8.0	ND		0.95	7.8	ND		0.96	7.9	ND		0.97	8.0	ND		0.96	7.8	ND		18	150	ND	UJ 4A	17	140
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.75	8.0	ND		0.73	7.8	ND		0.74	7.9	ND		0.75	8.0	ND		0.74	7.8	ND		14	150	ND	UJ 4A	13	140
Tetrachloroethene (PCE)	TO-15	µg/m^3	**210**		0.80	8.0	**370**		7.8	78	**290**		7.9	79	**64**		0.80	8.0	**160**		0.78	7.8	**83**	**J 6G**	15	150	**57**	**J- 4A, 6G**	14	140
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		1.1	8.0	ND		1.0	7.8	ND		1.1	7.9	ND		1.1	8.0	ND		1.1	7.8	ND		20	150	ND	UJ 4A	18	140
Tetrahydrofuran	TO-15	µg/m^3	**1.2**	**J 6G**	0.43	3.2	ND		0.42	3.1	ND		0.43	3.2	**4.4**		0.43	3.2	ND		0.42	3.1	**17**	**J 6G**	8.1	60	**21**	**J- 4A, 6G**	7.3	54
Toluene	TO-15	µg/m^3	**7.6**		0.43	3.2	**4.4**		0.42	3.1	**22**		0.43	3.2	**89**		0.43	3.2	**4.5**		0.42	3.1	**9,300**		40	300	**9,700**	**J- 4A**	37	270
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		25	300	ND	UJ 4A	22	270
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		0.62	8.0	ND		0.60	7.8	ND		0.62	7.9	ND		0.62	8.0	**1.2**	**J 6G**	0.61	7.8	ND		12	150	ND	UJ 4A	11	140
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.98	8.0	ND		0.95	7.8	ND		0.96	7.9	ND		0.97	8.0	ND		0.96	7.8	ND		18	150	ND	UJ 4A	17	140
Trichloroethene (TCE)	TO-15	µg/m^3	**2.5**	**J 6G**	0.86	8.0	**3.6**	**J 6G**	0.84	7.8	**2.9**	**J 6G**	0.85	7.9	ND		0.86	8.0	ND		0.85	7.8	ND		16	150	ND	UJ 4A	15	140
Trichlorofluoromethane	TO-15	µg/m^3	ND		0.75	8.0	**2.1**	**J 6G**	0.73	7.8	**2.4**	**J 6G**	0.74	7.9	**2.6**	**J 6G**	0.75	8.0	ND		0.74	7.8	ND		14	150	ND	UJ 4A	13	140
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.77	8.0	ND		0.74	7.8	ND		0.76	7.9	ND		0.76	8.0	ND		0.75	7.8	ND		14	150	ND	UJ 4A	13	140
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		0.88	8.0	ND		0.85	7.8	ND		0.87	7.9	ND		0.87	8.0	ND		0.86	7.8	ND		16	150	ND	UJ 4A	15	140
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**1.8**	**J 6G**	0.64	8.0	ND		0.62	7.8	**1.6**	**J 6G**	0.63	7.9	**9.8**		0.64	8.0	**9.0**		0.63	7.8	**32**	**J 6G**	12	150	**32**	**J- 4A, 6G**	11	140
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND		0.64	8.0	ND		0.62	7.8	ND		0.63	7.9	**2.4**	**J 6G**	0.64	8.0	**2.2**	**J 6G**	0.63	7.8	ND		12	150	ND	UJ 4A	11	140
Vinyl acetate	TO-15	µg/m^3	ND		0.53	3.2	ND		0.51	3.1	ND		0.52	3.2	ND		0.52	3.2	ND		0.52	3.1	ND		9.9	60	ND	UJ 4A	9.0	54
Vinyl bromide	TO-15	µg/m^3	ND		0.51	8.0	ND		0.50	7.8	ND		0.51	7.9	ND		0.51	8.0	ND		0.50	7.8	ND		9.6	150	ND	UJ 4A	8.7	140
Vinyl chloride	TO-15	µg/m^3	ND		0.62	3.2	ND		0.60	3.1	ND		0.62	3.2	ND		0.62	3.2	ND		0.61	3.1	ND		12	60	ND	UJ 4A	11	54
p- & *m*-Xylenes	TO-15	µg/m^3	**4.7**	**J 6G**	0.98	8.0	**4.2**	**J 6G**	0.95	7.8	ND		0.96	7.9	**22**		0.97	8.0	**12**		0.96	7.8	**110**	**J 6G**	18	150	**120**	**J- 4A, 6G**	17	140
o-Xylene	TO-15	µg/m^3	**1.9**	**J 6G**	0.48	8.0	**1.4**	**J 6G**	0.46	7.8	ND		0.47	7.9	**9.5**		0.48	8.0	**2.5**	**J 6G**	0.47	7.8	**31**	**J 6G**	9.0	150	**34**	**J- 4A, 6G**	8.2	140
Total Xylenes	TO-15	µg/m^3	**6.6**	**J 6G**	1.5	16	**5.6**	**J 6G**	1.4	16	ND		1.4	16	**32**		1.4	16	**15**	**J 6G**	1.4	16	**140**	**J 6G**	27	300	**160**	**J- 4A, 6G**	25	270
TPH - Gasoline	TO-15	µg/m^3	**1,800**		34	320	**1,400**		33	310	**1,500**		33	320	**610**		33	320	**590**		33	310	**9,500**		630	6,000	**10,000**	**J- 4A**	570	5,400
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**1,800**		34	320	**1,400**		33	310	**1,500**		33	320	**610**		33	320	**590**		33	310	**9,500**		630	6,000	**10,000**	**J- 4A**	570	5,400

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW32B				VW33A				VW33B				VW34A				VW34B				VW35A				VW35B			
			Sampling Date/Time	12/4/2020 9:30				12/29/2020 16:00				12/29/2020 15:55				12/2/2020 15:30				12/2/2020 15:20				12/1/2020 16:09				12/1/2020 15:59			
			Sample Depth (feet)	14.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW32B-01				SG-VW33A-01				SG-VW33B-01				SG-VW34A-01				SG-VW34B-01				SG-VW35A-01				SG-VW35B-01			
			Lab Sample ID	2035587-05				2100036-16				2100036-17				2035539-01				2035539-02				2035335-01				2035335-02			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			1.2	15	ND			1.2	15	ND			1.2	15	ND			1.3	16
Acetone	TO-15	µg/m^3	**5.2**	**J**	**6G**	0.66	7.7	**64**			0.67	7.8	**2.8**	**J**	**6G**	0.65	7.6	**330**			6.3	73	**4.7**	**J**	**6G**	0.65	7.6	**11**			0.65	7.6	ND			0.67	7.8
Acrylonitrile	TO-15	µg/m^3	ND			0.42	3.1	ND			0.42	3.1	ND			0.41	3.0	ND			0.39	2.9	ND			0.41	3.0	ND			0.41	3.0	ND			0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND			0.43	3.1	ND			0.43	3.1	ND			0.43	3.0	ND			0.41	2.9	ND			0.42	3.0	ND			0.43	3.0	ND			0.44	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.48	7.7	ND			0.48	7.8	ND			0.47	7.6	ND			0.45	7.3	**7.9**			0.47	7.6	ND			0.47	7.6	ND			0.48	7.8
Benzene	TO-15	µg/m^3	**0.64**	**J**	**6G**	0.32	3.1	**4.3**			0.33	3.1	ND			0.32	3.0	**19**			0.31	2.9	**6.2**			0.32	3.0	**1.4**	**J**	**6G**	0.32	3.0	ND			0.33	3.1
Benzyl chloride	TO-15	µg/m^3	**6.1**	**J**	**6G**	0.40	15	ND			0.40	16	ND			0.40	15	ND			0.38	15	ND			0.39	15	ND			0.40	15	ND			0.41	16
Bromodichloromethane	TO-15	µg/m^3	ND			0.69	7.7	ND			0.70	7.8	ND			0.68	7.6	ND			0.66	7.3	ND			0.68	7.6	ND			0.68	7.6	ND			0.70	7.8
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			1.3	15	ND			1.3	15	ND			1.3	15	ND			1.3	15	ND			1.3	16
Bromomethane	TO-15	µg/m^3	ND			0.72	3.1	ND			0.73	3.1	ND			0.71	3.0	ND			0.69	2.9	ND			0.71	3.0	ND			0.71	3.0	ND			0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND			0.34	3.1	ND			0.34	3.1	ND			0.33	3.0	ND			0.32	2.9	ND			0.33	3.0	ND			0.33	3.0	ND			0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	7.7	ND			1.1	7.8	ND			1.1	7.6	ND			1.0	7.3	**13**			1.1	7.6	ND			1.1	7.6	ND			1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**1.9**	**J**	**6G**	0.29	3.1	**11**			0.29	3.1	ND			0.29	3.0	**300**			2.8	29	**3.6**			0.29	3.0	**12**			0.29	3.0	**6.3**			0.30	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND			0.69	7.7	ND			0.70	7.8	ND			0.68	7.6	ND			0.66	7.3	ND			0.68	7.6	ND			0.68	7.6	ND			0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND			0.62	7.7	ND			0.62	7.8	ND			0.61	7.6	ND			0.58	7.3	ND			0.60	7.6	ND			0.61	7.6	ND			0.62	7.8
Chloroethane	TO-15	µg/m^3	ND			0.82	3.1	ND			0.82	3.1	ND			0.81	3.0	ND			0.77	2.9	ND			0.80	3.0	ND			0.81	3.0	ND			0.83	3.1
Chloroform	TO-15	µg/m^3	**6.2**	**J**	**6G**	0.83	7.7	ND			0.84	7.8	**22**			0.82	7.6	**2.8**	**J**	**6G**	0.79	7.3	**5.6**	**J**	**6G**	0.82	7.6	ND			0.82	7.6	**31**			0.84	7.8
Chloromethane	TO-15	µg/m^3	ND			0.32	3.1	ND			0.33	3.1	ND			0.32	3.0	**0.71**	**J**	**6G**	0.31	2.9	ND			0.32	3.0	ND			0.32	3.0	ND			0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND			0.59	3.1	ND			0.59	3.1	ND			0.58	3.0	**6.3**			0.55	2.9	ND			0.57	3.0	ND			0.58	3.0	ND			0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND			0.66	7.7	ND			0.67	7.8	ND			0.65	7.6	ND			0.63	7.3	ND			0.65	7.6	ND			0.65	7.6	ND			0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.6	7.7	ND			2.6	7.8	ND			2.6	7.6	ND			2.5	7.3	ND			2.6	7.6	ND			2.6	7.6	ND			2.7	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.89	7.7	ND			0.90	7.8	ND			0.88	7.6	ND			0.85	7.3	**19**			0.88	7.6	ND			0.88	7.6	**1.8**	**J**	**6G**	0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND			0.88	7.7	ND			0.88	7.8	ND			0.87	7.6	ND			0.83	7.3	ND			0.86	7.6	ND			0.87	7.6	ND			0.89	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.77	7.7	ND			0.78	7.8	ND			0.76	7.6	ND			0.73	7.3	ND			0.76	7.6	ND			0.76	7.6	ND			0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.48	7.7	ND			0.48	7.8	ND			0.47	7.6	ND			0.45	7.3	ND			0.47	7.6	ND			0.47	7.6	ND			0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.77	7.7	ND			0.78	7.8	ND			0.76	7.6	ND			0.73	7.3	ND			0.76	7.6	ND			0.76	7.6	ND			0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**2.5**	**J**	**6G**	0.69	7.7	**2.8**	**J**	**6G**	0.70	7.8	**9.9**			0.68	7.6	**2.8**	**J**	**6G**	0.66	7.3	**11**			0.68	7.6	ND			0.68	7.6	ND			0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.35	7.7	ND			0.36	7.8	ND			0.35	7.6	ND			0.34	7.3	ND			0.35	7.6	ND			0.35	7.6	ND			0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.40	7.7	ND			0.40	7.8	ND			0.40	7.6	ND			0.38	7.3	**7.9**			0.39	7.6	ND			0.40	7.6	ND			0.41	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.48	7.7	ND			0.48	7.8	ND			0.47	7.6	ND			0.45	7.3	ND			0.47	7.6	ND			0.47	7.6	ND			0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.49	3.1	ND			0.50	3.1	ND			0.49	3.0	ND			0.47	2.9	ND			0.48	3.0	ND			0.49	3.0	ND			0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.42	3.1	ND			0.42	3.1	ND			0.41	3.0	ND			0.39	2.9	ND			0.41	3.0	ND			0.41	3.0	ND			0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.49	7.7	ND			0.50	7.8	ND			0.49	7.6	ND			0.47	7.3	ND			0.48	7.6	ND			0.49	7.6	ND			0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.46	7.7	ND			0.46	7.8	ND			0.46	7.6	ND			0.44	7.3	ND			0.45	7.6	ND			0.46	7.6	ND			0.47	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.62	7.7	ND			0.62	7.8	ND			0.61	7.6	ND			0.58	7.3	ND			0.60	7.6	ND			0.61	7.6	ND			0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.7	ND			1.4	7.8	ND			1.4	7.6	ND			1.3	7.3	ND			1.4	7.6	ND			1.4	7.6	ND			1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.1	7.7	ND			3.1	7.8	ND			3.0	7.6	ND			2.9	7.3	ND			3.0	7.6	ND			3.0	7.6	ND			3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND			0.60	7.7	ND			0.60	7.8	ND			0.59	7.6	ND			0.57	7.3	ND			0.59	7.6	ND			0.59	7.6	ND			0.61	7.8
1,4-Dioxane	TO-15	µg/m^3	ND			0.51	3.1	ND			0.51	3.1	ND			0.50	3.0	ND			0.48	2.9	ND			0.50	3.0	ND			0.50	3.0	ND			0.51	3.1
Ethanol	TO-15	µg/m^3	ND			0.65	3.1	**5.2**			0.65	3.1	**2.6**	**J**	**6G**	0.64	3.0	**15**			0.61	2.9	**15**			0.63	3.0	**56**			0.64	3.0	ND			0.66	3.1
Ethyl acetate	TO-15	µg/m^3	ND			0.51	3.1	ND			0.51	3.1	ND			0.50	3.0	ND			0.48	2.9	ND			0.50	3.0	ND			0.50	3.0	ND			0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**2.9**	**J**	**6G**	0.49	7.7	**6.7**	**J**	**6G**	0.50	7.8	ND			0.49	7.6	**27**			0.47	7.3	**14**			0.48	7.6	**7.4**	**J**	**6G**	0.49	7.6	ND			0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**2.4**	**J**	**6G**	0.46	7.7	**5.2**	**J**	**6G**	0.46	7.8	ND			0.46	7.6	**22**			0.44	7.3	ND			0.45	7.6	**11**			0.46	7.6	ND			0.47	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.51	7.7	ND			0.51	7.8	ND			0.50	7.6	ND			0.48	7.3	**7.3**	**J**	**6G**	0.50	7.6	ND			0.50	7.6	ND			0.51	7.8
n-Heptane	TO-15	µg/m^3	ND			0.52	3.1	ND			0.53	3.1	ND			0.52	3.0	**10**			0.50	2.9	ND			0.51	3.0	ND			0.52	3.0	ND			0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.3	15	ND	UJ	5B	2.3	16	ND	UJ	5B	2.3	15	ND			2.2	15	ND			2.3	15	ND			2.3	15	ND			2.3	16

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			Location ID				VW32B				VW33A				VW33B				VW34A				VW34B				VW35A				VW35B			
			Sampling Date/Time				12/4/2020 9:30				12/29/2020 16:00				12/29/2020 15:55				12/2/2020 15:30				12/2/2020 15:20				12/1/2020 16:09				12/1/2020 15:59			
			Sample Depth (feet)				14.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type				N				N				N				N				N				N				N			
			Field Sample ID				SG-VW32B-01				SG-VW33A-01				SG-VW33B-01				SG-VW34A-01				SG-VW34B-01				SG-VW35A-01				SG-VW35B-01			
			Lab Sample ID				2035587-05				2100036-16				2100036-17				2035539-01				2035539-02				2035335-01				2035335-02			
			Status				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND			1.1	3.1	ND			1.1	3.1	ND			1.1	3.0	ND			1.1	2.9	ND			1.1	3.0	ND			1.1	3.0	ND			1.1	3.1
Hexane	TO-15	µg/m^3	ND			0.31	7.7	ND			0.31	7.8	ND			0.30	7.6	**7.7**			0.29	7.3	ND			0.30	7.6	ND			0.30	7.6	ND			0.31	7.8
2-Hexanone	TO-15	µg/m^3	ND			0.45	7.7	ND			0.45	7.8	ND			0.44	7.6	ND			0.42	7.3	ND			0.44	7.6	ND			0.44	7.6	ND			0.45	7.8
Isooctane	TO-15	µg/m^3	ND			0.54	7.7	ND			0.54	7.8	ND			0.53	7.6	**27**			0.51	7.3	ND			0.53	7.6	**1.9**	**J**	**6G**	0.53	7.6	ND			0.55	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND			0.49	3.1	ND			0.50	3.1	ND			0.49	3.0	ND			0.47	2.9	**1.5**	**J**	**6G**	0.48	3.0	ND			0.49	3.0	ND			0.50	3.1
Methylene chloride	TO-15	µg/m^3	ND			0.62	15	ND			0.62	16	ND			0.61	15	ND			0.58	15	ND			0.60	15	ND			0.61	15	ND			0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	ND			0.29	3.1	**37**			0.29	3.1	ND			0.29	3.0	**45**			0.28	2.9	ND			0.29	3.0	ND			0.29	3.0	ND			0.30	3.1
Methyl iodide	TO-15	µg/m^3	ND			0.89	15	ND			0.90	16	ND			0.88	15	ND			0.85	15	ND			0.88	15	ND			0.88	15	ND			0.90	16
Methyl isobutyl ketone	TO-15	µg/m^3	ND			0.40	7.7	**3.3**	**J**	**6G**	0.40	7.8	ND			0.40	7.6	**21**			0.38	7.3	ND			0.39	7.6	**1.9**	**J**	**6G**	0.40	7.6	ND			0.41	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND			0.43	3.1	ND			0.43	3.1	ND			0.43	3.0	ND			0.41	2.9	**4.4**			0.42	3.0	ND			0.43	3.0	ND			0.44	3.1
Naphthalene	TO-15	µg/m^3	ND			2.2	31	ND			2.2	31	ND			2.1	30	ND			2.0	29	ND			2.1	30	ND			2.1	30	ND			2.2	31
Propylene	TO-15	µg/m^3	ND			0.38	3.1	ND			0.39	3.1	ND			0.38	3.0	ND			0.36	2.9	ND			0.38	3.0	ND			0.38	3.0	ND			0.39	3.1
Styrene	TO-15	µg/m^3	ND			0.37	7.7	ND			0.37	7.8	ND			0.36	7.6	ND			0.35	7.3	ND			0.36	7.6	ND			0.36	7.6	ND			0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.94	7.7	ND			0.95	7.8	ND			0.93	7.6	ND			0.89	7.3	ND			0.92	7.6	ND			0.93	7.6	ND			0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.72	7.7	ND			0.73	7.8	ND			0.71	7.6	ND			0.69	7.3	ND			0.71	7.6	ND			0.71	7.6	ND			0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m^3	**120**			0.77	7.7	**2.9**	**J**	**6G**	0.78	7.8	**100**			0.76	7.6	**19**			0.73	7.3	**49**			0.76	7.6	**250**			0.76	7.6	**300**			7.8	78
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND			1.0	7.7	ND			1.0	7.8	ND			1.0	7.6	ND			0.98	7.3	ND			1.0	7.6	ND			1.0	7.6	ND			1.0	7.8
Tetrahydrofuran	TO-15	µg/m^3	ND			0.42	3.1	**4.1**			0.42	3.1	ND			0.41	3.0	**15**			0.39	2.9	ND			0.41	3.0	**1.2**	**J**	**6G**	0.41	3.0	ND			0.42	3.1
Toluene	TO-15	µg/m^3	**66**			0.42	3.1	**42**			0.42	3.1	**2.5**	**J**	**6G**	0.41	3.0	**180**			3.9	29	**10**			0.41	3.0	**140**			0.41	3.0	**1.1**	**J**	**6G**	0.42	3.1
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			1.2	15	ND			1.2	15	ND			1.2	15	ND			1.2	15	ND			1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	ND			0.60	7.7	ND			0.60	7.8	ND			0.59	7.6	ND			0.57	7.3	ND			0.59	7.6	**1.1**	**J**	**6G**	0.59	7.6	**1.4**	**J**	**6G**	0.61	7.8
1,1,2-Trichloroethane	TO-15	µg/m^3	ND			0.94	7.7	ND			0.95	7.8	ND			0.93	7.6	ND			0.89	7.3	ND			0.92	7.6	ND			0.93	7.6	ND			0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m^3	ND			0.83	7.7	ND			0.84	7.8	ND			0.82	7.6	ND			0.79	7.3	**11**			0.82	7.6	ND			0.82	7.6	**1.7**	**J**	**6G**	0.84	7.8
Trichlorofluoromethane	TO-15	µg/m^3	**1.5**	**J**	**6G**	0.72	7.7	ND			0.73	7.8	**1.7**	**J**	**6G**	0.71	7.6	**2.8**	**J**	**6G**	0.69	7.3	**1.7**	**J**	**6G**	0.71	7.6	**1.2**	**J**	**6G**	0.71	7.6	**1.6**	**J**	**6G**	0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m^3	ND			0.74	7.7	ND			0.74	7.8	ND			0.73	7.6	ND			0.70	7.3	ND			0.72	7.6	ND			0.73	7.6	ND			0.75	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND			0.85	7.7	ND			0.85	7.8	ND			0.84	7.6	**3.1**	**J**	**6G**	0.80	7.3	ND			0.83	7.6	ND			0.84	7.6	ND			0.86	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**4.0**	**J**	**6G**	0.62	7.7	**7.0**	**J**	**6G**	0.62	7.8	ND			0.61	7.6	**29**			0.58	7.3	ND			0.60	7.6	**20**			0.61	7.6	**0.77**	**J**	**6G**	0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**1.2**	**J**	**6G**	0.62	7.7	**2.2**	**J**	**6G**	0.62	7.8	ND			0.61	7.6	**9.3**			0.58	7.3	ND			0.60	7.6	**4.3**	**J**	**6G**	0.61	7.6	ND			0.62	7.8
Vinyl acetate	TO-15	µg/m^3	ND			0.51	3.1	ND			0.51	3.1	ND			0.50	3.0	ND			0.48	2.9	ND			0.50	3.0	ND			0.50	3.0	ND			0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND			0.49	7.7	ND			0.50	7.8	ND			0.49	7.6	ND			0.47	7.3	ND			0.48	7.6	ND			0.49	7.6	ND			0.50	7.8
Vinyl chloride	TO-15	µg/m^3	ND			0.60	3.1	ND			0.60	3.1	ND			0.59	3.0	ND			0.57	2.9	ND			0.59	3.0	ND			0.59	3.0	ND			0.61	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**11**			0.94	7.7	**22**			0.95	7.8	ND			0.93	7.6	**99**			0.89	7.3	**31**			0.92	7.6	**29**			0.93	7.6	**1.5**	**J**	**6G**	0.95	7.8
o-Xylene	TO-15	µg/m^3	**3.5**	**J**	**6G**	0.46	7.7	**7.3**	**J**	**6G**	0.46	7.8	ND			0.46	7.6	**29**			0.44	7.3	**17**			0.45	7.6	**12**			0.46	7.6	**0.75**	**J**	**6G**	0.47	7.8
Total Xylenes	TO-15	µg/m^3	**15**			1.4	15	**30**			1.4	16	ND			1.4	15	**130**			1.3	15	**48**			1.4	15	**41**			1.4	15	**2.2**	**J**	**6G**	1.4	16
TPH - Gasoline	TO-15	µg/m^3	**570**			32	310	**380**			33	310	**190**	**J**	**6G**	32	300	**3,400**			31	290	**340**			32	300	**810**			32	300	**590**			33	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**570**			32	310	**380**			33	310	**190**	**J**	**6G**	32	300	**3,400**			31	290	**340**			32	300	**810**			32	300	**590**			33	310

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Location ID			VW36A				VW36B				VW37A				VW37B				VW37B				VW38A				VW38B			
Sampling Date/Time			12/2/2020 7:50				12/2/2020 7:52				12/2/2020 9:44				12/2/2020 9:47				12/2/2020 9:47				12/4/2020 13:45				12/4/2020 13:30			
Sample Depth (feet)			5.5				14.5				5.5				14.5				14.5				5.5				14.5			
Sample Type			N				N				N				N				FD				N				N			
Field Sample ID			SG-VW36A-01				SG-VW36B-01				SG-VW37A-01				SG-VW37B-01				SG-VW37B-02				SG-VW38A-01				SG-VW38B-01			
Lab Sample ID			2035335-03				2035335-04				2035335-07				2035335-08				2035335-09				2035587-09				2035587-10			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		1.2	15	ND		1.6	20	ND		1.3	16	ND	UJ 4A	1.1	14	ND		1.3	15	ND		1.3	16	ND		1.3	16
Acetone	TO-15	µg/m^3	**75**		0.64	7.5	**4.7**	**J 6G**	0.85	9.8	**10**		0.68	8.0	**21**	**J- 4A**	0.58	6.8	**18**		0.66	7.6	**6.2**	**J 6G**	0.71	8.2	**6.0**	**J 6G**	0.69	8.0
Acrylonitrile	TO-15	µg/m^3	ND		0.40	3.0	ND		0.53	3.9	ND		0.43	3.2	ND	UJ 4A	0.36	2.7	ND		0.41	3.1	ND		0.44	3.3	ND		0.43	3.2
Allyl chloride	TO-15	µg/m^3	ND		0.42	3.0	ND		0.55	3.9	ND		0.45	3.2	ND	UJ 4A	0.38	2.7	ND		0.43	3.1	ND		0.46	3.3	ND		0.45	3.2
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		0.46	7.5	ND		0.61	9.8	ND		0.49	8.0	ND	UJ 4A	0.42	6.8	ND		0.47	7.6	ND		0.51	8.2	ND		0.50	8.0
Benzene	TO-15	µg/m^3	**23**		0.32	3.0	ND		0.41	3.9	ND		0.33	3.2	**6.3**	**J- 4A**	0.28	2.7	**7.0**		0.32	3.1	ND		0.34	3.3	ND		0.34	3.2
Benzyl chloride	TO-15	µg/m^3	ND		0.39	15	ND		0.51	20	ND		0.41	16	ND	UJ 4A	0.35	14	ND		0.40	15	ND		0.43	16	ND		0.42	16
Bromodichloromethane	TO-15	µg/m^3	ND		0.68	7.5	ND		0.89	9.8	ND		0.72	8.0	ND	UJ 4A	0.61	6.8	ND		0.69	7.6	ND		0.74	8.2	ND		0.72	8.0
Bromoform	TO-15	µg/m^3	ND		1.3	15	ND		1.7	20	ND		1.4	16	ND	UJ 4A	1.2	14	ND		1.3	15	ND		1.4	16	ND		1.4	16
Bromomethane	TO-15	µg/m^3	ND		0.70	3.0	ND		0.93	3.9	ND		0.75	3.2	ND	UJ 4A	0.63	2.7	ND		0.72	3.1	ND		0.77	3.3	ND		0.76	3.2
1,3-Butadiene	TO-15	µg/m^3	ND		0.33	3.0	ND		0.43	3.9	ND		0.35	3.2	ND	UJ 4A	0.30	2.7	ND		0.34	3.1	ND		0.36	3.3	ND		0.35	3.2
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND		1.0	7.5	ND		1.4	9.8	ND		1.1	8.0	ND	UJ 4A	0.94	6.8	ND		1.1	7.6	ND		1.1	8.2	ND		1.1	8.0
Carbon disulfide	TO-15	µg/m^3	**11**		0.28	3.0	**1.7**	**J 6G**	0.37	3.9	**3.7**		0.30	3.2	**4.9**	**J- 3D, 4A**	0.26	2.7	**7.6**	**J 3D**	0.29	3.1	**1.6**	**J 6G**	0.31	3.3	**1.4**	**J 6G**	0.31	3.2
Carbon tetrachloride	TO-15	µg/m^3	ND		0.68	7.5	ND		0.89	9.8	ND		0.72	8.0	ND	UJ 4A	0.61	6.8	ND		0.69	7.6	ND		0.74	8.2	ND		0.72	8.0
Chlorobenzene	TO-15	µg/m^3	ND		0.60	7.5	ND		0.79	9.8	ND		0.64	8.0	ND	UJ 4A	0.54	6.8	ND		0.61	7.6	ND		0.66	8.2	ND		0.64	8.0
Chloroethane	TO-15	µg/m^3	ND		0.80	3.0	ND		1.0	3.9	ND		0.84	3.2	ND	UJ 4A	0.72	2.7	ND		0.81	3.1	ND		0.87	3.3	ND		0.85	3.2
Chloroform	TO-15	µg/m^3	ND		0.81	7.5	**4.7**	**J 6G**	1.1	9.8	ND		0.86	8.0	ND	UJ 4A	0.73	6.8	ND		0.83	7.6	ND		0.89	8.2	**6.3**	**J 6G**	0.87	8.0
Chloromethane	TO-15	µg/m^3	ND		0.32	3.0	ND		0.41	3.9	ND		0.33	3.2	ND	UJ 4A	0.28	2.7	ND		0.32	3.1	ND		0.34	3.3	ND		0.34	3.2
Cyclohexane	TO-15	µg/m^3	ND		0.57	3.0	ND		0.75	3.9	ND		0.60	3.2	ND	UJ 4A	0.51	2.7	ND		0.58	3.1	ND		0.62	3.3	ND		0.61	3.2
Dibromochloromethane	TO-15	µg/m^3	ND		0.64	7.5	ND		0.85	9.8	ND		0.68	8.0	ND	UJ 4A	0.58	6.8	ND		0.66	7.6	ND		0.71	8.2	ND		0.69	8.0
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		2.6	7.5	ND		3.3	9.8	ND		2.7	8.0	ND	UJ 4A	2.3	6.8	ND		2.6	7.6	ND		2.8	8.2	ND		2.7	8.0
1,2-Dibromoethane	TO-15	µg/m^3	ND		0.87	7.5	ND		1.1	9.8	ND		0.92	8.0	ND	UJ 4A	0.78	6.8	ND		0.89	7.6	ND		0.95	8.2	ND		0.93	8.0
Dibromomethane	TO-15	µg/m^3	**2.7**	**J 6G**	0.86	7.5	ND		1.1	9.8	ND		0.91	8.0	ND	UJ 4A	0.77	6.8	ND		0.87	7.6	ND		0.93	8.2	ND		0.92	8.0
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		0.75	7.5	ND		0.98	9.8	ND		0.80	8.0	ND	UJ 4A	0.68	6.8	ND		0.76	7.6	ND		0.82	8.2	ND		0.80	8.0
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		0.46	7.5	ND		0.61	9.8	ND		0.49	8.0	ND	UJ 4A	0.42	6.8	ND		0.47	7.6	ND		0.51	8.2	ND		0.50	8.0
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		0.75	7.5	ND		0.98	9.8	ND		0.80	8.0	ND	UJ 4A	0.68	6.8	ND		0.76	7.6	ND		0.82	8.2	ND		0.80	8.0
Dichlorodifluoromethane	TO-15	µg/m^3	ND		0.68	7.5	ND		0.89	9.8	**2.6**	**J 6G**	0.72	8.0	**2.7**	**J- 4A, 6G**	0.61	6.8	**2.7**	**J 6G**	0.69	7.6	**2.7**	**J 6G**	0.74	8.2	**2.7**	**J 6G**	0.72	8.0
1,1-Dichloroethane	TO-15	µg/m^3	ND		0.34	7.5	ND		0.45	9.8	ND		0.37	8.0	ND	UJ 4A	0.31	6.8	ND		0.35	7.6	ND		0.38	8.2	ND		0.37	8.0
1,2-Dichloroethane	TO-15	µg/m^3	ND		0.39	7.5	ND		0.51	9.8	ND		0.41	8.0	ND	UJ 4A	0.35	6.8	ND		0.40	7.6	ND		0.43	8.2	ND		0.42	8.0
1,1-Dichloroethene	TO-15	µg/m^3	ND		0.46	7.5	ND		0.61	9.8	ND		0.49	8.0	ND	UJ 4A	0.42	6.8	ND		0.47	7.6	ND		0.51	8.2	ND		0.50	8.0
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.48	3.0	ND		0.63	3.9	ND		0.51	3.2	ND	UJ 4A	0.43	2.7	ND		0.49	3.1	ND		0.52	3.3	ND		0.52	3.2
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.40	3.0	ND		0.53	3.9	ND		0.43	3.2	ND	UJ 4A	0.36	2.7	ND		0.41	3.1	ND		0.44	3.3	ND		0.43	3.2
1,2-Dichloropropane	TO-15	µg/m^3	ND		0.48	7.5	ND		0.63	9.8	ND		0.51	8.0	ND	UJ 4A	0.43	6.8	ND		0.49	7.6	ND		0.52	8.2	ND		0.52	8.0
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.45	7.5	ND		0.59	9.8	ND		0.48	8.0	ND	UJ 4A	0.40	6.8	ND		0.46	7.6	ND		0.49	8.2	ND		0.48	8.0
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.60	7.5	ND		0.79	9.8	ND		0.64	8.0	ND	UJ 4A	0.54	6.8	ND		0.61	7.6	ND		0.66	8.2	ND		0.64	8.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		1.4	7.5	ND		1.8	9.8	ND		1.4	8.0	ND	UJ 4A	1.2	6.8	ND		1.4	7.6	ND		1.5	8.2	ND		1.5	8.0
1,1-Difluoroethane	TO-15	µg/m^3	ND		3.0	7.5	ND		3.9	9.8	ND		3.2	8.0	ND	UJ 4A	2.7	6.8	ND		3.1	7.6	ND		3.3	8.2	ND		3.2	8.0
Diisopropyl ether	TO-15	µg/m^3	ND		0.58	7.5	ND		0.77	9.8	ND		0.62	8.0	ND	UJ 4A	0.53	6.8	ND		0.60	7.6	ND		0.64	8.2	ND		0.63	8.0
1,4-Dioxane	TO-15	µg/m^3	ND		0.50	3.0	ND		0.65	3.9	ND		0.52	3.2	ND	UJ 4A	0.45	2.7	ND		0.50	3.1	ND		0.54	3.3	ND		0.53	3.2
Ethanol	TO-15	µg/m^3	ND		0.63	3.0	ND		0.83	3.9	ND		0.67	3.2	**22**	**J- 3D, 4A**	0.57	2.7	ND	UJ 3D	0.64	3.1	ND	UJ 3D	0.69	3.3	ND		0.68	3.2
Ethyl acetate	TO-15	µg/m^3	ND		0.50	3.0	ND		0.65	3.9	ND		0.52	3.2	ND	UJ 4A	0.45	2.7	ND		0.50	3.1	ND		0.54	3.3	ND		0.53	3.2
Ethylbenzene	TO-15	µg/m^3	**48**		0.48	7.5	**1.0**	**J 6G**	0.63	9.8	**2.3**	**J 6G**	0.51	8.0	**36**	**J- 4A**	0.43	6.8	**38**		0.49	7.6	**3.8**	**J 6G**	0.52	8.2	**6.7**	**J 6G**	0.52	8.0
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**37**		0.45	7.5	ND		0.59	9.8	**2.7**	**J 6G**	0.48	8.0	**39**	**J- 4A**	0.40	6.8	**39**		0.46	7.6	**3.0**	**J 6G**	0.49	8.2	**16**	**J 3D**	0.48	8.0
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		0.50	7.5	ND		0.65	9.8	ND		0.52	8.0	ND	UJ 4A	0.45	6.8	ND		0.50	7.6	ND		0.54	8.2	ND		0.53	8.0
n-Heptane	TO-15	µg/m^3	**12**		0.51	3.0	ND		0.67	3.9	ND		0.54	3.2	ND	UJ 4A	0.46	2.7	ND		0.52	3.1	ND		0.56	3.3	ND		0.55	3.2
Hexachlorobutadiene	TO-15	µg/m^3	ND		2.2	15	ND		3.0	20	ND		2.4	16	ND	UJ 4A	2.0	14	ND		2.3	15	ND		2.5	16	ND		2.4	16

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW36A				VW36B				VW37A				VW37B				VW37B				VW38A				VW38B			
Sampling Date/Time			12/2/2020 7:50				12/2/2020 7:52				12/2/2020 9:44				12/2/2020 9:47				12/2/2020 9:47				12/4/2020 13:45				12/4/2020 13:30			
Sample Depth (feet)			5.5				14.5				5.5				14.5				14.5				5.5				14.5			
Sample Type			N				N				N				N				FD				N				N			
Field Sample ID			SG-VW36A-01				SG-VW36B-01				SG-VW37A-01				SG-VW37B-01				SG-VW37B-02				SG-VW38A-01				SG-VW38B-01			
Lab Sample ID			2035335-03				2035335-04				2035335-07				2035335-08				2035335-09				2035587-09				2035587-10			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.1	3.0	ND		1.4	3.9	ND		1.2	3.2	ND	UJ 4A	0.99	2.7	ND		1.1	3.1	ND		1.2	3.3	ND		1.2	3.2
Hexane	TO-15	µg/m^3	ND		0.30	7.5	ND		0.39	9.8	ND		0.32	8.0	ND	UJ 4A	0.27	6.8	ND		0.31	7.6	ND		0.33	8.2	ND		0.32	8.0
2-Hexanone	TO-15	µg/m^3	ND		0.44	7.5	ND		0.57	9.8	ND		0.46	8.0	ND	UJ 4A	0.39	6.8	ND		0.44	7.6	ND		0.48	8.2	ND		0.47	8.0
Isooctane	TO-15	µg/m^3	**9.8**		0.52	7.5	ND		0.69	9.8	ND		0.56	8.0	**1.4**	**J- 4A, 6G**	0.47	6.8	**1.4**	**J 6G**	0.54	7.6	ND		0.57	8.2	ND		0.56	8.0
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		0.48	3.0	ND		0.63	3.9	ND		0.51	3.2	ND	UJ 4A	0.43	2.7	ND		0.49	3.1	ND		0.52	3.3	ND		0.52	3.2
Methylene chloride	TO-15	µg/m^3	ND		0.60	15	ND		0.79	20	ND		0.64	16	ND	UJ 4A	0.54	14	ND		0.61	15	ND		0.66	16	ND		0.64	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**42**		0.28	3.0	ND		0.37	3.9	**6.4**		0.30	3.2	**10**	**J- 3D, 4A**	0.26	2.7	**5.4**	**J 3D**	0.29	3.1	**2.1**	**J 6G**	0.31	3.3	ND		0.31	3.2
Methyl iodide	TO-15	µg/m^3	ND		0.87	15	ND		1.1	20	ND		0.92	16	ND	UJ 4A	0.78	14	ND		0.89	15	ND		0.95	16	ND		0.93	16
Methyl isobutyl ketone	TO-15	µg/m^3	**46**		0.39	7.5	ND		0.51	9.8	ND		0.41	8.0	**16**	**J- 4A**	0.35	6.8	**14**		0.40	7.6	ND		0.43	8.2	ND		0.42	8.0
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.42	3.0	ND		0.55	3.9	ND		0.45	3.2	ND	UJ 4A	0.38	2.7	ND		0.43	3.1	ND		0.46	3.3	ND		0.45	3.2
Naphthalene	TO-15	µg/m^3	ND		2.1	30	ND		2.8	39	ND		2.2	32	ND	UJ 4A	1.9	27	ND		2.1	31	**9.7**	**J 6G**	2.3	33	**12**	**J 6G**	2.3	32
Propylene	TO-15	µg/m^3	ND		0.38	3.0	ND		0.49	3.9	ND		0.40	3.2	ND	UJ 4A	0.34	2.7	ND		0.38	3.1	ND		0.41	3.3	ND		0.40	3.2
Styrene	TO-15	µg/m^3	**1.7**	**J 6G**	0.36	7.5	ND		0.47	9.8	ND		0.38	8.0	**2.6**	**J- 4A, 6G**	0.32	6.8	**1.8**	**J 6G**	0.37	7.6	ND		0.39	8.2	ND		0.39	8.0
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.92	7.5	ND		1.2	9.8	ND		0.97	8.0	ND	UJ 4A	0.82	6.8	ND		0.93	7.6	ND		1.0	8.2	ND		0.98	8.0
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.70	7.5	ND		0.93	9.8	ND		0.75	8.0	ND	UJ 4A	0.63	6.8	ND		0.72	7.6	ND		0.77	8.2	ND		0.76	8.0
Tetrachloroethene (PCE)	TO-15	µg/m^3	**78**		0.75	7.5	**260**		0.98	9.8	ND		0.80	8.0	**2.9**	**J- 4A, 6G**	0.68	6.8	**4.7**	**J 6G**	0.76	7.6	**37**		0.82	8.2	**50**		0.80	8.0
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		1.0	7.5	ND		1.3	9.8	ND		1.1	8.0	ND	UJ 4A	0.90	6.8	ND		1.0	7.6	ND		1.1	8.2	ND		1.1	8.0
Tetrahydrofuran	TO-15	µg/m^3	**38**		0.40	3.0	**1.2**	**J 6G**	0.53	3.9	**0.75**	**J 6G**	0.43	3.2	**22**	**J- 4A**	0.36	2.7	**21**		0.41	3.1	**0.77**	**J 6G**	0.44	3.3	ND		0.43	3.2
Toluene	TO-15	µg/m^3	**280**		4.0	30	**4.4**		0.53	3.9	**8.9**		0.43	3.2	**140**	**J- 4A**	3.6	27	**150**		4.1	31	**27**		0.44	3.3	**5.9**	**J 3D**	0.43	3.2
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.2	15	ND		1.6	20	ND		1.3	16	ND	UJ 4A	1.1	14	ND		1.3	15	ND		1.3	16	ND		1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		0.58	7.5	**2.0**	**J 6G**	0.77	9.8	ND		0.62	8.0	ND	UJ 4A	0.53	6.8	ND		0.60	7.6	ND		0.64	8.2	ND		0.63	8.0
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.92	7.5	ND		1.2	9.8	ND		0.97	8.0	ND	UJ 4A	0.82	6.8	ND		0.93	7.6	ND		1.0	8.2	ND		0.98	8.0
Trichloroethene (TCE)	TO-15	µg/m^3	ND		0.81	7.5	**1.7**	**J 6G**	1.1	9.8	ND		0.86	8.0	**16**	**J- 3D, 4A**	0.73	6.8	**22**	**J 3D**	0.83	7.6	ND		0.89	8.2	**0.95**	**J 6G**	0.87	8.0
Trichlorofluoromethane	TO-15	µg/m^3	**1.3**	**J 6G**	0.70	7.5	**1.3**	**J 6G**	0.93	9.8	**1.4**	**J 6G**	0.75	8.0	**1.6**	**J- 4A, 6G**	0.63	6.8	**1.5**	**J 6G**	0.72	7.6	**1.4**	**J 6G**	0.77	8.2	**1.6**	**J 6G**	0.76	8.0
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.72	7.5	ND		0.95	9.8	ND		0.76	8.0	ND	UJ 4A	0.65	6.8	ND		0.73	7.6	ND		0.79	8.2	ND		0.77	8.0
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		0.82	7.5	ND		1.1	9.8	ND		0.87	8.0	ND	UJ 4A	0.74	6.8	ND		0.84	7.6	ND		0.90	8.2	ND		0.89	8.0
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**50**		0.60	7.5	**1.6**	**J 6G**	0.79	9.8	**5.2**	**J 6G**	0.64	8.0	**67**	**J- 4A**	0.54	6.8	**60**		0.61	7.6	**5.6**	**J 6G**	0.66	8.2	**41**	**J 3D**	0.64	8.0
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**19**		0.60	7.5	ND		0.79	9.8	**1.4**	**J 6G**	0.64	8.0	**19**	**J- 4A**	0.54	6.8	**18**		0.61	7.6	**1.6**	**J 6G**	0.66	8.2	**8.2**	**J 3D**	0.64	8.0
Vinyl acetate	TO-15	µg/m^3	ND		0.50	3.0	ND		0.65	3.9	ND		0.52	3.2	ND	UJ 4A	0.45	2.7	ND		0.50	3.1	ND		0.54	3.3	ND		0.53	3.2
Vinyl bromide	TO-15	µg/m^3	ND		0.48	7.5	ND		0.63	9.8	ND		0.51	8.0	ND	UJ 4A	0.43	6.8	ND		0.49	7.6	ND		0.52	8.2	ND		0.52	8.0
Vinyl chloride	TO-15	µg/m^3	ND		0.58	3.0	ND		0.77	3.9	ND		0.62	3.2	ND	UJ 4A	0.53	2.7	ND		0.60	3.1	ND		0.64	3.3	ND		0.63	3.2
p- & *m*-Xylenes	TO-15	µg/m^3	**150**		0.92	7.5	**3.4**	**J 6G**	1.2	9.8	**9.5**		0.97	8.0	**120**	**J- 4A**	0.82	6.8	**130**		0.93	7.6	**17**		1.0	8.2	**20**	**J 3D**	0.98	8.0
o-Xylene	TO-15	µg/m^3	**56**		0.45	7.5	**1.7**	**J 6G**	0.59	9.8	**3.9**	**J 6G**	0.48	8.0	**55**	**J- 4A**	0.40	6.8	**55**		0.46	7.6	**7.0**	**J 6G**	0.49	8.2	**10**	**J 3D**	0.48	8.0
Total Xylenes	TO-15	µg/m^3	**210**		1.4	15	**5.1**	**J 6G**	1.8	20	**13**	**J 6G**	1.4	16	**180**	**J- 4A**	1.2	14	**180**		1.4	15	**24**		1.5	16	**30**	**J 3D**	1.5	16
TPH - Gasoline	TO-15	µg/m^3	**2,700**		32	300	**670**		41	390	**350**		33	320	**1,800**	**J- 4A**	28	270	**1,700**		32	310	**280**	**J 6G**	34	330	**750**	**J 3D**	34	320
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**2,700**		32	300	**670**		41	390	**350**		33	320	**1,800**	**J- 4A**	28	270	**1,700**		32	310	**280**	**J 6G**	34	330	**750**	**J 3D**	34	320

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW38B				VW39A				VW39B				VW40A				VW40B				VW41A				VW41A			
			Sampling Date/Time	12/4/2020 13:30				12/3/2020 9:14				12/3/2020 9:01				12/2/2020 8:55				12/2/2020 8:42				12/4/2020 11:10				12/4/2020 11:10			
			Sample Depth (feet)	14.5				5.5				14.5				5.5				14.5				5.5				5.5			
			Sample Type	FD				N				N				N				N				N				N			
			Field Sample ID	SG-VW38B-02				SG-VW39A-01				SG-VW39B-01				SG-VW40A-01				SG-VW40B-01				SG-VW41A-01				SG-VW41A-02			
			Lab Sample ID	2035587-11				2035539-03				2035539-04				2035335-05				2035335-06				2035587-06				2035587-07			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.2	15	ND			1.3	16	ND			1.2	15	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16
Acetone	TO-15	µg/m^3	**3.7**	J	6G	0.65	7.6	**5.2**	J	6G	0.67	7.8	**4.2**	J	6G	0.65	7.6	**5.3**	J	6G	0.70	8.1	**1.9**	J	6G	0.67	7.8	**99**			6.7	78	**93**			6.7	78
Acrylonitrile	TO-15	µg/m^3	ND			0.41	3.0	ND			0.42	3.1	ND			0.41	3.0	ND			0.44	3.2	ND			0.42	3.1	ND			0.42	3.1	ND			0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND			0.42	3.0	ND			0.43	3.1	ND			0.42	3.0	ND			0.45	3.2	ND			0.43	3.1	ND			0.43	3.1	ND			0.43	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.47	7.6	ND			0.48	7.8	ND			0.47	7.6	ND			0.50	8.1	ND			0.48	7.8	ND			0.48	7.8	ND			0.48	7.8
Benzene	TO-15	µg/m^3	ND			0.32	3.0	ND			0.33	3.1	ND			0.32	3.0	**6.0**			0.34	3.2	ND			0.33	3.1	**3.2**			0.33	3.1	**3.4**			0.33	3.1
Benzyl chloride	TO-15	µg/m^3	ND			0.39	15	ND			0.40	16	ND			0.39	15	ND			0.42	16	ND			0.40	16	ND			0.40	16	ND			0.40	16
Bromodichloromethane	TO-15	µg/m^3	ND			0.68	7.6	ND			0.70	7.8	ND			0.68	7.6	ND			0.73	8.1	ND			0.70	7.8	ND			0.70	7.8	ND			0.70	7.8
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			1.3	15	ND			1.4	16	ND			1.3	16	ND			1.3	16	ND			1.3	16
Bromomethane	TO-15	µg/m^3	ND			0.71	3.0	ND			0.73	3.1	ND			0.71	3.0	ND			0.76	3.2	ND			0.73	3.1	ND			0.73	3.1	ND			0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND			0.33	3.0	ND			0.34	3.1	ND			0.33	3.0	ND			0.36	3.2	ND			0.34	3.1	ND			0.34	3.1	ND			0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	7.6	ND			1.1	7.8	ND			1.1	7.6	ND			1.1	8.1	ND			1.1	7.8	ND			1.1	7.8	ND			1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**1.2**	J	6G	0.29	3.0	**2.2**	J	6G	0.29	3.1	ND			0.29	3.0	**1.4**	J	6G	0.31	3.2	ND			0.29	3.1	**5.5**			0.29	3.1	**5.9**			0.29	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND			0.68	7.6	ND			0.70	7.8	ND			0.68	7.6	ND			0.73	8.1	ND			0.70	7.8	ND			0.70	7.8	ND			0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND			0.60	7.6	ND			0.62	7.8	ND			0.60	7.6	ND			0.65	8.1	ND			0.62	7.8	ND			0.62	7.8	ND			0.62	7.8
Chloroethane	TO-15	µg/m^3	ND			0.80	3.0	ND			0.82	3.1	ND			0.80	3.0	ND			0.86	3.2	ND			0.82	3.1	ND			0.82	3.1	ND			0.82	3.1
Chloroform	TO-15	µg/m^3	**6.1**	J	6G	0.82	7.6	**3.0**	J	6G	0.84	7.8	**8.5**			0.82	7.6	ND			0.87	8.1	ND			0.84	7.8	ND			0.84	7.8	ND			0.84	7.8
Chloromethane	TO-15	µg/m^3	ND			0.32	3.0	ND			0.33	3.1	ND			0.32	3.0	ND			0.34	3.2	ND			0.33	3.1	ND			0.33	3.1	ND			0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND			0.57	3.0	ND			0.59	3.1	ND			0.57	3.0	ND			0.62	3.2	ND			0.59	3.1	ND			0.59	3.1	ND			0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND			0.65	7.6	ND			0.67	7.8	ND			0.65	7.6	ND			0.70	8.1	ND			0.67	7.8	ND			0.67	7.8	ND			0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.6	7.6	ND			2.6	7.8	ND			2.6	7.6	ND			2.8	8.1	ND			2.6	7.8	ND			2.6	7.8	ND			2.6	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.88	7.6	ND			0.90	7.8	ND			0.88	7.6	ND			0.94	8.1	ND			0.90	7.8	ND			0.90	7.8	ND			0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND			0.86	7.6	ND			0.88	7.8	ND			0.86	7.6	ND			0.92	8.1	ND			0.88	7.8	ND			0.88	7.8	ND			0.88	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.78	7.8	ND			0.76	7.6	ND			0.81	8.1	ND			0.78	7.8	ND			0.78	7.8	ND			0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.48	7.8	ND			0.47	7.6	ND			0.50	8.1	ND			0.48	7.8	ND			0.48	7.8	ND			0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.78	7.8	ND			0.76	7.6	ND			0.81	8.1	ND			0.78	7.8	ND			0.78	7.8	ND			0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**2.6**	J	6G	0.68	7.6	ND			0.70	7.8	ND			0.68	7.6	**2.5**	J	6G	0.73	8.1	ND			0.70	7.8	**2.6**	J	6G	0.70	7.8	**2.7**	J	6G	0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.35	7.6	ND			0.36	7.8	ND			0.35	7.6	ND			0.37	8.1	ND			0.36	7.8	ND			0.36	7.8	ND			0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.39	7.6	ND			0.40	7.8	ND			0.39	7.6	ND			0.42	8.1	ND			0.40	7.8	ND			0.40	7.8	ND			0.40	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.48	7.8	ND			0.47	7.6	ND			0.50	8.1	ND			0.48	7.8	ND			0.48	7.8	ND			0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.48	3.0	ND			0.50	3.1	ND			0.48	3.0	ND			0.52	3.2	ND			0.50	3.1	ND			0.50	3.1	ND			0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.41	3.0	ND			0.42	3.1	ND			0.41	3.0	ND			0.44	3.2	ND			0.42	3.1	ND			0.42	3.1	ND			0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.48	7.6	ND			0.50	7.8	ND			0.48	7.6	ND			0.52	8.1	ND			0.50	7.8	ND			0.50	7.8	ND			0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.45	7.6	ND			0.46	7.8	ND			0.45	7.6	ND			0.49	8.1	ND			0.46	7.8	ND			0.46	7.8	ND			0.46	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.60	7.6	ND			0.62	7.8	ND			0.60	7.6	ND			0.65	8.1	ND			0.62	7.8	ND			0.62	7.8	ND			0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.6	ND			1.4	7.8	ND			1.4	7.6	ND			1.5	8.1	ND			1.4	7.8	ND			1.4	7.8	ND			1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.0	7.6	ND			3.1	7.8	ND			3.0	7.6	ND			3.2	8.1	ND			3.1	7.8	ND			3.1	7.8	ND			3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND			0.59	7.6	ND			0.60	7.8	ND			0.59	7.6	ND			0.63	8.1	ND			0.60	7.8	ND			0.60	7.8	ND			0.60	7.8
1,4-Dioxane	TO-15	µg/m^3	ND			0.50	3.0	ND			0.51	3.1	ND			0.50	3.0	ND			0.53	3.2	ND			0.51	3.1	ND			0.51	3.1	ND			0.51	3.1
Ethanol	TO-15	µg/m^3	**10**	J	3D	0.63	3.0	**2.0**	J	6G	0.65	3.1	ND			0.63	3.0	ND			0.68	3.2	**10**			0.65	3.1	**11**	J	3D	0.65	3.1	**7.4**	J	3D	0.65	3.1
Ethyl acetate	TO-15	µg/m^3	ND			0.50	3.0	ND			0.51	3.1	ND			0.50	3.0	ND			0.53	3.2	ND			0.51	3.1	ND			0.51	3.1	ND			0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**0.92**	J	6G	0.48	7.6	**4.0**	J	6G	0.50	7.8	ND			0.48	7.6	**42**			0.52	8.1	ND			0.50	7.8	**8.1**			0.50	7.8	**7.7**	J	6G	0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**1.4**	J	3D, 6G	0.45	7.6	**2.7**	J	6G	0.46	7.8	ND			0.45	7.6	**25**			0.49	8.1	ND			0.46	7.8	**7.4**	J	6G	0.46	7.8	**6.7**	J	6G	0.46	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.50	7.6	ND			0.51	7.8	ND			0.50	7.6	ND			0.53	8.1	ND			0.51	7.8	ND			0.51	7.8	ND			0.51	7.8
n-Heptane	TO-15	µg/m^3	ND			0.51	3.0	ND			0.53	3.1	ND			0.51	3.0	**3.9**			0.55	3.2	ND			0.53	3.1	ND			0.53	3.1	**1.1**	J	6G	0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.3	15	ND			2.3	16	ND			2.3	15	ND			2.4	16	ND			2.3	16	ND			2.3	16	ND			2.3	16

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW38B				VW39A				VW39B				VW40A				VW40B				VW41A				VW41A			
Sampling Date/Time			12/4/2020 13:30				12/3/2020 9:14				12/3/2020 9:01				12/2/2020 8:55				12/2/2020 8:42				12/4/2020 11:10				12/4/2020 11:10			
Sample Depth (feet)			14.5				5.5				14.5				5.5				14.5				5.5				5.5			
Sample Type			FD				N				N				N				N				N				N			
Field Sample ID			SG-VW38B-02				SG-VW39A-01				SG-VW39B-01				SG-VW40A-01				SG-VW40B-01				SG-VW41A-01				SG-VW41A-02			
Lab Sample ID			2035587-11				2035539-03				2035539-04				2035335-05				2035335-06				2035587-06				2035587-07			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.1	3.0	ND		1.1	3.1	ND		1.1	3.0	ND		1.2	3.2	ND		1.1	3.1	ND		1.1	3.1	ND		1.1	3.1
Hexane	TO-15	µg/m^3	ND		0.30	7.6	ND		0.31	7.8	ND		0.30	7.6	ND		0.32	8.1	ND		0.31	7.8	ND		0.31	7.8	ND		0.31	7.8
2-Hexanone	TO-15	µg/m^3	ND		0.44	7.6	ND		0.45	7.8	ND		0.44	7.6	ND		0.47	8.1	ND		0.45	7.8	ND		0.45	7.8	ND		0.45	7.8
Isooctane	TO-15	µg/m^3	ND		0.53	7.6	ND		0.54	7.8	ND		0.53	7.6	**1.2**	**J 6G**	0.57	8.1	ND		0.54	7.8	ND		0.54	7.8	ND		0.54	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		0.48	3.0	ND		0.50	3.1	ND		0.48	3.0	ND		0.52	3.2	ND		0.50	3.1	ND		0.50	3.1	ND		0.50	3.1
Methylene chloride	TO-15	µg/m^3	ND		0.60	15	ND		0.62	16	ND		0.60	15	ND		0.65	16	ND		0.62	16	ND		0.62	16	ND		0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**0.80**	**J 6G**	0.29	3.0	**1.3**	**J 6G**	0.29	3.1	ND		0.29	3.0	**1.6**	**J 6G**	0.31	3.2	**1.0**	**J 6G**	0.29	3.1	**99**		0.29	3.1	**100**		0.29	3.1
Methyl iodide	TO-15	µg/m^3	ND		0.88	15	ND		0.90	16	ND		0.88	15	ND		0.94	16	ND		0.90	16	ND		0.90	16	ND		0.90	16
Methyl isobutyl ketone	TO-15	µg/m^3	ND		0.39	7.6	ND		0.40	7.8	ND		0.39	7.6	ND		0.42	8.1	ND		0.40	7.8	**6.7**	**J 6G**	0.40	7.8	**7.4**	**J 6G**	0.40	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.42	3.0	ND		0.43	3.1	ND		0.42	3.0	ND		0.45	3.2	ND		0.43	3.1	ND		0.43	3.1	ND		0.43	3.1
Naphthalene	TO-15	µg/m^3	**9.3**	**J 6G**	2.1	30	ND		2.2	31	ND		2.1	30	ND		2.3	32	ND		2.2	31	**9.6**	**J 6G**	2.2	31	**9.4**	**J 6G**	2.2	31
Propylene	TO-15	µg/m^3	ND		0.38	3.0	ND		0.39	3.1	ND		0.38	3.0	ND		0.40	3.2	ND		0.39	3.1	ND		0.39	3.1	ND		0.39	3.1
Styrene	TO-15	µg/m^3	ND		0.36	7.6	ND		0.37	7.8	ND		0.36	7.6	ND		0.39	8.1	ND		0.37	7.8	ND		0.37	7.8	ND		0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.92	7.6	ND		0.95	7.8	ND		0.92	7.6	ND		0.99	8.1	ND		0.95	7.8	ND		0.95	7.8	ND		0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.71	7.6	ND		0.73	7.8	ND		0.71	7.6	ND		0.76	8.1	ND		0.73	7.8	ND		0.73	7.8	ND		0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m^3	**46**		0.76	7.6	**30**		0.78	7.8	**22**		0.76	7.6	**3.3**	**J 6G**	0.81	8.1	**6.7**	**J 6G**	0.78	7.8	**12**		0.78	7.8	**12**		0.78	7.8
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		1.0	7.6	ND		1.0	7.8	ND		1.0	7.6	ND		1.1	8.1	ND		1.0	7.8	ND		1.0	7.8	ND		1.0	7.8
Tetrahydrofuran	TO-15	µg/m^3	ND		0.41	3.0	**1.4**	**J 6G**	0.42	3.1	ND		0.41	3.0	ND		0.44	3.2	ND		0.42	3.1	**5.9**		0.42	3.1	**6.9**		0.42	3.1
Toluene	TO-15	µg/m^3	**3.7**	**J 3D**	0.41	3.0	**570**		4.2	31	**2.7**	**J 6G**	0.41	3.0	**130**		0.44	3.2	**1.3**	**J 6G**	0.42	3.1	**710**		4.2	31	**720**		4.2	31
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.2	15	ND		1.3	16	ND		1.2	15	ND		1.3	16	ND		1.3	16	ND		1.3	16	ND		1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		0.59	7.6	ND		0.60	7.8	ND		0.59	7.6	ND		0.63	8.1	ND		0.60	7.8	ND		0.60	7.8	ND		0.60	7.8
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.92	7.6	ND		0.95	7.8	ND		0.92	7.6	ND		0.99	8.1	ND		0.95	7.8	ND		0.95	7.8	ND		0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m^3	ND		0.82	7.6	ND		0.84	7.8	ND		0.82	7.6	ND		0.87	8.1	ND		0.84	7.8	**0.92**	**J 6G**	0.84	7.8	**0.92**	**J 6G**	0.84	7.8
Trichlorofluoromethane	TO-15	µg/m^3	**1.5**	**J 6G**	0.71	7.6	ND		0.73	7.8	ND		0.71	7.6	**1.3**	**J 6G**	0.76	8.1	**1.4**	**J 6G**	0.73	7.8	**1.3**	**J 6G**	0.73	7.8	**1.4**	**J 6G**	0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.72	7.6	ND		0.74	7.8	ND		0.72	7.6	ND		0.78	8.1	ND		0.74	7.8	ND		0.74	7.8	ND		0.74	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		0.83	7.6	ND		0.85	7.8	ND		0.83	7.6	ND		0.89	8.1	ND		0.85	7.8	ND		0.85	7.8	ND		0.85	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**3.3**	**J 3D, 6G**	0.60	7.6	**4.0**	**J 6G**	0.62	7.8	ND		0.60	7.6	**27**		0.65	8.1	**2.1**	**J 6G**	0.62	7.8	**12**		0.62	7.8	**12**		0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND	UJ 3D	0.60	7.6	**1.8**	**J 6G**	0.62	7.8	ND		0.60	7.6	**6.8**	**J 6G**	0.65	8.1	ND		0.62	7.8	**2.7**	**J 6G**	0.62	7.8	**3.1**	**J 6G**	0.62	7.8
Vinyl acetate	TO-15	µg/m^3	ND		0.50	3.0	ND		0.51	3.1	ND		0.50	3.0	ND		0.53	3.2	ND		0.51	3.1	**1.4**	**J 6G**	0.51	3.1	ND		0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND		0.48	7.6	ND		0.50	7.8	ND		0.48	7.6	ND		0.52	8.1	ND		0.50	7.8	ND		0.50	7.8	ND		0.50	7.8
Vinyl chloride	TO-15	µg/m^3	ND		0.59	3.0	ND		0.60	3.1	ND		0.59	3.0	ND		0.63	3.2	ND		0.60	3.1	ND		0.60	3.1	ND		0.60	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**3.7**	**J 3D, 6G**	0.92	7.6	**15**		0.95	7.8	ND		0.92	7.6	**84**		0.99	8.1	**3.5**	**J 6G**	0.95	7.8	**35**		0.95	7.8	**29**		0.95	7.8
o-Xylene	TO-15	µg/m^3	**1.1**	**J 3D, 6G**	0.45	7.6	**7.0**	**J 6G**	0.46	7.8	ND		0.45	7.6	**18**		0.49	8.1	**1.1**	**J 6G**	0.46	7.8	**11**		0.46	7.8	**9.8**		0.46	7.8
Total Xylenes	TO-15	µg/m^3	**4.8**	**J 3D, 6G**	1.4	15	**22**		1.4	16	ND		1.4	15	**100**		1.5	16	**4.6**	**J 6G**	1.4	16	**47**		1.4	16	**39**		1.4	16
TPH - Gasoline	TO-15	µg/m^3	**200**	**J 3D, 6G**	32	300	**1,000**		33	310	**230**	**J 6G**	32	300	**560**		34	320	**150**	**J 6G**	33	310	**960**		33	310	**990**		33	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**200**	**J 3D, 6G**	32	300	**1,000**		33	310	**230**	**J 6G**	32	300	**560**		34	320	**150**	**J 6G**	33	310	**960**		33	310	**990**		33	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW41B				VW42A				VW42A				VW42B				VW43A				VW43B				VW44A			
			Sampling Date/Time	12/4/2020 11:00				12/2/2020 10:59				3/4/2021 13:55				12/2/2020 10:50				12/22/2020 13:08				12/22/2020 12:56				12/22/2020 12:08			
			Sample Depth (feet)	14.5				5.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW41B-01				SG-VW42A-01				SG-VW42A-02				SG-VW42B-01				SG-VW43A-01				SG-VW43B-01				SG-VW44A-01			
			Lab Sample ID	2035587-08				2035335-10				2107220-08				2035335-11				2037849-10				2037849-11				2037849-08			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		1.3	16	ND		120	1,500	ND		1.3	16	ND		1.4	17	ND		1.3	15	ND		1.3	15	ND		1.2	15
Acetone	TO-15	µg/m^3	**5.1**	**J 6G**	0.69	8.0	ND		64	740	**2.1**	**J 6G**	0.69	8.0	**3.1**	**J 6G**	0.75	8.7	**4.3**	**J 6G**	0.66	7.6	**11**		0.66	7.6	**140**		6.4	74
Acrylonitrile	TO-15	µg/m^3	ND		0.43	3.2	ND		40	300	ND		0.43	3.2	ND		0.47	3.5	ND		0.41	3.1	ND		0.41	3.1	ND		0.40	3.0
Allyl chloride	TO-15	µg/m^3	ND		0.45	3.2	ND		41	300	ND		0.45	3.2	ND		0.49	3.5	ND		0.43	3.1	ND		0.43	3.1	ND		0.42	3.0
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		0.50	8.0	ND		46	740	ND		0.50	8.0	ND		0.54	8.7	ND		0.47	7.6	ND		0.47	7.6	ND		0.46	7.4
Benzene	TO-15	µg/m^3	**1.1**	**J 6G**	0.34	3.2	ND		31	300	ND		0.34	3.2	ND		0.37	3.5	**1.8**	**J 6G**	0.32	3.1	**4.3**		0.32	3.1	**7.6**		0.31	3.0
Benzyl chloride	TO-15	µg/m^3	ND		0.42	16	ND		38	1,500	ND		0.42	16	ND		0.45	17	ND		0.40	15	ND		0.40	15	ND		0.39	15
Bromodichloromethane	TO-15	µg/m^3	**5.3**	**J 6G**	0.72	8.0	ND		67	740	ND		0.72	8.0	ND		0.78	8.7	ND		0.69	7.6	ND		0.69	7.6	ND		0.67	7.4
Bromoform	TO-15	µg/m^3	ND		1.4	16	ND		130	1,500	ND		1.4	16	ND		1.5	17	ND		1.3	15	ND		1.3	15	ND		1.3	15
Bromomethane	TO-15	µg/m^3	ND		0.75	3.2	ND		70	300	ND		0.75	3.2	ND		0.82	3.5	ND		0.72	3.1	ND		0.72	3.1	ND		0.70	3.0
1,3-Butadiene	TO-15	µg/m^3	ND		0.35	3.2	ND		33	300	ND		0.35	3.2	ND		0.38	3.5	ND		0.34	3.1	ND		0.34	3.1	ND		0.33	3.0
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND		1.1	8.0	ND		100	740	ND		1.1	8.0	ND		1.2	8.7	ND		1.1	7.6	ND		1.1	7.6	ND		1.0	7.4
Carbon disulfide	TO-15	µg/m^3	**1.9**	**J 6G**	0.30	3.2	ND		28	300	ND		0.30	3.2	**0.60**	**J 6G**	0.33	3.5	**4.5**		0.29	3.1	**20**		0.29	3.1	**13**		0.28	3.0
Carbon tetrachloride	TO-15	µg/m^3	ND		0.72	8.0	ND		67	740	ND		0.72	8.0	ND		0.78	8.7	ND		0.69	7.6	ND		0.69	7.6	ND		0.67	7.4
Chlorobenzene	TO-15	µg/m^3	ND		0.64	8.0	ND		59	740	ND		0.64	8.0	ND		0.70	8.7	ND		0.61	7.6	ND		0.61	7.6	ND		0.60	7.4
Chloroethane	TO-15	µg/m^3	ND		0.85	3.2	ND		78	300	ND		0.85	3.2	ND		0.92	3.5	ND		0.81	3.1	ND		0.81	3.1	ND		0.79	3.0
Chloroform	TO-15	µg/m^3	**210**		8.6	80	ND		80	740	ND		0.86	8.0	ND		0.94	8.7	ND		0.83	7.6	**43**		0.83	7.6	**20**		0.80	7.4
Chloromethane	TO-15	µg/m^3	ND		0.34	3.2	ND		31	300	ND		0.34	3.2	ND		0.37	3.5	ND		0.32	3.1	ND		0.32	3.1	ND		0.31	3.0
Cyclohexane	TO-15	µg/m^3	ND		0.61	3.2	ND		56	300	ND		0.61	3.2	ND		0.66	3.5	ND		0.58	3.1	ND		0.58	3.1	ND		0.57	3.0
Dibromochloromethane	TO-15	µg/m^3	ND		0.69	8.0	ND		64	740	ND		0.69	8.0	ND		0.75	8.7	ND		0.66	7.6	ND		0.66	7.6	ND		0.64	7.4
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		2.7	8.0	ND		250	740	ND		2.7	8.0	ND		3.0	8.7	ND		2.6	7.6	ND		2.6	7.6	ND		2.5	7.4
1,2-Dibromoethane	TO-15	µg/m^3	ND		0.93	8.0	ND		86	740	ND		0.93	8.0	ND		1.0	8.7	ND		0.89	7.6	ND		0.89	7.6	ND		0.86	7.4
Dibromomethane	TO-15	µg/m^3	ND		0.91	8.0	ND		84	740	ND		0.91	8.0	ND		0.99	8.7	ND		0.87	7.6	ND		0.87	7.6	ND		0.85	7.4
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		0.80	8.0	ND		74	740	ND		0.80	8.0	ND		0.87	8.7	ND		0.76	7.6	ND		0.76	7.6	ND		0.74	7.4
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		0.50	8.0	ND		46	740	ND		0.50	8.0	ND		0.54	8.7	ND		0.47	7.6	ND		0.47	7.6	ND		0.46	7.4
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		0.80	8.0	ND		74	740	ND		0.80	8.0	ND		0.87	8.7	ND		0.76	7.6	ND		0.76	7.6	ND		0.74	7.4
Dichlorodifluoromethane	TO-15	µg/m^3	**2.5**	**J 6G**	0.72	8.0	ND		67	740	**3.0**	**J 6G**	0.72	8.0	**2.4**	**J 6G**	0.78	8.7	**3.1**	**J 6G**	0.69	7.6	**3.8**	**J 6G**	0.69	7.6	**4.3**	**J 6G**	0.67	7.4
1,1-Dichloroethane	TO-15	µg/m^3	ND		0.37	8.0	ND		34	740	ND		0.37	8.0	ND		0.40	8.7	ND		0.35	7.6	ND		0.35	7.6	ND		0.34	7.4
1,2-Dichloroethane	TO-15	µg/m^3	ND		0.42	8.0	ND		38	740	ND		0.42	8.0	ND		0.45	8.7	ND		0.40	7.6	ND		0.40	7.6	ND		0.39	7.4
1,1-Dichloroethene	TO-15	µg/m^3	ND		0.50	8.0	ND		46	740	ND		0.50	8.0	ND		0.54	8.7	ND		0.47	7.6	ND		0.47	7.6	ND		0.46	7.4
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.51	3.2	ND		47	300	ND		0.51	3.2	ND		0.56	3.5	ND		0.49	3.1	ND		0.49	3.1	ND		0.48	3.0
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND		0.43	3.2	ND		40	300	ND		0.43	3.2	ND		0.47	3.5	ND		0.41	3.1	ND		0.41	3.1	ND		0.40	3.0
1,2-Dichloropropane	TO-15	µg/m^3	ND		0.51	8.0	ND		47	740	ND		0.51	8.0	ND		0.56	8.7	ND		0.49	7.6	ND		0.49	7.6	ND		0.48	7.4
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.48	8.0	ND		44	740	ND		0.48	8.0	ND		0.52	8.7	ND		0.46	7.6	ND		0.46	7.6	ND		0.45	7.4
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		0.64	8.0	ND		59	740	ND		0.64	8.0	ND		0.70	8.7	ND		0.61	7.6	ND		0.61	7.6	ND		0.60	7.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		1.5	8.0	ND		130	740	ND		1.5	8.0	ND		1.6	8.7	ND		1.4	7.6	ND		1.4	7.6	ND		1.4	7.4
1,1-Difluoroethane	TO-15	µg/m^3	ND		3.2	8.0	ND		300	740	ND		3.2	8.0	ND		3.5	8.7	ND		3.1	7.6	ND		3.1	7.6	ND		3.0	7.4
Diisopropyl ether	TO-15	µg/m^3	ND		0.62	8.0	ND		58	740	ND		0.62	8.0	ND		0.68	8.7	ND		0.60	7.6	ND		0.60	7.6	ND		0.58	7.4
1,4-Dioxane	TO-15	µg/m^3	ND		0.53	3.2	ND		49	300	ND		0.53	3.2	ND		0.57	3.5	ND		0.50	3.1	ND		0.50	3.1	ND		0.49	3.0
Ethanol	TO-15	µg/m^3	**8.7**		0.67	3.2	ND		62	300	**1.4**	**J 6G**	0.67	3.2	**30**		0.73	3.5	ND		0.64	3.1	ND		0.64	3.1	**3.8**		0.63	3.0
Ethyl acetate	TO-15	µg/m^3	ND		0.53	3.2	ND		49	300	ND		0.53	3.2	ND		0.57	3.5	ND		0.50	3.1	ND		0.50	3.1	ND		0.49	3.0
Ethylbenzene	TO-15	µg/m^3	**1.9**	**J 6G**	0.51	8.0	ND		47	740	ND		0.51	8.0	**1.3**	**J 6G**	0.56	8.7	**3.6**	**J 6G**	0.49	7.6	**9.5**		0.49	7.6	**9.4**		0.48	7.4
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**0.87**	**J 6G**	0.48	8.0	ND		44	740	ND		0.48	8.0	**2.3**	**J 6G**	0.52	8.7	**4.9**	**J 6G**	0.46	7.6	**11**		0.46	7.6	**8.2**		0.45	7.4
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		0.53	8.0	ND		49	740	ND		0.53	8.0	ND		0.57	8.7	ND		0.50	7.6	ND		0.50	7.6	ND		0.49	7.4
n-Heptane	TO-15	µg/m^3	ND		0.54	3.2	ND		50	300	ND		0.54	3.2	ND		0.59	3.5	ND		0.52	3.1	ND		0.52	3.1	**2.1**	**J 6G**	0.51	3.0
Hexachlorobutadiene	TO-15	µg/m^3	ND		2.4	16	ND		220	1,500	ND		2.4	16	ND		2.6	17	ND		2.3	15	ND		2.3	15	ND		2.2	15

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			Location ID	VW41B				VW42A				VW42A				VW42B				VW43A				VW43B				VW44A			
			Sampling Date/Time	12/4/2020 11:00				12/2/2020 10:59				3/4/2021 13:55				12/2/2020 10:50				12/22/2020 13:08				12/22/2020 12:56				12/22/2020 12:08			
			Sample Depth (feet)	14.5				5.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW41B-01				SG-VW42A-01				SG-VW42A-02				SG-VW42B-01				SG-VW43A-01				SG-VW43B-01				SG-VW44A-01			
			Lab Sample ID	2035587-08				2035335-10				2107220-08				2035335-11				2037849-10				2037849-11				2037849-08			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		1.2	3.2	ND		110	300	ND		1.2	3.2	ND		1.3	3.5	ND		1.1	3.1	ND		1.1	3.1	ND		1.1	3.0
Hexane	TO-15	µg/m^3	ND		0.32	8.0	**2,300**		30	740	ND		0.32	8.0	ND		0.35	8.7	ND		0.31	7.6	ND		0.31	7.6	ND		0.30	7.4
2-Hexanone	TO-15	µg/m^3	ND		0.46	8.0	ND		43	740	ND		0.46	8.0	ND		0.50	8.7	ND		0.44	7.6	ND		0.44	7.6	ND		0.43	7.4
Isooctane	TO-15	µg/m^3	ND		0.56	8.0	ND		52	740	ND		0.56	8.0	ND		0.61	8.7	ND		0.54	7.6	ND		0.54	7.6	**2.4**	**J 6G**	0.52	7.4
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		0.51	3.2	ND		47	300	**0.87**	**J 6G**	0.51	3.2	ND		0.56	3.5	ND		0.49	3.1	ND		0.49	3.1	ND		0.48	3.0
Methylene chloride	TO-15	µg/m^3	ND		0.64	16	ND		59	1,500	ND		0.64	16	ND		0.70	17	ND		0.61	15	ND		0.61	15	ND		0.60	15
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**2.8**	**J 6G**	0.30	3.2	ND		28	300	ND		0.30	3.2	ND		0.33	3.5	**2.0**	**J 6G**	0.29	3.1	**6.4**		0.29	3.1	**80**		0.28	3.0
Methyl iodide	TO-15	µg/m^3	ND		0.93	16	ND		86	1,500	ND		0.93	16	ND		1.0	17	ND		0.89	15	ND		0.89	15	ND		0.86	15
Methyl isobutyl ketone	TO-15	µg/m^3	ND		0.42	8.0	ND		38	740	ND		0.42	8.0	ND		0.45	8.7	ND		0.40	7.6	**3.3**	**J 6G**	0.40	7.6	**5.6**	**J 6G**	0.39	7.4
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		0.45	3.2	ND		41	300	ND		0.45	3.2	ND		0.49	3.5	ND		0.43	3.1	ND		0.43	3.1	ND		0.42	3.0
Naphthalene	TO-15	µg/m^3	ND		2.2	32	ND		210	3,000	ND		2.2	32	**11**	**J 6G**	2.4	35	ND		2.1	31	ND		2.1	31	ND		2.1	30
Propylene	TO-15	µg/m^3	ND		0.40	3.2	ND		37	300	ND		0.40	3.2	ND		0.44	3.5	ND		0.38	3.1	ND		0.38	3.1	ND		0.37	3.0
Styrene	TO-15	µg/m^3	ND		0.38	8.0	**310**	**J 6G**	36	740	ND		0.38	8.0	ND		0.42	8.7	ND		0.37	7.6	ND		0.37	7.6	ND		0.36	7.4
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.98	8.0	ND		90	740	ND		0.98	8.0	ND		1.1	8.7	ND		0.93	7.6	ND		0.93	7.6	ND		0.91	7.4
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		0.75	8.0	ND		70	740	ND		0.75	8.0	ND		0.82	8.7	ND		0.72	7.6	ND		0.72	7.6	ND		0.70	7.4
Tetrachloroethene (PCE)	TO-15	µg/m^3	**16**		0.80	8.0	ND		74	740	**6.7**	**J 6G**	0.80	8.0	**6.4**	**J 6G**	0.87	8.7	**5.5**	**J 6G**	0.76	7.6	**15**		0.76	7.6	**9.1**		0.74	7.4
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		1.1	8.0	ND		99	740	ND		1.1	8.0	ND		1.2	8.7	ND		1.0	7.6	ND		1.0	7.6	ND		1.0	7.4
Tetrahydrofuran	TO-15	µg/m^3	**1.6**	**J 6G**	0.43	3.2	ND		40	300	ND		0.43	3.2	ND		0.47	3.5	**2.3**	**J 6G**	0.41	3.1	**2.7**	**J 6G**	0.41	3.1	**8.1**		0.40	3.0
Toluene	TO-15	µg/m^3	**15**		0.43	3.2	**5,700**		40	300	**5.1**		0.43	3.2	**6.8**		0.47	3.5	**12**		0.41	3.1	**55**		0.41	3.1	**69**		0.40	3.0
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		1.3	16	ND		120	1,500	ND		1.3	16	ND		1.4	17	ND		1.3	15	ND		1.3	15	ND		1.2	15
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		0.62	8.0	ND		58	740	ND		0.62	8.0	ND		0.68	8.7	ND		0.60	7.6	ND		0.60	7.6	ND		0.58	7.4
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		0.98	8.0	ND		90	740	ND		0.98	8.0	ND		1.1	8.7	ND		0.93	7.6	ND		0.93	7.6	ND		0.91	7.4
Trichloroethene (TCE)	TO-15	µg/m^3	**1.9**	**J 6G**	0.86	8.0	ND		80	740	ND		0.86	8.0	ND		0.94	8.7	ND		0.83	7.6	**8.4**		0.83	7.6	**5.5**	**J 6G**	0.80	7.4
Trichlorofluoromethane	TO-15	µg/m^3	**1.5**	**J 6G**	0.75	8.0	ND		70	740	ND		0.75	8.0	**1.3**	**J 6G**	0.82	8.7	ND		0.72	7.6	**2.3**	**J 6G**	0.72	7.6	**2.3**	**J 6G**	0.70	7.4
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		0.77	8.0	ND		71	740	ND		0.77	8.0	ND		0.84	8.7	ND		0.73	7.6	ND		0.73	7.6	ND		0.72	7.4
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		0.88	8.0	ND		81	740	ND		0.88	8.0	ND		0.96	8.7	ND		0.84	7.6	ND		0.84	7.6	ND		0.82	7.4
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**3.1**	**J 6G**	0.64	8.0	ND		59	740	ND		0.64	8.0	**5.6**	**J 6G**	0.70	8.7	**7.2**	**J 6G**	0.61	7.6	**16**		0.61	7.6	**11**		0.60	7.4
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**0.79**	**J 6G**	0.64	8.0	ND		59	740	ND		0.64	8.0	**1.0**	**J 6G**	0.70	8.7	**2.2**	**J 6G**	0.61	7.6	**4.8**	**J 6G**	0.61	7.6	**3.9**	**J 6G**	0.60	7.4
Vinyl acetate	TO-15	µg/m^3	ND		0.53	3.2	ND		49	300	ND		0.53	3.2	ND		0.57	3.5	ND		0.50	3.1	ND		0.50	3.1	ND		0.49	3.0
Vinyl bromide	TO-15	µg/m^3	ND		0.51	8.0	ND		47	740	ND		0.51	8.0	ND		0.56	8.7	ND		0.49	7.6	ND		0.49	7.6	ND		0.48	7.4
Vinyl chloride	TO-15	µg/m^3	ND		0.62	3.2	ND		58	300	ND		0.62	3.2	ND		0.68	3.5	ND		0.60	3.1	ND		0.60	3.1	ND		0.58	3.0
p- & *m*-Xylenes	TO-15	µg/m^3	**9.5**		0.98	8.0	ND		90	740	ND		0.98	8.0	**6.4**	**J 6G**	1.1	8.7	**14**		0.93	7.6	**37**		0.93	7.6	**35**		0.91	7.4
o-Xylene	TO-15	µg/m^3	**2.4**	**J 6G**	0.48	8.0	ND		44	740	ND		0.48	8.0	**2.2**	**J 6G**	0.52	8.7	**4.3**	**J 6G**	0.46	7.6	**12**		0.46	7.6	**11**		0.45	7.4
Total Xylenes	TO-15	µg/m^3	**12**	**J 6G**	1.5	16	ND		130	1,500	ND		1.5	16	**8.6**	**J 6G**	1.6	17	**19**		1.4	15	**49**		1.4	15	**46**		1.4	15
TPH - Gasoline	TO-15	µg/m^3	**540**		34	320	**63,000**		3,100	30,000	**91**	**J 6G**	34	320	**300**	**J 6G**	37	350	**220**	**J 6G**	32	310	**630**		32	310	**810**		31	300
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**540**		34	320	**63,000**		3,100	30,000	**91**	**J 6G**	34	320	**300**	**J 6G**	37	350	**220**	**J 6G**	32	310	**630**		32	310	**810**		31	300

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW44B				VW45A				VW45A				VW45B				VW46A				VW46B				VW47A			
			Sampling Date/Time	12/22/2020 11:57				12/23/2020 8:54				3/3/2021 12:40				12/23/2020 8:43				12/23/2020 9:59				12/23/2020 9:47				12/23/2020 10:49			
			Sample Depth (feet)	14.5				5.5				5.5				14.5				5.5				14.5				5.5			
			Sample Type	N				N				N				N				N				N				N			
			Field Sample ID	SG-VW44B-01				SG-VW45A-01				SG-VW45A-02				SG-VW45B-01				SG-VW46A-01				SG-VW46B-01				SG-VW47A-01			
			Lab Sample ID	2037849-09				2037849-17				2107220-01				2037849-18				2037849-19				2037849-20				2037849-21			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.2	15	ND			1.3	16	ND			1.4	17	ND			1.2	15	ND			1.2	15	ND	UJ	4D	1.2	15	ND			1.2	15
Acetone	TO-15	µg/m^3	**64**			0.63	7.4	**250**			6.7	78	**2.1**	**J**	**6G**	0.71	8.3	**43**			0.63	7.4	**56**			0.64	7.5	**32**	**J-**	**4D**	0.64	7.5	**6.4**	**J**	**6G**	0.64	7.5
Acrylonitrile	TO-15	µg/m^3	ND			0.40	2.9	ND			0.42	3.1	ND			0.45	3.3	ND			0.40	2.9	ND			0.40	3.0	ND	UJ	4D	0.40	3.0	ND			0.40	3.0
Allyl chloride	TO-15	µg/m^3	ND			0.41	2.9	ND			0.43	3.1	ND			0.46	3.3	ND			0.41	2.9	ND			0.42	3.0	ND	UJ	4D	0.42	3.0	ND			0.42	3.0
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.46	7.4	ND			0.48	7.8	ND			0.51	8.3	ND			0.46	7.4	ND			0.46	7.5	ND	UJ	4D	0.46	7.5	ND			0.46	7.5
Benzene	TO-15	µg/m^3	**1.1**	**J**	**6G**	0.31	2.9	**17**			0.33	3.1	ND			0.35	3.3	ND			0.31	2.9	**1.8**	**J**	**6G**	0.32	3.0	**1.1**	**J-**	**4D, 6G**	0.32	3.0	ND			0.32	3.0
Benzyl chloride	TO-15	µg/m^3	ND			0.38	15	ND			0.40	16	ND			0.43	17	ND			0.38	15	ND			0.39	15	ND	UJ	4D	0.39	15	ND			0.39	15
Bromodichloromethane	TO-15	µg/m^3	ND			0.66	7.4	ND			0.70	7.8	ND			0.75	8.3	ND			0.66	7.4	ND			0.68	7.5	ND	UJ	4D	0.68	7.5	ND			0.68	7.5
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.3	16	ND			1.4	17	ND			1.3	15	ND			1.3	15	ND	UJ	4D	1.3	15	ND			1.3	15
Bromomethane	TO-15	µg/m^3	ND			0.69	2.9	ND			0.73	3.1	ND			0.78	3.3	ND			0.69	2.9	ND			0.70	3.0	ND	UJ	4D	0.70	3.0	ND			0.70	3.0
1,3-Butadiene	TO-15	µg/m^3	ND			0.32	2.9	ND			0.34	3.1	ND			0.37	3.3	ND			0.32	2.9	ND			0.33	3.0	ND	UJ	4D	0.33	3.0	ND			0.33	3.0
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.0	7.4	ND			1.1	7.8	**3.9**	**J**	**6G**	1.2	8.3	ND			1.0	7.4	ND			1.0	7.5	**2.2**	**J-**	**4D, 6G**	1.0	7.5	ND			1.0	7.5
Carbon disulfide	TO-15	µg/m^3	**6.7**			0.28	2.9	**20**			0.29	3.1	ND			0.32	3.3	**2.8**	**J**	**6G**	0.28	2.9	**8.1**			0.28	3.0	**5.9**	**J-**	**4D**	0.28	3.0	**4.4**			0.28	3.0
Carbon tetrachloride	TO-15	µg/m^3	ND			0.66	7.4	ND			0.70	7.8	ND			0.75	8.3	ND			0.66	7.4	ND			0.68	7.5	ND	UJ	4D	0.68	7.5	ND			0.68	7.5
Chlorobenzene	TO-15	µg/m^3	ND			0.59	7.4	ND			0.62	7.8	ND			0.66	8.3	ND			0.59	7.4	ND			0.60	7.5	ND	UJ	4D	0.60	7.5	ND			0.60	7.5
Chloroethane	TO-15	µg/m^3	ND			0.78	2.9	ND			0.82	3.1	ND			0.88	3.3	ND			0.78	2.9	ND			0.80	3.0	ND	UJ	4D	0.80	3.0	ND			0.80	3.0
Chloroform	TO-15	µg/m^3	**73**			0.79	7.4	**2.4**	**J**	**6G**	0.84	7.8	ND			0.90	8.3	**27**			0.79	7.4	ND			0.81	7.5	**15**	**J-**	**4D**	0.81	7.5	ND			0.81	7.5
Chloromethane	TO-15	µg/m^3	ND			0.31	2.9	ND			0.33	3.1	ND			0.35	3.3	ND			0.31	2.9	ND			0.32	3.0	ND	UJ	4D	0.32	3.0	ND			0.32	3.0
Cyclohexane	TO-15	µg/m^3	ND			0.56	2.9	ND			0.59	3.1	ND			0.63	3.3	ND			0.56	2.9	ND			0.57	3.0	ND	UJ	4D	0.57	3.0	ND			0.57	3.0
Dibromochloromethane	TO-15	µg/m^3	ND			0.63	7.4	ND			0.67	7.8	ND			0.71	8.3	ND			0.63	7.4	ND			0.64	7.5	ND	UJ	4D	0.64	7.5	ND			0.64	7.5
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.5	7.4	ND			2.6	7.8	ND			2.8	8.3	ND			2.5	7.4	ND			2.6	7.5	ND	UJ	4D	2.6	7.5	ND			2.6	7.5
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.85	7.4	ND			0.90	7.8	**4.0**	**J**	**6G**	0.96	8.3	ND			0.85	7.4	ND			0.87	7.5	ND	UJ	4D	0.87	7.5	ND			0.87	7.5
Dibromomethane	TO-15	µg/m^3	ND			0.84	7.4	ND			0.88	7.8	ND			0.95	8.3	ND			0.84	7.4	ND			0.86	7.5	ND	UJ	4D	0.86	7.5	ND			0.86	7.5
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.74	7.4	ND			0.78	7.8	ND			0.83	8.3	ND			0.74	7.4	ND			0.75	7.5	ND	UJ	4D	0.75	7.5	ND			0.75	7.5
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.46	7.4	ND			0.48	7.8	ND			0.51	8.3	ND			0.46	7.4	ND			0.46	7.5	ND	UJ	4D	0.46	7.5	ND			0.46	7.5
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.74	7.4	ND			0.78	7.8	ND			0.83	8.3	ND			0.74	7.4	ND			0.75	7.5	**2.6**	**J-**	**4D, 6G**	0.75	7.5	ND			0.75	7.5
Dichlorodifluoromethane	TO-15	µg/m^3	**4.7**	**J**	**6G**	0.66	7.4	**2.9**	**J**	**6G**	0.70	7.8	**2.8**	**J**	**6G**	0.75	8.3	**3.0**	**J**	**6G**	0.66	7.4	**2.8**	**J**	**6G**	0.68	7.5	**2.5**	**J-**	**4D, 6G**	0.68	7.5	**2.7**	**J**	**6G**	0.68	7.5
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.34	7.4	ND			0.36	7.8	ND			0.38	8.3	ND			0.34	7.4	ND			0.34	7.5	ND	UJ	4D	0.34	7.5	ND			0.34	7.5
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.38	7.4	ND			0.40	7.8	ND			0.43	8.3	ND			0.38	7.4	ND			0.39	7.5	ND	UJ	4D	0.39	7.5	ND			0.39	7.5
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.46	7.4	ND			0.48	7.8	ND			0.51	8.3	ND			0.46	7.4	ND			0.46	7.5	ND	UJ	4D	0.46	7.5	ND			0.46	7.5
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.47	2.9	ND			0.50	3.1	ND			0.53	3.3	ND			0.47	2.9	ND			0.48	3.0	ND	UJ	4D	0.48	3.0	ND			0.48	3.0
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.40	2.9	ND			0.42	3.1	ND			0.45	3.3	ND			0.40	2.9	ND			0.40	3.0	ND	UJ	4D	0.40	3.0	ND			0.40	3.0
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.47	7.4	ND			0.50	7.8	ND			0.53	8.3	ND			0.47	7.4	ND			0.48	7.5	ND	UJ	4D	0.48	7.5	ND			0.48	7.5
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.44	7.4	ND			0.46	7.8	ND			0.50	8.3	ND			0.44	7.4	ND			0.45	7.5	ND	UJ	4D	0.45	7.5	ND			0.45	7.5
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.59	7.4	ND			0.62	7.8	ND			0.66	8.3	ND			0.59	7.4	ND			0.60	7.5	ND	UJ	4D	0.60	7.5	ND			0.60	7.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.3	7.4	ND			1.4	7.8	ND			1.5	8.3	ND			1.3	7.4	ND			1.4	7.5	ND	UJ	4D	1.4	7.5	ND			1.4	7.5
1,1-Difluoroethane	TO-15	µg/m^3	ND			2.9	7.4	ND			3.1	7.8	ND			3.3	8.3	ND			2.9	7.4	ND			3.0	7.5	ND	UJ	4D	3.0	7.5	ND			3.0	7.5
Diisopropyl ether	TO-15	µg/m^3	ND			0.57	7.4	ND			0.60	7.8	ND			0.65	8.3	ND			0.57	7.4	ND			0.58	7.5	ND	UJ	4D	0.58	7.5	ND			0.58	7.5
1,4-Dioxane	TO-15	µg/m^3	ND			0.49	2.9	ND			0.51	3.1	ND			0.55	3.3	ND			0.49	2.9	ND			0.50	3.0	ND	UJ	4D	0.50	3.0	ND			0.50	3.0
Ethanol	TO-15	µg/m^3	ND			0.62	2.9	**3.5**			0.65	3.1	**4.6**			0.70	3.3	**1.9**	**J**	**6G**	0.62	2.9	**2.0**	**J**	**6G**	0.63	3.0	**130**	**J-**	**4D**	0.63	3.0	**2.0**	**J**	**6G**	0.63	3.0
Ethyl acetate	TO-15	µg/m^3	ND			0.49	2.9	ND			0.51	3.1	ND			0.55	3.3	ND			0.49	2.9	ND			0.50	3.0	ND	UJ	4D	0.50	3.0	ND			0.50	3.0
Ethylbenzene	TO-15	µg/m^3	**3.1**	**J**	**6G**	0.47	7.4	**24**			0.50	7.8	ND			0.53	8.3	**2.2**	**J**	**6G**	0.47	7.4	**5.6**	**J**	**6G**	0.48	7.5	**7.7**	**J-**	**4D**	0.48	7.5	ND			0.48	7.5
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**2.8**	**J**	**6G**	0.44	7.4	**25**			0.46	7.8	ND			0.50	8.3	**3.2**	**J**	**6G**	0.44	7.4	**5.6**	**J**	**6G**	0.45	7.5	**3.8**	**J-**	**4D, 6G**	0.45	7.5	ND			0.45	7.5
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.49	7.4	ND			0.51	7.8	ND			0.55	8.3	ND			0.49	7.4	ND			0.50	7.5	ND	UJ	4D	0.50	7.5	ND			0.50	7.5
n-Heptane	TO-15	µg/m^3	ND			0.50	2.9	**5.0**			0.53	3.1	ND			0.56	3.3	ND			0.50	2.9	ND			0.51	3.0	ND	UJ	4D	0.51	3.0	ND			0.51	3.0
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.2	15	ND			2.3	16	ND			2.5	17	ND			2.2	15	ND			2.2	15	ND	UJ	4D	2.2	15	ND			2.2	15

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW44B				VW45A				VW45A				VW45B				VW46A				VW46B				VW47A			
Sampling Date/Time			12/22/2020 11:57				12/23/2020 8:54				3/3/2021 12:40				12/23/2020 8:43				12/23/2020 9:59				12/23/2020 9:47				12/23/2020 10:49			
Sample Depth (feet)			14.5				5.5				5.5				14.5				5.5				14.5				5.5			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			SG-VW44B-01				SG-VW45A-01				SG-VW45A-02				SG-VW45B-01				SG-VW46A-01				SG-VW46B-01				SG-VW47A-01			
Lab Sample ID			2037849-09				2037849-17				2107220-01				2037849-18				2037849-19				2037849-20				2037849-21			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND			1.1	2.9	ND			1.1	3.1	ND			1.2	3.3	ND			1.1	2.9	ND			1.1	3.0	ND	UJ	4D	1.1	3.0	ND			1.1	3.0
Hexane	TO-15	µg/m^3	ND			0.29	7.4	ND			0.31	7.8	ND			0.33	8.3	ND			0.29	7.4	ND			0.30	7.5	ND	UJ	4D	0.30	7.5	ND			0.30	7.5
2-Hexanone	TO-15	µg/m^3	ND			0.43	7.4	ND			0.45	7.8	ND			0.48	8.3	ND			0.43	7.4	ND			0.44	7.5	ND	UJ	4D	0.44	7.5	ND			0.44	7.5
Isooctane	TO-15	µg/m^3	ND			0.51	7.4	**5.0**	**J**	**6G**	0.54	7.8	ND			0.58	8.3	ND			0.51	7.4	ND			0.52	7.5	ND	UJ	4D	0.52	7.5	ND			0.52	7.5
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND			0.47	2.9	ND			0.50	3.1	**0.84**	**J**	**6G**	0.53	3.3	**1.7**	**J**	**6G**	0.47	2.9	ND			0.48	3.0	**35**	**J-**	**4D**	0.48	3.0	ND			0.48	3.0
Methylene chloride	TO-15	µg/m^3	ND			0.59	15	ND			0.62	16	ND			0.66	17	ND			0.59	15	ND			0.60	15	ND	UJ	4D	0.60	15	ND			0.60	15
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**30**			0.28	2.9	**160**			2.9	31	ND			0.32	3.3	**33**			0.28	2.9	**43**			0.28	3.0	**40**	**J-**	**4D**	0.28	3.0	**2.8**	**J**	**6G**	0.28	3.0
Methyl iodide	TO-15	µg/m^3	ND			0.85	15	ND			0.90	16	ND			0.96	17	ND			0.85	15	ND			0.87	15	ND	UJ	4D	0.87	15	ND			0.87	15
Methyl isobutyl ketone	TO-15	µg/m^3	**2.4**	**J**	**6G**	0.38	7.4	**6.1**	**J**	**6G**	0.40	7.8	ND			0.43	8.3	**2.7**	**J**	**6G**	0.38	7.4	**3.4**	**J**	**6G**	0.39	7.5	**7.0**	**J-**	**4D, 6G**	0.39	7.5	ND			0.39	7.5
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND			0.41	2.9	ND			0.43	3.1	ND			0.46	3.3	ND			0.41	2.9	ND			0.42	3.0	ND	UJ	4D	0.42	3.0	ND			0.42	3.0
Naphthalene	TO-15	µg/m^3	ND			2.1	29	ND			2.2	31	ND			2.3	33	ND			2.1	29	ND			2.1	30	**7.5**	**J-**	**4D, 6G**	2.1	30	ND			2.1	30
Propylene	TO-15	µg/m^3	ND			0.37	2.9	ND			0.39	3.1	ND			0.42	3.3	ND			0.37	2.9	ND			0.38	3.0	ND	UJ	4D	0.38	3.0	ND			0.38	3.0
Styrene	TO-15	µg/m^3	ND			0.35	7.4	**2.6**	**J**	**6G**	0.37	7.8	ND			0.40	8.3	ND			0.35	7.4	ND			0.36	7.5	**1.8**	**J-**	**4D, 6G**	0.36	7.5	ND			0.36	7.5
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.90	7.4	ND			0.95	7.8	ND			1.0	8.3	ND			0.90	7.4	ND			0.92	7.5	ND	UJ	4D	0.92	7.5	ND			0.92	7.5
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.69	7.4	ND			0.73	7.8	ND			0.78	8.3	ND			0.69	7.4	ND			0.70	7.5	ND	UJ	4D	0.70	7.5	ND			0.70	7.5
Tetrachloroethene (PCE)	TO-15	µg/m^3	**21**			0.74	7.4	**5.1**	**J**	**6G**	0.78	7.8	**8.6**			0.83	8.3	**10**			0.74	7.4	**5.3**	**J**	**6G**	0.75	7.5	**11**	**J-**	**4D**	0.75	7.5	**9.5**			0.75	7.5
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND			0.98	7.4	ND			1.0	7.8	ND			1.1	8.3	ND			0.98	7.4	ND			1.0	7.5	ND	UJ	4D	1.0	7.5	ND			1.0	7.5
Tetrahydrofuran	TO-15	µg/m^3	**2.5**	**J**	**6G**	0.40	2.9	**8.7**			0.42	3.1	ND			0.45	3.3	**1.9**	**J**	**6G**	0.40	2.9	**4.2**			0.40	3.0	**7.8**	**J-**	**4D**	0.40	3.0	ND			0.40	3.0
Toluene	TO-15	µg/m^3	**17**			0.40	2.9	**130**			4.2	31	**2.0**	**J**	**6G**	0.45	3.3	**8.6**			0.40	2.9	**33**			0.40	3.0	**13**	**J-**	**4D**	0.40	3.0	**7.0**			0.40	3.0
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND			1.2	15	ND			1.3	16	ND			1.4	17	ND			1.2	15	ND			1.2	15	ND	UJ	4D	1.2	15	ND			1.2	15
1,1,1-Trichloroethane	TO-15	µg/m^3	ND			0.57	7.4	ND			0.60	7.8	ND			0.65	8.3	ND			0.57	7.4	ND			0.58	7.5	ND	UJ	4D	0.58	7.5	ND			0.58	7.5
1,1,2-Trichloroethane	TO-15	µg/m^3	ND			0.90	7.4	ND			0.95	7.8	ND			1.0	8.3	ND			0.90	7.4	ND			0.92	7.5	ND	UJ	4D	0.92	7.5	ND			0.92	7.5
Trichloroethene (TCE)	TO-15	µg/m^3	**5.9**	**J**	**6G**	0.79	7.4	ND			0.84	7.8	**2.0**	**J**	**6G**	0.90	8.3	ND			0.79	7.4	ND			0.81	7.5	ND	UJ	4D	0.81	7.5	ND			0.81	7.5
Trichlorofluoromethane	TO-15	µg/m^3	**2.7**	**J**	**6G**	0.69	7.4	**1.7**	**J**	**6G**	0.73	7.8	ND			0.78	8.3	**1.7**	**J**	**6G**	0.69	7.4	ND			0.70	7.5	ND	UJ	4D	0.70	7.5	ND			0.70	7.5
1,2,3-Trichloropropane	TO-15	µg/m^3	ND			0.71	7.4	ND			0.74	7.8	ND			0.80	8.3	ND			0.71	7.4	ND			0.72	7.5	ND	UJ	4D	0.72	7.5	ND			0.72	7.5
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND			0.81	7.4	ND			0.85	7.8	ND			0.91	8.3	ND			0.81	7.4	ND			0.82	7.5	ND	UJ	4D	0.82	7.5	ND			0.82	7.5
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**4.1**	**J**	**6G**	0.59	7.4	**35**			0.62	7.8	ND			0.66	8.3	**5.8**	**J**	**6G**	0.59	7.4	**8.3**			0.60	7.5	**5.7**	**J-**	**4D, 6G**	0.60	7.5	ND			0.60	7.5
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND			0.59	7.4	**11**			0.62	7.8	ND			0.66	8.3	**1.7**	**J**	**6G**	0.59	7.4	**2.9**	**J**	**6G**	0.60	7.5	**1.6**	**J-**	**4D, 6G**	0.60	7.5	ND			0.60	7.5
Vinyl acetate	TO-15	µg/m^3	ND			0.49	2.9	ND			0.51	3.1	ND			0.55	3.3	ND			0.49	2.9	ND			0.50	3.0	ND	UJ	4D	0.50	3.0	ND			0.50	3.0
Vinyl bromide	TO-15	µg/m^3	ND			0.47	7.4	ND			0.50	7.8	ND			0.53	8.3	ND			0.47	7.4	ND			0.48	7.5	ND	UJ	4D	0.48	7.5	ND			0.48	7.5
Vinyl chloride	TO-15	µg/m^3	ND			0.57	2.9	ND			0.60	3.1	ND			0.65	3.3	ND			0.57	2.9	ND			0.58	3.0	ND	UJ	4D	0.58	3.0	ND			0.58	3.0
p- & *m*-Xylenes	TO-15	µg/m^3	**12**			0.90	7.4	**94**			0.95	7.8	**3.2**	**J**	**6G**	1.0	8.3	**9.5**			0.90	7.4	**23**			0.92	7.5	**17**	**J-**	**4D**	0.92	7.5	ND			0.92	7.5
o-Xylene	TO-15	µg/m^3	**3.1**	**J**	**6G**	0.44	7.4	**29**			0.46	7.8	ND			0.50	8.3	**3.9**	**J**	**6G**	0.44	7.4	**7.9**			0.45	7.5	**5.4**	**J-**	**4D, 6G**	0.45	7.5	**1.7**	**J**	**6G**	0.45	7.5
Total Xylenes	TO-15	µg/m^3	**15**			1.3	15	**120**			1.4	16	**3.2**	**J**	**6G**	1.5	17	**13**	**J**	**6G**	1.3	15	**31**			1.4	15	**22**	**J-**	**4D**	1.4	15	**1.7**	**J**	**6G**	1.4	15
TPH - Gasoline	TO-15	µg/m^3	**270**	**J**	**6G**	31	290	**2,800**			33	310	**94**	**J**	**6G**	35	330	**260**	**J**	**6G**	31	290	**510**			32	300	**720**	**J-**	**4D**	32	300	**130**	**J**	**6G**	32	300
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**270**	**J**	**6G**	31	290	**2,800**			33	310	**94**	**J**	**6G**	35	330	**260**	**J**	**6G**	31	290	**510**			32	300	**720**	**J-**	**4D**	32	300	**130**	**J**	**6G**	32	300

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID				VW47B				VW48A				VW48A				VW48B				VW49A				VW49A				VW49B			
			Sampling Date/Time				12/23/2020 10:38				12/23/2020 12:07				3/3/2021 13:50				12/23/2020 11:56				12/23/2020 12:59				3/3/2021 14:45				12/23/2020 12:49			
			Sample Depth (feet)				14.5				5.5				5.5				14.5				5.5				5.5				14.5			
			Sample Type				N				N				N				N				N				N				N			
			Field Sample ID				SG-VW47B-01				SG-VW48A-01				SG-VW48A-02				SG-VW48B-01				SG-VW49A-01				SG-VW49A-02				SG-VW49B-01			
			Lab Sample ID				2037849-22				2037849-23				2107220-02				2037849-24				2037849-25				2107220-03				2037849-26			
			Status				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.2	15	ND			1.3	15	ND			1.3	16	ND			1.2	15	ND			1.3	16	ND			1.2	15	ND			1.3	16
Acetone	TO-15	µg/m^3	**14**			0.65	7.6	**14**			0.66	7.6	**2.1**	**J**	**6G**	0.68	7.9	**7.4**	**J**	**6G**	0.64	7.5	**18**			0.67	7.8	**1.7**	**J**	**6G**	0.65	7.6	**11**			0.67	7.8
Acrylonitrile	TO-15	µg/m^3	ND			0.41	3.0	ND			0.41	3.1	ND			0.43	3.2	ND			0.40	3.0	ND			0.42	3.1	ND			0.41	3.0	ND			0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND			0.42	3.0	ND			0.43	3.1	ND			0.44	3.2	ND			0.42	3.0	ND			0.44	3.1	ND			0.43	3.0	ND			0.44	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.47	7.6	ND			0.47	7.6	ND			0.49	7.9	ND			0.46	7.5	ND			0.48	7.8	ND			0.47	7.6	ND			0.48	7.8
Benzene	TO-15	µg/m^3	ND			0.32	3.0	ND			0.32	3.1	ND			0.33	3.2	ND			0.32	3.0	**1.0**	**J**	**6G**	0.33	3.1	ND			0.32	3.0	ND			0.33	3.1
Benzyl chloride	TO-15	µg/m^3	ND			0.39	15	ND			0.40	15	ND			0.41	16	ND			0.39	15	ND			0.41	16	ND			0.40	15	ND			0.41	16
Bromodichloromethane	TO-15	µg/m^3	**2.3**	**J**	**6G**	0.68	7.6	ND			0.69	7.6	ND			0.71	7.9	ND			0.68	7.5	ND			0.70	7.8	ND			0.68	7.6	ND			0.70	7.8
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.3	15	ND			1.4	16	ND			1.3	15	ND			1.3	16	ND			1.3	15	ND			1.3	16
Bromomethane	TO-15	µg/m^3	ND			0.71	3.0	ND			0.72	3.1	ND			0.74	3.2	ND			0.70	3.0	ND			0.73	3.1	ND			0.71	3.0	ND			0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND			0.33	3.0	ND			0.34	3.1	ND			0.35	3.2	ND			0.33	3.0	ND			0.34	3.1	ND			0.33	3.0	ND			0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	7.6	ND			1.1	7.6	ND			1.1	7.9	ND			1.0	7.5	ND			1.1	7.8	ND			1.1	7.6	ND			1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**3.7**			0.29	3.0	**4.5**			0.29	3.1	**1.3**	**J**	**6G**	0.30	3.2	**1.7**	**J**	**6G**	0.28	3.0	**4.1**			0.30	3.1	**1.1**	**J**	**6G**	0.29	3.0	**1.9**	**J**	**6G**	0.30	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND			0.68	7.6	ND			0.69	7.6	ND			0.71	7.9	ND			0.68	7.5	ND			0.70	7.8	ND			0.68	7.6	ND			0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND			0.60	7.6	ND			0.61	7.6	ND			0.63	7.9	ND			0.60	7.5	ND			0.62	7.8	ND			0.61	7.6	ND			0.62	7.8
Chloroethane	TO-15	µg/m^3	ND			0.80	3.0	ND			0.81	3.1	ND			0.84	3.2	ND			0.80	3.0	ND			0.83	3.1	ND			0.81	3.0	ND			0.83	3.1
Chloroform	TO-15	µg/m^3	**170**			0.82	7.6	**3.5**	**J**	**6G**	0.83	7.6	**5.4**	**J**	**6G**	0.85	7.9	**130**			0.81	7.5	**4.7**	**J**	**6G**	0.84	7.8	**7.6**			0.82	7.6	**39**			0.84	7.8
Chloromethane	TO-15	µg/m^3	ND			0.32	3.0	ND			0.32	3.1	ND			0.33	3.2	ND			0.32	3.0	ND			0.33	3.1	ND			0.32	3.0	ND			0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND			0.57	3.0	ND			0.58	3.1	ND			0.60	3.2	ND			0.57	3.0	ND			0.59	3.1	ND			0.58	3.0	ND			0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND			0.65	7.6	ND			0.66	7.6	ND			0.68	7.9	ND			0.64	7.5	ND			0.67	7.8	ND			0.65	7.6	ND			0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.6	7.6	ND			2.6	7.6	ND			2.7	7.9	ND			2.6	7.5	ND			2.7	7.8	ND			2.6	7.6	ND			2.7	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.88	7.6	ND			0.89	7.6	**2.8**	**J**	**6G**	0.92	7.9	ND			0.87	7.5	ND			0.90	7.8	ND			0.88	7.6	ND			0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND			0.86	7.6	ND			0.87	7.6	ND			0.90	7.9	ND			0.86	7.5	ND			0.89	7.8	ND			0.87	7.6	ND			0.89	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.76	7.6	ND			0.79	7.9	ND			0.75	7.5	ND			0.78	7.8	ND			0.76	7.6	ND			0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.47	7.6	ND			0.49	7.9	ND			0.46	7.5	ND			0.48	7.8	ND			0.47	7.6	ND			0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.76	7.6	ND			0.79	7.9	ND			0.75	7.5	ND			0.78	7.8	ND			0.76	7.6	ND			0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**2.7**	**J**	**6G**	0.68	7.6	**2.9**	**J**	**6G**	0.69	7.6	**2.7**	**J**	**6G**	0.71	7.9	**2.8**	**J**	**6G**	0.68	7.5	**3.0**	**J**	**6G**	0.70	7.8	**2.8**	**J**	**6G**	0.68	7.6	**2.7**	**J**	**6G**	0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.35	7.6	ND			0.35	7.6	ND			0.36	7.9	ND			0.34	7.5	ND			0.36	7.8	ND			0.35	7.6	ND			0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.39	7.6	ND			0.40	7.6	ND			0.41	7.9	ND			0.39	7.5	ND			0.41	7.8	ND			0.40	7.6	ND			0.41	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.47	7.6	ND			0.49	7.9	ND			0.46	7.5	ND			0.48	7.8	ND			0.47	7.6	ND			0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.48	3.0	ND			0.49	3.1	ND			0.51	3.2	ND			0.48	3.0	ND			0.50	3.1	ND			0.49	3.0	ND			0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.41	3.0	ND			0.41	3.1	ND			0.43	3.2	ND			0.40	3.0	ND			0.42	3.1	ND			0.41	3.0	ND			0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.48	7.6	ND			0.49	7.6	ND			0.51	7.9	ND			0.48	7.5	ND			0.50	7.8	ND			0.49	7.6	ND			0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.45	7.6	ND			0.46	7.6	ND			0.47	7.9	ND			0.45	7.5	ND			0.47	7.8	ND			0.46	7.6	ND			0.47	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.60	7.6	ND			0.61	7.6	ND			0.63	7.9	ND			0.60	7.5	ND			0.62	7.8	ND			0.61	7.6	ND			0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.6	ND			1.4	7.6	ND			1.4	7.9	ND			1.4	7.5	ND			1.4	7.8	ND			1.4	7.6	ND			1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.0	7.6	ND			3.1	7.6	ND			3.2	7.9	ND			3.0	7.5	ND			3.1	7.8	ND			3.0	7.6	ND			3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND			0.59	7.6	ND			0.60	7.6	ND			0.62	7.9	ND			0.58	7.5	ND			0.61	7.8	ND			0.59	7.6	ND			0.61	7.8
1,4-Dioxane	TO-15	µg/m^3	ND			0.50	3.0	ND			0.50	3.1	ND			0.52	3.2	ND			0.50	3.0	ND			0.51	3.1	ND			0.50	3.0	ND			0.51	3.1
Ethanol	TO-15	µg/m^3	**1.7**	**J**	**6G**	0.63	3.0	**2.8**	**J**	**6G**	0.64	3.1	**2.2**	**J**	**6G**	0.66	3.2	**6.4**			0.63	3.0	**3.9**			0.66	3.1	**2.6**	**J**	**6G**	0.64	3.0	**2.6**	**J**	**6G**	0.66	3.1
Ethyl acetate	TO-15	µg/m^3	ND			0.50	3.0	ND			0.50	3.1	ND			0.52	3.2	ND			0.50	3.0	ND			0.51	3.1	ND			0.50	3.0	ND			0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**2.4**	**J**	**6G**	0.48	7.6	**5.2**	**J**	**6G**	0.49	7.6	ND			0.51	7.9	ND			0.48	7.5	**3.3**	**J**	**6G**	0.50	7.8	ND			0.49	7.6	ND			0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**1.9**	**J**	**6G**	0.45	7.6	**6.4**	**J**	**6G**	0.46	7.6	**29**			0.47	7.9	ND			0.45	7.5	**2.0**	**J**	**6G**	0.47	7.8	ND			0.46	7.6	ND			0.47	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.50	7.6	ND			0.50	7.6	ND			0.52	7.9	ND			0.50	7.5	ND			0.51	7.8	ND			0.50	7.6	ND			0.51	7.8
n-Heptane	TO-15	µg/m^3	ND			0.51	3.0	ND			0.52	3.1	ND			0.54	3.2	ND			0.51	3.0	ND			0.53	3.1	ND			0.52	3.0	ND			0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.3	15	ND			2.3	15	ND			2.4	16	ND			2.2	15	ND			2.3	16	ND			2.3	15	ND			2.3	16

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW47B				VW48A				VW48A				VW48B				VW49A				VW49A				VW49B			
Sampling Date/Time			12/23/2020 10:38				12/23/2020 12:07				3/3/2021 13:50				12/23/2020 11:56				12/23/2020 12:59				3/3/2021 14:45				12/23/2020 12:49			
Sample Depth (feet)			14.5				5.5				5.5				14.5				5.5				5.5				14.5			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			SG-VW47B-01				SG-VW48A-01				SG-VW48A-02				SG-VW48B-01				SG-VW49A-01				SG-VW49A-02				SG-VW49B-01			
Lab Sample ID			2037849-22				2037849-23				2107220-02				2037849-24				2037849-25				2107220-03				2037849-26			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m³	ND			1.1	3.0	ND			1.1	3.1	ND			1.2	3.2	ND			1.1	3.0	ND			1.1	3.1	ND			1.1	3.0	ND			1.1	3.1
Hexane	TO-15	µg/m³	ND			0.30	7.6	ND			0.31	7.6	ND			0.32	7.9	ND			0.30	7.5	ND			0.31	7.8	ND			0.30	7.6	ND			0.31	7.8
2-Hexanone	TO-15	µg/m³	ND			0.44	7.6	ND			0.44	7.6	ND			0.46	7.9	ND			0.44	7.5	**2.5**	**J**	**6G**	0.45	7.8	ND			0.44	7.6	ND			0.45	7.8
Isooctane	TO-15	µg/m³	ND			0.53	7.6	ND			0.54	7.6	ND			0.55	7.9	ND			0.52	7.5	ND			0.55	7.8	ND			0.53	7.6	ND			0.55	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m³	ND			0.48	3.0	**1.4**	**J**	**6G**	0.49	3.1	ND			0.51	3.2	ND			0.48	3.0	ND			0.50	3.1	ND			0.49	3.0	ND			0.50	3.1
Methylene chloride	TO-15	µg/m³	ND			0.60	15	ND			0.61	15	ND			0.63	16	ND			0.60	15	ND			0.62	16	ND			0.61	15	ND			0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m³	**8.9**			0.29	3.0	**19**			0.29	3.1	ND			0.30	3.2	**1.0**	**J**	**6G**	0.28	3.0	**13**			0.30	3.1	ND			0.29	3.0	**11**			0.30	3.1
Methyl iodide	TO-15	µg/m³	ND			0.88	15	ND			0.89	15	ND			0.92	16	ND			0.87	15	ND			0.90	16	ND			0.88	15	ND			0.90	16
Methyl isobutyl ketone	TO-15	µg/m³	**1.8**	**J**	**6G**	0.39	7.6	**4.8**	**J**	**6G**	0.40	7.6	ND			0.41	7.9	ND			0.39	7.5	**2.4**	**J**	**6G**	0.41	7.8	ND			0.40	7.6	ND			0.41	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m³	ND			0.42	3.0	ND			0.43	3.1	ND			0.44	3.2	ND			0.42	3.0	ND			0.44	3.1	ND			0.43	3.0	ND			0.44	3.1
Naphthalene	TO-15	µg/m³	ND			2.1	30	ND			2.1	31	**70**			2.2	32	ND			2.1	30	ND			2.2	31	ND			2.1	30	ND			2.2	31
Propylene	TO-15	µg/m³	ND			0.38	3.0	ND			0.38	3.1	ND			0.40	3.2	ND			0.38	3.0	ND			0.39	3.1	ND			0.38	3.0	ND			0.39	3.1
Styrene	TO-15	µg/m³	ND			0.36	7.6	ND			0.37	7.6	ND			0.38	7.9	ND			0.36	7.5	ND			0.37	7.8	ND			0.36	7.6	ND			0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m³	ND			0.92	7.6	ND			0.93	7.6	ND			0.96	7.9	ND			0.92	7.5	ND			0.95	7.8	ND			0.93	7.6	ND			0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m³	ND			0.71	7.6	ND			0.72	7.6	ND			0.74	7.9	ND			0.70	7.5	ND			0.73	7.8	ND			0.71	7.6	ND			0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m³	**11**			0.76	7.6	**35**			0.76	7.6	**29**			0.79	7.9	**41**			0.75	7.5	**54**			0.78	7.8	**55**			0.76	7.6	**98**			0.78	7.8
1,1,1,2-Tetrafluoroethane	TO-15	µg/m³	ND			1.0	7.6	ND			1.0	7.6	ND			1.1	7.9	ND			1.0	7.5	ND			1.0	7.8	ND			1.0	7.6	ND			1.0	7.8
Tetrahydrofuran	TO-15	µg/m³	**1.5**	**J**	**6G**	0.41	3.0	**5.8**			0.41	3.1	ND			0.43	3.2	**1.2**	**J**	**6G**	0.40	3.0	**3.5**			0.42	3.1	ND			0.41	3.0	ND			0.42	3.1
Toluene	TO-15	µg/m³	**7.6**			0.41	3.0	**18**			0.41	3.1	**1.9**	**J**	**6G**	0.43	3.2	**1.5**	**J**	**6G**	0.40	3.0	**14**			0.42	3.1	ND			0.41	3.0	**1.3**	**J**	**6G**	0.42	3.1
1,2,4-Trichlorobenzene	TO-15	µg/m³	ND			1.2	15	ND			1.3	15	ND			1.3	16	ND			1.2	15	ND			1.3	16	ND			1.2	15	ND			1.3	16
1,1,1-Trichloroethane	TO-15	µg/m³	ND			0.59	7.6	ND			0.60	7.6	ND			0.62	7.9	ND			0.58	7.5	ND			0.61	7.8	ND			0.59	7.6	ND			0.61	7.8
1,1,2-Trichloroethane	TO-15	µg/m³	ND			0.92	7.6	ND			0.93	7.6	ND			0.96	7.9	ND			0.92	7.5	ND			0.95	7.8	ND			0.93	7.6	ND			0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m³	ND			0.82	7.6	ND			0.83	7.6	ND			0.85	7.9	ND			0.81	7.5	ND			0.84	7.8	ND			0.82	7.6	ND			0.84	7.8
Trichlorofluoromethane	TO-15	µg/m³	ND			0.71	7.6	ND			0.72	7.6	ND			0.74	7.9	ND			0.70	7.5	ND			0.73	7.8	ND			0.71	7.6	ND			0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m³	ND			0.72	7.6	ND			0.73	7.6	ND			0.76	7.9	ND			0.72	7.5	ND			0.75	7.8	ND			0.73	7.6	ND			0.75	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m³	ND			0.83	7.6	ND			0.84	7.6	ND			0.87	7.9	ND			0.82	7.5	ND			0.86	7.8	ND			0.84	7.6	ND			0.86	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m³	**3.4**	**J**	**6G**	0.60	7.6	**10**			0.61	7.6	**160**			0.63	7.9	ND			0.60	7.5	**3.5**	**J**	**6G**	0.62	7.8	ND			0.61	7.6	ND			0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m³	ND			0.60	7.6	**3.0**	**J**	**6G**	0.61	7.6	**32**			0.63	7.9	ND			0.60	7.5	ND			0.62	7.8	ND			0.61	7.6	ND			0.62	7.8
Vinyl acetate	TO-15	µg/m³	ND			0.50	3.0	ND			0.50	3.1	ND			0.52	3.2	ND			0.50	3.0	ND			0.51	3.1	ND			0.50	3.0	ND			0.51	3.1
Vinyl bromide	TO-15	µg/m³	ND			0.48	7.6	ND			0.49	7.6	ND			0.51	7.9	ND			0.48	7.5	ND			0.50	7.8	ND			0.49	7.6	ND			0.50	7.8
Vinyl chloride	TO-15	µg/m³	ND			0.59	3.0	ND			0.60	3.1	ND			0.62	3.2	ND			0.58	3.0	ND			0.61	3.1	ND			0.59	3.0	ND			0.61	3.1
p- & *m*-Xylenes	TO-15	µg/m³	**7.5**	**J**	**6G**	0.92	7.6	**20**			0.93	7.6	**2.8**	**J**	**6G**	0.96	7.9	**2.1**	**J**	**6G**	0.92	7.5	**7.6**	**J**	**6G**	0.95	7.8	ND			0.93	7.6	**2.0**	**J**	**6G**	0.95	7.8
o-Xylene	TO-15	µg/m³	**3.1**	**J**	**6G**	0.45	7.6	**7.5**	**J**	**6G**	0.46	7.6	**1.6**	**J**	**6G**	0.47	7.9	ND			0.45	7.5	**4.7**	**J**	**6G**	0.47	7.8	ND			0.46	7.6	**1.4**	**J**	**6G**	0.47	7.8
Total Xylenes	TO-15	µg/m³	**11**	**J**	**6G**	1.4	15	**27**			1.4	15	**4.4**	**J**	**6G**	1.4	16	**2.1**	**J**	**6G**	1.4	15	**12**	**J**	**6G**	1.4	16	ND			1.4	15	**3.3**	**J**	**6G**	1.4	16
TPH - Gasoline	TO-15	µg/m³	**240**	**J**	**6G**	32	300	**410**			32	310	**2,800**			33	320	**180**	**J**	**6G**	32	300	**190**	**J**	**6G**	33	310	**120**	**J**	**6G**	32	300	**180**	**J**	**6G**	33	310
Total Petroleum Hydrocarbons	TO-15	µg/m³	**240**	**J**	**6G**	32	300	**410**			32	310	**2,800**			33	320	**180**	**J**	**6G**	32	300	**190**	**J**	**6G**	33	310	**120**	**J**	**6G**	32	300	**180**	**J**	**6G**	33	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW50A				VW50A				VW50B				VW51A				VW51B				VW52A				VW52B			
			Sampling Date/Time	12/23/2020 13:55				12/23/2020 13:55				12/23/2020 13:43				12/23/2020 15:07				12/23/2020 14:55				12/22/2020 11:13				12/22/2020 11:02			
			Sample Depth (feet)	5.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type	N				FD				N				N				N				N				N			
			Field Sample ID	SG-VW50A-01				SG-VW50A-02				SG-VW50B-01				SG-VW51A-01				SG-VW51B-01				SG-VW52A-01				SG-VW52B-01			
			Lab Sample ID	2037849-27				2037849-28				2037849-29				2037849-30				2037849-31				2037849-06				2037849-07			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.2	15	ND			1.2	15	ND			1.2	15	ND			1.3	16	ND			1.3	16	ND			1.3	15	ND			1.2	15
Acetone	TO-15	µg/m^3	**110**			6.5	76	**100**			6.4	75	**9.8**			0.63	7.4	**320**			7.0	82	**36**			0.68	8.0	**64**			0.66	7.6	**23**			0.64	7.4
Acrylonitrile	TO-15	µg/m^3	ND			0.41	3.0	ND			0.40	3.0	ND			0.40	2.9	ND			0.44	3.3	ND			0.43	3.2	ND			0.41	3.1	ND			0.40	3.0
Allyl chloride	TO-15	µg/m^3	ND			0.43	3.0	ND			0.42	3.0	ND			0.41	2.9	ND			0.46	3.3	ND			0.45	3.2	ND			0.43	3.1	ND			0.41	3.0
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.47	7.6	ND			0.46	7.5	ND			0.46	7.4	ND			0.51	8.2	ND			0.49	8.0	ND			0.47	7.6	ND			0.46	7.4
Benzene	TO-15	µg/m^3	**2.0**	**J**	**6G**	0.32	3.0	**1.9**	**J**	**6G**	0.32	3.0	ND			0.31	2.9	**4.2**			0.34	3.3	ND			0.33	3.2	**1.5**	**J**	**6G**	0.32	3.1	ND			0.31	3.0
Benzyl chloride	TO-15	µg/m^3	ND			0.40	15	ND			0.39	15	ND			0.38	15	ND			0.42	16	ND			0.41	16	ND			0.40	15	ND			0.38	15
Bromodichloromethane	TO-15	µg/m^3	ND			0.68	7.6	ND			0.68	7.5	ND			0.66	7.4	ND			0.73	8.2	ND			0.72	8.0	ND			0.69	7.6	ND			0.67	7.4
Bromoform	TO-15	µg/m^3	ND			1.3	15	ND			1.3	15	ND			1.3	15	ND			1.4	16	ND			1.4	16	ND			1.3	15	ND			1.3	15
Bromomethane	TO-15	µg/m^3	ND			0.71	3.0	ND			0.70	3.0	ND			0.69	2.9	ND			0.77	3.3	ND			0.75	3.2	ND			0.72	3.1	ND			0.70	3.0
1,3-Butadiene	TO-15	µg/m^3	ND			0.33	3.0	ND			0.33	3.0	ND			0.32	2.9	ND			0.36	3.3	ND			0.35	3.2	ND			0.34	3.1	ND			0.33	3.0
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	7.6	ND			1.0	7.5	ND			1.0	7.4	ND			1.1	8.2	ND			1.1	8.0	ND			1.1	7.6	ND			1.0	7.4
Carbon disulfide	TO-15	µg/m^3	**5.6**			0.29	3.0	**5.8**			0.28	3.0	**6.4**			0.28	2.9	**4.4**			0.31	3.3	**5.9**			0.30	3.2	**10**			0.29	3.1	**4.1**			0.28	3.0
Carbon tetrachloride	TO-15	µg/m^3	ND			0.68	7.6	ND			0.68	7.5	ND			0.66	7.4	ND			0.73	8.2	ND			0.72	8.0	ND			0.69	7.6	ND			0.67	7.4
Chlorobenzene	TO-15	µg/m^3	ND			0.61	7.6	ND			0.60	7.5	ND			0.59	7.4	ND			0.65	8.2	ND			0.64	8.0	ND			0.61	7.6	ND			0.59	7.4
Chloroethane	TO-15	µg/m^3	ND			0.81	3.0	ND			0.80	3.0	ND			0.78	2.9	ND			0.86	3.3	ND			0.84	3.2	ND			0.81	3.1	ND			0.78	3.0
Chloroform	TO-15	µg/m^3	**2.6**	**J**	**6G**	0.82	7.6	**1.7**	**J**	**6G**	0.81	7.5	**17**			0.79	7.4	ND			0.88	8.2	**27**			0.86	8.0	**9.0**			0.83	7.6	**25**			0.80	7.4
Chloromethane	TO-15	µg/m^3	ND			0.32	3.0	ND			0.32	3.0	ND			0.31	2.9	ND			0.34	3.3	ND			0.33	3.2	ND			0.32	3.1	ND			0.31	3.0
Cyclohexane	TO-15	µg/m^3	ND			0.58	3.0	ND			0.57	3.0	ND			0.56	2.9	ND			0.62	3.3	ND			0.60	3.2	ND			0.58	3.1	ND			0.56	3.0
Dibromochloromethane	TO-15	µg/m^3	ND			0.65	7.6	ND			0.64	7.5	ND			0.63	7.4	ND			0.70	8.2	ND			0.68	8.0	ND			0.66	7.6	ND			0.64	7.4
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.6	7.6	ND			2.6	7.5	ND			2.5	7.4	ND			2.8	8.2	ND			2.7	8.0	ND			2.6	7.6	ND			2.5	7.4
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.88	7.6	ND			0.87	7.5	ND			0.85	7.4	ND			0.95	8.2	ND			0.92	8.0	ND			0.89	7.6	ND			0.86	7.4
Dibromomethane	TO-15	µg/m^3	ND			0.87	7.6	ND			0.86	7.5	ND			0.84	7.4	ND			0.93	8.2	ND			0.91	8.0	ND			0.87	7.6	ND			0.84	7.4
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.75	7.5	ND			0.74	7.4	ND			0.82	8.2	ND			0.80	8.0	ND			0.76	7.6	ND			0.74	7.4
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.46	7.5	ND			0.46	7.4	ND			0.51	8.2	ND			0.49	8.0	ND			0.47	7.6	ND			0.46	7.4
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.76	7.6	ND			0.75	7.5	ND			0.74	7.4	ND			0.82	8.2	ND			0.80	8.0	ND			0.76	7.6	ND			0.74	7.4
Dichlorodifluoromethane	TO-15	µg/m^3	**2.9**	**J**	**6G**	0.68	7.6	**3.0**	**J**	**6G**	0.68	7.5	**3.0**	**J**	**6G**	0.66	7.4	**2.9**	**J**	**6G**	0.73	8.2	**3.1**	**J**	**6G**	0.72	8.0	**46**			0.69	7.6	**57**			0.67	7.4
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.35	7.6	ND			0.34	7.5	ND			0.34	7.4	ND			0.37	8.2	ND			0.37	8.0	ND			0.35	7.6	ND			0.34	7.4
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.40	7.6	ND			0.39	7.5	ND			0.38	7.4	ND			0.42	8.2	ND			0.41	8.0	ND			0.40	7.6	ND			0.38	7.4
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.47	7.6	ND			0.46	7.5	ND			0.46	7.4	ND			0.51	8.2	ND			0.49	8.0	ND			0.47	7.6	ND			0.46	7.4
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.49	3.0	ND			0.48	3.0	ND			0.47	2.9	ND			0.52	3.3	ND			0.51	3.2	ND			0.49	3.1	ND			0.47	3.0
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.41	3.0	ND			0.40	3.0	ND			0.40	2.9	ND			0.44	3.3	ND			0.43	3.2	ND			0.41	3.1	ND			0.40	3.0
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.49	7.6	ND			0.48	7.5	ND			0.47	7.4	ND			0.52	8.2	ND			0.51	8.0	ND			0.49	7.6	ND			0.47	7.4
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.46	7.6	ND			0.45	7.5	ND			0.44	7.4	ND			0.49	8.2	ND			0.48	8.0	ND			0.46	7.6	ND			0.44	7.4
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.61	7.6	ND			0.60	7.5	ND			0.59	7.4	ND			0.65	8.2	ND			0.64	8.0	ND			0.61	7.6	ND			0.59	7.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.4	7.6	ND			1.4	7.5	ND			1.3	7.4	ND			1.5	8.2	ND			1.4	8.0	ND			1.4	7.6	ND			1.3	7.4
1,1-Difluoroethane	TO-15	µg/m^3	**11**			3.0	7.6	**8.1**			3.0	7.5	ND			2.9	7.4	ND			3.3	8.2	ND			3.2	8.0	ND			3.1	7.6	ND			3.0	7.4
Diisopropyl ether	TO-15	µg/m^3	ND			0.59	7.6	ND			0.58	7.5	ND			0.57	7.4	ND			0.64	8.2	ND			0.62	8.0	ND			0.60	7.6	ND			0.58	7.4
1,4-Dioxane	TO-15	µg/m^3	ND			0.50	3.0	ND			0.50	3.0	ND			0.49	2.9	ND			0.54	3.3	ND			0.52	3.2	ND			0.50	3.1	ND			0.49	3.0
Ethanol	TO-15	µg/m^3	**11**			0.64	3.0	**8.6**			0.63	3.0	**4.0**			0.62	2.9	**28**			0.68	3.3	**4.3**			0.67	3.2	**6.5**			0.64	3.1	ND			0.62	3.0
Ethyl acetate	TO-15	µg/m^3	ND			0.50	3.0	ND			0.50	3.0	ND			0.49	2.9	ND			0.54	3.3	ND			0.52	3.2	ND			0.50	3.1	ND			0.49	3.0
Ethylbenzene	TO-15	µg/m^3	**8.3**			0.49	7.6	**8.2**			0.48	7.5	ND			0.47	7.4	**9.9**			0.52	8.2	**1.5**	**J**	**6G**	0.51	8.0	**5.0**	**J**	**6G**	0.49	7.6	**2.0**	**J**	**6G**	0.47	7.4
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**8.9**			0.46	7.6	**8.9**			0.45	7.5	ND			0.44	7.4	**8.6**			0.49	8.2	ND			0.48	8.0	**7.6**			0.46	7.6	**5.4**	**J**	**6G**	0.44	7.4
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.50	7.6	ND			0.50	7.5	ND			0.49	7.4	ND			0.54	8.2	ND			0.52	8.0	ND			0.50	7.6	ND			0.49	7.4
n-Heptane	TO-15	µg/m^3	ND			0.52	3.0	ND			0.51	3.0	ND			0.50	2.9	ND			0.55	3.3	ND			0.54	3.2	ND			0.52	3.1	ND			0.50	3.0
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.3	15	ND			2.2	15	ND			2.2	15	ND			2.4	16	ND			2.4	16	ND			2.3	15	ND			2.2	15

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW50A				VW50A				VW50B				VW51A				VW51B				VW52A				VW52B			
Sampling Date/Time			12/23/2020 13:55				12/23/2020 13:55				12/23/2020 13:43				12/23/2020 15:07				12/23/2020 14:55				12/22/2020 11:13				12/22/2020 11:02			
Sample Depth (feet)			5.5				5.5				14.5				5.5				14.5				5.5				14.5			
Sample Type			N				FD				N				N				N				N				N			
Field Sample ID			SG-VW50A-01				SG-VW50A-02				SG-VW50B-01				SG-VW51A-01				SG-VW51B-01				SG-VW52A-01				SG-VW52B-01			
Lab Sample ID			2037849-27				2037849-28				2037849-29				2037849-30				2037849-31				2037849-06				2037849-07			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND			1.1	3.0	ND			1.1	3.0	ND			1.1	2.9	ND			1.2	3.3	ND			1.2	3.2	ND			1.1	3.1	ND			1.1	3.0
Hexane	TO-15	µg/m^3	ND			0.30	7.6	ND			0.30	7.5	ND			0.29	7.4	ND			0.33	8.2	ND			0.32	8.0	ND			0.31	7.6	ND			0.30	7.4
2-Hexanone	TO-15	µg/m^3	ND			0.44	7.6	ND			0.44	7.5	**3.9**	**J**	**6G**	0.43	7.4	ND			0.47	8.2	ND			0.46	8.0	ND			0.44	7.6	ND			0.43	7.4
Isooctane	TO-15	µg/m^3	ND			0.53	7.6	ND			0.52	7.5	ND			0.51	7.4	ND			0.57	8.2	ND			0.56	8.0	ND			0.54	7.6	ND			0.52	7.4
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND			0.49	3.0	**2.8**	**J**	**6G**	0.48	3.0	ND			0.47	2.9	ND			0.52	3.3	**4.0**			0.51	3.2	ND			0.49	3.1	ND			0.47	3.0
Methylene chloride	TO-15	µg/m^3	ND			0.61	15	ND			0.60	15	ND			0.59	15	ND			0.65	16	ND			0.64	16	ND			0.61	15	ND			0.59	15
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**100**			2.9	30	**99**			2.8	30	**3.0**			0.28	2.9	**130**			3.1	33	**16**			0.30	3.2	**40**			0.29	3.1	**10**			0.28	3.0
Methyl iodide	TO-15	µg/m^3	ND			0.88	15	ND			0.87	15	ND			0.85	15	ND			0.95	16	ND			0.92	16	ND			0.89	15	ND			0.86	15
Methyl isobutyl ketone	TO-15	µg/m^3	**8.8**			0.40	7.6	**8.9**			0.39	7.5	ND			0.38	7.4	**4.2**	**J**	**6G**	0.42	8.2	ND			0.41	8.0	**3.8**	**J**	**6G**	0.40	7.6	ND			0.38	7.4
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND			0.43	3.0	ND			0.42	3.0	ND			0.41	2.9	ND			0.46	3.3	ND			0.45	3.2	ND			0.43	3.1	ND			0.41	3.0
Naphthalene	TO-15	µg/m^3	ND			2.1	30	ND			2.1	30	ND			2.1	29	ND			2.3	33	ND			2.2	32	ND			2.1	31	ND			2.1	30
Propylene	TO-15	µg/m^3	ND			0.38	3.0	ND			0.38	3.0	ND			0.37	2.9	ND			0.41	3.3	ND			0.40	3.2	ND			0.38	3.1	ND			0.37	3.0
Styrene	TO-15	µg/m^3	ND			0.36	7.6	ND			0.36	7.5	ND			0.35	7.4	ND			0.39	8.2	ND			0.38	8.0	ND			0.37	7.6	ND			0.36	7.4
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.93	7.6	ND			0.92	7.5	ND			0.90	7.4	ND			0.99	8.2	ND			0.97	8.0	ND			0.93	7.6	ND			0.90	7.4
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.71	7.6	ND			0.70	7.5	ND			0.69	7.4	ND			0.77	8.2	ND			0.75	8.0	ND			0.72	7.6	ND			0.70	7.4
Tetrachloroethene (PCE)	TO-15	µg/m^3	**71**			0.76	7.6	**71**			0.75	7.5	**220**			7.4	74	**23**			0.82	8.2	**97**			0.80	8.0	**140**			0.76	7.6	**220**			0.74	7.4
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND			1.0	7.6	ND			1.0	7.5	ND			0.98	7.4	ND			1.1	8.2	ND			1.1	8.0	ND			1.0	7.6	ND			0.99	7.4
Tetrahydrofuran	TO-15	µg/m^3	**10**			0.41	3.0	**11**			0.40	3.0	ND			0.40	2.9	**9.5**			0.44	3.3	**0.94**	**J**	**6G**	0.43	3.2	**2.9**	**J**	**6G**	0.41	3.1	**1.1**	**J**	**6G**	0.40	3.0
Toluene	TO-15	µg/m^3	**39**			0.41	3.0	**39**			0.40	3.0	**2.0**	**J**	**6G**	0.40	2.9	**51**			0.44	3.3	**4.2**			0.43	3.2	**19**			0.41	3.1	**7.2**			0.40	3.0
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND			1.2	15	ND			1.2	15	ND			1.2	15	ND			1.3	16	ND			1.3	16	ND			1.3	15	ND			1.2	15
1,1,1-Trichloroethane	TO-15	µg/m^3	ND			0.59	7.6	ND			0.58	7.5	ND			0.57	7.4	ND			0.64	8.2	ND			0.62	8.0	ND			0.60	7.6	ND			0.58	7.4
1,1,2-Trichloroethane	TO-15	µg/m^3	ND			0.93	7.6	ND			0.92	7.5	ND			0.90	7.4	ND			0.99	8.2	ND			0.97	8.0	ND			0.93	7.6	ND			0.90	7.4
Trichloroethene (TCE)	TO-15	µg/m^3	ND			0.82	7.6	ND			0.81	7.5	ND			0.79	7.4	ND			0.88	8.2	ND			0.86	8.0	ND			0.83	7.6	ND			0.80	7.4
Trichlorofluoromethane	TO-15	µg/m^3	ND			0.71	7.6	ND			0.70	7.5	ND			0.69	7.4	ND			0.77	8.2	ND			0.75	8.0	**7.6**			0.72	7.6	**10**			0.70	7.4
1,2,3-Trichloropropane	TO-15	µg/m^3	ND			0.73	7.6	ND			0.72	7.5	ND			0.71	7.4	ND			0.78	8.2	ND			0.76	8.0	ND			0.73	7.6	ND			0.71	7.4
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND			0.84	7.6	ND			0.82	7.5	ND			0.81	7.4	ND			0.90	8.2	ND			0.87	8.0	ND			0.84	7.6	ND			0.81	7.4
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**14**			0.61	7.6	**14**			0.60	7.5	ND			0.59	7.4	**12**			0.65	8.2	**2.2**	**J**	**6G**	0.64	8.0	**11**			0.61	7.6	**10**			0.59	7.4
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**4.0**	**J**	**6G**	0.61	7.6	**4.3**	**J**	**6G**	0.60	7.5	ND			0.59	7.4	**3.7**	**J**	**6G**	0.65	8.2	ND			0.64	8.0	**3.1**	**J**	**6G**	0.61	7.6	**2.6**	**J**	**6G**	0.59	7.4
Vinyl acetate	TO-15	µg/m^3	ND			0.50	3.0	ND			0.50	3.0	ND			0.49	2.9	ND			0.54	3.3	ND			0.52	3.2	ND			0.50	3.1	ND			0.49	3.0
Vinyl bromide	TO-15	µg/m^3	ND			0.49	7.6	ND			0.48	7.5	ND			0.47	7.4	ND			0.52	8.2	ND			0.51	8.0	ND			0.49	7.6	ND			0.47	7.4
Vinyl chloride	TO-15	µg/m^3	ND			0.59	3.0	ND			0.58	3.0	ND			0.57	2.9	ND			0.64	3.3	ND			0.62	3.2	ND			0.60	3.1	ND			0.58	3.0
p- & *m*-Xylenes	TO-15	µg/m^3	**32**			0.93	7.6	**32**			0.92	7.5	**1.8**	**J**	**6G**	0.90	7.4	**37**			0.99	8.2	**5.8**	**J**	**6G**	0.97	8.0	**20**			0.93	7.6	**16**			0.90	7.4
o-Xylene	TO-15	µg/m^3	**12**			0.46	7.6	**12**			0.45	7.5	ND			0.44	7.4	**12**			0.49	8.2	**1.8**	**J**	**6G**	0.48	8.0	**7.0**	**J**	**6G**	0.46	7.6	**5.1**	**J**	**6G**	0.44	7.4
Total Xylenes	TO-15	µg/m^3	**44**			1.4	15	**43**			1.4	15	**1.8**	**J**	**6G**	1.3	15	**49**			1.5	16	**7.6**	**J**	**6G**	1.4	16	**27**			1.4	15	**21**			1.3	15
TPH - Gasoline	TO-15	µg/m^3	**710**			32	300	**730**			32	300	**320**			31	290	**870**			34	330	**240**	**J**	**6G**	33	320	**620**			32	310	**380**			31	300
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**710**			32	300	**730**			32	300	**320**			31	290	**870**			34	330	**240**	**J**	**6G**	33	320	**620**			32	310	**380**			31	300

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW53A				VW53A				VW53B				VW54A				VW54B				VW55A				VW55B			
			Sampling Date/Time	12/29/2020 12:00				12/29/2020 12:00				12/29/2020 11:50				12/29/2020 13:35				12/29/2020 13:25				12/29/2020 14:55				12/29/2020 14:45			
			Sample Depth (feet)	5.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type	N				FD				N				N				N				N				N			
			Field Sample ID	SG-VW53A-01				SG-VW53A-02				SG-VW53B-01				SG-VW54A-01				SG-VW54B-01				SG-VW55A-01				SG-VW55B-01			
			Lab Sample ID	2100036-09				2100036-10				2100036-11				2100036-12				2100036-13				2100036-14				2100036-15			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16
Acetone	TO-15	µg/m^3	**13**	**J**	**3D**	0.69	8.0	**34**	**J**	**3D**	0.67	7.8	**3.5**	**J**	**6G**	0.70	8.2	**15**			0.69	8.0	**3.6**	**J**	**6G**	0.68	7.8	**180**			6.6	76	**7.3**	**J**	**6G**	0.67	7.8
Acrylonitrile	TO-15	µg/m^3	ND			0.43	3.2	ND			0.42	3.1	ND			0.44	3.3	ND			0.43	3.2	ND			0.42	3.1	ND			0.41	3.1	ND			0.42	3.1
Allyl chloride	TO-15	µg/m^3	ND			0.45	3.2	ND			0.43	3.1	ND			0.46	3.3	ND			0.45	3.2	ND			0.44	3.1	ND			0.43	3.1	ND			0.43	3.1
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND			0.50	8.0	ND			0.48	7.8	ND			0.51	8.2	ND			0.50	8.0	ND			0.49	7.8	ND			0.47	7.6	ND			0.48	7.8
Benzene	TO-15	µg/m^3	ND			0.34	3.2	**1.7**	**J**	**6G**	0.33	3.1	ND			0.34	3.3	**37**			0.34	3.2	ND			0.33	3.1	**5.2**			0.32	3.1	ND			0.33	3.1
Benzyl chloride	TO-15	µg/m^3	ND			0.42	16	ND			0.40	16	ND			0.42	16	ND			0.42	16	ND			0.41	16	ND			0.40	15	ND			0.40	16
Bromodichloromethane	TO-15	µg/m^3	ND			0.72	8.0	ND			0.70	7.8	ND			0.73	8.2	ND			0.72	8.0	ND			0.71	7.8	ND			0.69	7.6	ND			0.70	7.8
Bromoform	TO-15	µg/m^3	ND			1.4	16	ND			1.3	16	ND			1.4	16	ND			1.4	16	ND			1.4	16	ND			1.3	15	ND			1.3	16
Bromomethane	TO-15	µg/m^3	ND			0.75	3.2	ND			0.73	3.1	ND			0.77	3.3	ND			0.75	3.2	ND			0.74	3.1	ND			0.72	3.1	ND			0.73	3.1
1,3-Butadiene	TO-15	µg/m^3	ND			0.35	3.2	ND			0.34	3.1	ND			0.36	3.3	ND			0.35	3.2	ND			0.35	3.1	ND			0.34	3.1	ND			0.34	3.1
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND			1.1	8.0	ND			1.1	7.8	ND			1.1	8.2	ND			1.1	8.0	ND			1.1	7.8	ND			1.1	7.6	ND			1.1	7.8
Carbon disulfide	TO-15	µg/m^3	**11**			0.30	3.2	**12**			0.29	3.1	**3.2**	**J**	**6G**	0.31	3.3	**72**			0.30	3.2	**1.2**	**J**	**6G**	0.30	3.1	**7.4**			0.29	3.1	**2.5**	**J**	**6G**	0.29	3.1
Carbon tetrachloride	TO-15	µg/m^3	ND			0.72	8.0	ND			0.70	7.8	ND			0.73	8.2	ND			0.72	8.0	ND			0.71	7.8	ND			0.69	7.6	ND			0.70	7.8
Chlorobenzene	TO-15	µg/m^3	ND			0.64	8.0	ND			0.62	7.8	ND			0.65	8.2	ND			0.64	8.0	ND			0.63	7.8	ND			0.61	7.6	ND			0.62	7.8
Chloroethane	TO-15	µg/m^3	ND			0.85	3.2	ND			0.82	3.1	ND			0.86	3.3	ND			0.85	3.2	ND			0.83	3.1	ND			0.81	3.1	ND			0.82	3.1
Chloroform	TO-15	µg/m^3	ND			0.86	8.0	ND			0.84	7.8	**2.8**	**J**	**6G**	0.88	8.2	**6.7**	**J**	**6G**	0.86	8.0	**3.8**	**J**	**6G**	0.85	7.8	ND			0.83	7.6	ND			0.84	7.8
Chloromethane	TO-15	µg/m^3	ND			0.34	3.2	ND			0.33	3.1	ND			0.34	3.3	ND			0.34	3.2	ND			0.33	3.1	ND			0.32	3.1	ND			0.33	3.1
Cyclohexane	TO-15	µg/m^3	ND			0.61	3.2	ND			0.59	3.1	ND			0.62	3.3	**5.8**			0.61	3.2	ND			0.60	3.1	ND			0.58	3.1	ND			0.59	3.1
Dibromochloromethane	TO-15	µg/m^3	ND			0.69	8.0	ND			0.67	7.8	ND			0.70	8.2	ND			0.69	8.0	ND			0.68	7.8	ND			0.66	7.6	ND			0.67	7.8
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND			2.7	8.0	ND			2.6	7.8	ND			2.8	8.2	ND			2.7	8.0	ND			2.7	7.8	ND			2.6	7.6	ND			2.6	7.8
1,2-Dibromoethane	TO-15	µg/m^3	ND			0.93	8.0	ND			0.90	7.8	ND			0.95	8.2	ND			0.93	8.0	ND			0.91	7.8	ND			0.89	7.6	ND			0.90	7.8
Dibromomethane	TO-15	µg/m^3	ND			0.91	8.0	ND			0.88	7.8	ND			0.93	8.2	ND			0.91	8.0	ND			0.89	7.8	ND			0.87	7.6	ND			0.88	7.8
1,2-Dichlorobenzene	TO-15	µg/m^3	ND			0.80	8.0	ND			0.78	7.8	ND			0.82	8.2	ND			0.80	8.0	ND			0.78	7.8	ND			0.76	7.6	ND			0.78	7.8
1,3-Dichlorobenzene	TO-15	µg/m^3	ND			0.50	8.0	ND			0.48	7.8	ND			0.51	8.2	ND			0.50	8.0	ND			0.49	7.8	ND			0.47	7.6	ND			0.48	7.8
1,4-Dichlorobenzene	TO-15	µg/m^3	ND			0.80	8.0	ND			0.78	7.8	ND			0.82	8.2	ND			0.80	8.0	ND			0.78	7.8	ND			0.76	7.6	ND			0.78	7.8
Dichlorodifluoromethane	TO-15	µg/m^3	**26**			0.72	8.0	**28**			0.70	7.8	**27**			0.73	8.2	**43**			0.72	8.0	**41**			0.71	7.8	**2.8**	**J**	**6G**	0.69	7.6	**4.4**	**J**	**6G**	0.70	7.8
1,1-Dichloroethane	TO-15	µg/m^3	ND			0.37	8.0	ND			0.36	7.8	ND			0.37	8.2	ND			0.37	8.0	ND			0.36	7.8	ND			0.35	7.6	ND			0.36	7.8
1,2-Dichloroethane	TO-15	µg/m^3	ND			0.42	8.0	ND			0.40	7.8	ND			0.42	8.2	**1.3**	**J**	**6G**	0.42	8.0	ND			0.41	7.8	ND			0.40	7.6	ND			0.40	7.8
1,1-Dichloroethene	TO-15	µg/m^3	ND			0.50	8.0	ND			0.48	7.8	ND			0.51	8.2	ND			0.50	8.0	ND			0.49	7.8	ND			0.47	7.6	ND			0.48	7.8
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.51	3.2	ND			0.50	3.1	ND			0.52	3.3	ND			0.51	3.2	ND			0.50	3.1	ND			0.49	3.1	ND			0.50	3.1
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND			0.43	3.2	ND			0.42	3.1	ND			0.44	3.3	ND			0.43	3.2	ND			0.42	3.1	ND			0.41	3.1	ND			0.42	3.1
1,2-Dichloropropane	TO-15	µg/m^3	ND			0.51	8.0	ND			0.50	7.8	ND			0.52	8.2	ND			0.51	8.0	ND			0.50	7.8	ND			0.49	7.6	ND			0.50	7.8
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.48	8.0	ND			0.46	7.8	ND			0.49	8.2	ND			0.48	8.0	ND			0.47	7.8	ND			0.46	7.6	ND			0.46	7.8
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND			0.64	8.0	ND			0.62	7.8	ND			0.65	8.2	ND			0.64	8.0	ND			0.63	7.8	ND			0.61	7.6	ND			0.62	7.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND			1.5	8.0	ND			1.4	7.8	ND			1.5	8.2	ND			1.5	8.0	ND			1.4	7.8	ND			1.4	7.6	ND			1.4	7.8
1,1-Difluoroethane	TO-15	µg/m^3	ND			3.2	8.0	ND			3.1	7.8	ND			3.3	8.2	ND			3.2	8.0	ND			3.1	7.8	ND			3.1	7.6	ND			3.1	7.8
Diisopropyl ether	TO-15	µg/m^3	ND			0.62	8.0	ND			0.60	7.8	ND			0.64	8.2	ND			0.62	8.0	ND			0.61	7.8	ND			0.60	7.6	ND			0.60	7.8
1,4-Dioxane	TO-15	µg/m^3	ND			0.53	3.2	ND			0.51	3.1	ND			0.54	3.3	ND			0.53	3.2	ND			0.52	3.1	ND			0.50	3.1	ND			0.51	3.1
Ethanol	TO-15	µg/m^3	**6.1**	**J**	**3D**	0.67	3.2	**49**	**J**	**3D**	0.65	3.1	ND			0.68	3.3	ND			0.67	3.2	ND			0.66	3.1	**2.1**	**J**	**6G**	0.64	3.1	ND			0.65	3.1
Ethyl acetate	TO-15	µg/m^3	ND			0.53	3.2	ND			0.51	3.1	ND			0.54	3.3	ND			0.53	3.2	ND			0.52	3.1	ND			0.50	3.1	ND			0.51	3.1
Ethylbenzene	TO-15	µg/m^3	**4.3**	**J**	**6G**	0.51	8.0	**7.3**	**J**	**6G**	0.50	7.8	ND			0.52	8.2	**38**			0.51	8.0	ND			0.50	7.8	**6.7**	**J**	**6G**	0.49	7.6	ND			0.50	7.8
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**4.9**	**J**	**6G**	0.48	8.0	**6.2**	**J**	**6G**	0.46	7.8	ND			0.49	8.2	**32**			0.48	8.0	ND			0.47	7.8	**6.1**	**J**	**6G**	0.46	7.6	ND			0.46	7.8
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND			0.53	8.0	ND			0.51	7.8	ND			0.54	8.2	ND			0.53	8.0	ND			0.52	7.8	ND			0.50	7.6	ND			0.51	7.8
n-Heptane	TO-15	µg/m^3	ND			0.54	3.2	ND			0.53	3.1	ND			0.55	3.3	ND			0.54	3.2	ND			0.53	3.1	ND			0.52	3.1	ND			0.53	3.1
Hexachlorobutadiene	TO-15	µg/m^3	ND			2.4	16	ND	UJ	5B	2.3	16	ND	UJ	5B	2.4	16	ND	UJ	5B	2.4	16	ND	UJ	5B	2.4	16	ND	UJ	5B	2.3	15	ND	UJ	5B	2.3	16

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID				VW53A				VW53A				VW53B				VW54A				VW54B				VW55A				VW55B			
			Sampling Date/Time				12/29/2020 12:00				12/29/2020 12:00				12/29/2020 11:50				12/29/2020 13:35				12/29/2020 13:25				12/29/2020 14:55				12/29/2020 14:45			
			Sample Depth (feet)				5.5				5.5				14.5				5.5				14.5				5.5				14.5			
			Sample Type				N				FD				N				N				N				N				N			
			Field Sample ID				SG-VW53A-01				SG-VW53A-02				SG-VW53B-01				SG-VW54A-01				SG-VW54B-01				SG-VW55A-01				SG-VW55B-01			
			Lab Sample ID				2100036-09				2100036-10				2100036-11				2100036-12				2100036-13				2100036-14				2100036-15			
			Status				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL	Result	QA	Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND			1.2	3.2	ND			1.1	3.1	ND			1.2	3.3	ND			1.2	3.2	ND			1.1	3.1	ND			1.1	3.1	ND			1.1	3.1
Hexane	TO-15	µg/m^3	ND			0.32	8.0	ND			0.31	7.8	ND			0.33	8.2	ND			0.32	8.0	ND			0.31	7.8	ND			0.31	7.6	ND			0.31	7.8
2-Hexanone	TO-15	µg/m^3	ND			0.46	8.0	ND			0.45	7.8	ND			0.47	8.2	ND			0.46	8.0	ND			0.46	7.8	ND			0.44	7.6	ND			0.45	7.8
Isooctane	TO-15	µg/m^3	ND			0.56	8.0	ND			0.54	7.8	ND			0.57	8.2	**9.2**			0.56	8.0	ND			0.55	7.8	ND			0.54	7.6	ND			0.54	7.8
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND	UJ	3D	0.51	3.2	**10**	**J**	**3D**	0.50	3.1	ND			0.52	3.3	ND			0.51	3.2	ND			0.50	3.1	ND			0.49	3.1	ND			0.50	3.1
Methylene chloride	TO-15	µg/m^3	ND			0.64	16	ND			0.62	16	ND			0.65	16	ND			0.64	16	ND			0.63	16	ND			0.61	15	ND			0.62	16
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**6.8**	**J**	**3D**	0.30	3.2	**26**	**J**	**3D**	0.29	3.1	ND			0.31	3.3	**13**			0.30	3.2	ND			0.30	3.1	**100**			0.29	3.1	**3.2**			0.29	3.1
Methyl iodide	TO-15	µg/m^3	ND			0.93	16	ND			0.90	16	ND			0.95	16	ND			0.93	16	ND			0.91	16	ND			0.89	15	ND			0.90	16
Methyl isobutyl ketone	TO-15	µg/m^3	ND			0.42	8.0	**2.1**	**J**	**6G**	0.40	7.8	ND			0.42	8.2	**2.5**	**J**	**6G**	0.42	8.0	ND			0.41	7.8	**4.7**	**J**	**6G**	0.40	7.6	ND			0.40	7.8
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND			0.45	3.2	ND			0.43	3.1	ND			0.46	3.3	ND			0.45	3.2	ND			0.44	3.1	ND			0.43	3.1	ND			0.43	3.1
Naphthalene	TO-15	µg/m^3	ND			2.2	32	**4.9**	**J**	**6G**	2.2	31	ND			2.3	33	ND			2.2	32	ND			2.2	31	ND			2.1	31	ND			2.2	31
Propylene	TO-15	µg/m^3	ND			0.40	3.2	ND			0.39	3.1	ND			0.41	3.3	**100**			4.0	32	ND			0.39	3.1	ND			0.38	3.1	ND			0.39	3.1
Styrene	TO-15	µg/m^3	ND			0.38	8.0	ND			0.37	7.8	ND			0.39	8.2	ND			0.38	8.0	ND			0.38	7.8	ND			0.37	7.6	ND			0.37	7.8
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.98	8.0	ND			0.95	7.8	ND			0.99	8.2	ND			0.98	8.0	ND			0.96	7.8	ND			0.93	7.6	ND			0.95	7.8
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND			0.75	8.0	ND			0.73	7.8	ND			0.77	8.2	ND			0.75	8.0	ND			0.74	7.8	ND			0.72	7.6	ND			0.73	7.8
Tetrachloroethene (PCE)	TO-15	µg/m^3	**42**			0.80	8.0	**45**			0.78	7.8	**69**			0.82	8.2	**29**			0.80	8.0	**53**			0.78	7.8	ND			0.76	7.6	**11**			0.78	7.8
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND			1.1	8.0	ND			1.0	7.8	ND			1.1	8.2	ND			1.1	8.0	ND			1.1	7.8	ND			1.0	7.6	ND			1.0	7.8
Tetrahydrofuran	TO-15	µg/m^3	**1.8**	**J**	**3D, 6G**	0.43	3.2	**4.9**	**J**	**3D**	0.42	3.1	ND			0.44	3.3	**5.0**			0.43	3.2	ND			0.42	3.1	**7.8**			0.41	3.1	ND			0.42	3.1
Toluene	TO-15	µg/m^3	**13**	**J**	**3D**	0.43	3.2	**22**	**J**	**3D**	0.42	3.1	ND			0.44	3.3	**280**			4.3	32	ND			0.42	3.1	**46**			0.41	3.1	**3.0**	**J**	**6G**	0.42	3.1
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	16	ND			1.3	15	ND			1.3	16
1,1,1-Trichloroethane	TO-15	µg/m^3	ND			0.62	8.0	ND			0.60	7.8	ND			0.64	8.2	ND			0.62	8.0	ND			0.61	7.8	ND			0.60	7.6	ND			0.60	7.8
1,1,2-Trichloroethane	TO-15	µg/m^3	ND			0.98	8.0	ND			0.95	7.8	ND			0.99	8.2	ND			0.98	8.0	ND			0.96	7.8	ND			0.93	7.6	ND			0.95	7.8
Trichloroethene (TCE)	TO-15	µg/m^3	ND			0.86	8.0	ND			0.84	7.8	ND			0.88	8.2	ND			0.86	8.0	ND			0.85	7.8	ND			0.83	7.6	ND			0.84	7.8
Trichlorofluoromethane	TO-15	µg/m^3	ND			0.75	8.0	**1.9**	**J**	**6G**	0.73	7.8	**2.0**	**J**	**6G**	0.77	8.2	**2.5**	**J**	**6G**	0.75	8.0	**2.4**	**J**	**6G**	0.74	7.8	ND			0.72	7.6	ND			0.73	7.8
1,2,3-Trichloropropane	TO-15	µg/m^3	ND			0.77	8.0	ND			0.74	7.8	ND			0.78	8.2	ND			0.77	8.0	ND			0.75	7.8	ND			0.73	7.6	ND			0.74	7.8
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND			0.88	8.0	ND			0.85	7.8	ND			0.90	8.2	ND			0.88	8.0	ND			0.86	7.8	ND			0.84	7.6	ND			0.85	7.8
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**7.4**	**J**	**6G**	0.64	8.0	**9.1**			0.62	7.8	ND			0.65	8.2	**41**			0.64	8.0	ND			0.63	7.8	**9.3**			0.61	7.6	**2.1**	**J**	**6G**	0.62	7.8
1,3,5-Trimethylbenzene	TO-15	µg/m^3	**2.3**	**J**	**6G**	0.64	8.0	**2.8**	**J**	**6G**	0.62	7.8	ND			0.65	8.2	**14**			0.64	8.0	ND			0.63	7.8	**2.8**	**J**	**6G**	0.61	7.6	ND			0.62	7.8
Vinyl acetate	TO-15	µg/m^3	ND			0.53	3.2	ND			0.51	3.1	ND			0.54	3.3	ND			0.53	3.2	ND			0.52	3.1	ND			0.50	3.1	ND			0.51	3.1
Vinyl bromide	TO-15	µg/m^3	ND			0.51	8.0	ND			0.50	7.8	ND			0.52	8.2	ND			0.51	8.0	ND			0.50	7.8	ND			0.49	7.6	ND			0.50	7.8
Vinyl chloride	TO-15	µg/m^3	ND			0.62	3.2	ND			0.60	3.1	ND			0.64	3.3	ND			0.62	3.2	ND			0.61	3.1	ND			0.60	3.1	ND			0.60	3.1
p- & *m*-Xylenes	TO-15	µg/m^3	**15**	**J**	**3D**	0.98	8.0	**22**	**J**	**3D**	0.95	7.8	ND			0.99	8.2	**150**			0.98	8.0	ND			0.96	7.8	**26**			0.93	7.6	**3.6**	**J**	**6G**	0.95	7.8
o-Xylene	TO-15	µg/m^3	**5.6**	**J**	**3D, 6G**	0.48	8.0	**7.7**	**J**	**3D, 6G**	0.46	7.8	ND			0.49	8.2	**42**			0.48	8.0	ND			0.47	7.8	**8.6**			0.46	7.6	**1.5**	**J**	**6G**	0.46	7.8
Total Xylenes	TO-15	µg/m^3	**21**	**J**	**3D**	1.5	16	**29**	**J**	**3D**	1.4	16	ND			1.5	16	**190**			1.5	16	ND			1.4	16	**34**			1.4	15	**5.1**	**J**	**6G**	1.4	16
TPH - Gasoline	TO-15	µg/m^3	**330**	**J**	**3D**	34	320	**490**	**J**	**3D**	33	310	**140**	**J**	**6G**	34	330	**3,000**			34	320	**94**	**J**	**6G**	33	310	**610**			32	310	**96**	**J**	**6G**	33	310
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**330**	**J**	**3D**	34	320	**490**	**J**	**3D**	33	310	**140**	**J**	**6G**	34	330	**3,000**			34	320	**94**	**J**	**6G**	33	310	**610**			32	310	**96**	**J**	**6G**	33	310

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			VW56A				VW56B				VW57A				VW57B				VW57B				VW57B			
Sampling Date/Time			12/30/2020 12:50				12/30/2020 12:40				12/30/2020 11:40				12/30/2020 11:30				12/30/2020 11:30				3/4/2021 15:10			
Sample Depth (feet)			5.5				14.5				5.5				14.5				14.5				14.5			
Sample Type			N				N				N				N				FD				N			
Field Sample ID			SG-VW56A-01				SG-VW56B-01				SG-VW57A-01				SG-VW57B-01				SG-VW57B-02				SG-VW57B-03			
Lab Sample ID			2100036-23				2100036-24				2100036-20				2100036-21				2100036-22				2107220-09			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND	UJ 4D	1.2	15	ND		1.3	15	ND		1.3	16	ND		120	1,500	ND		120	1,500	ND		1.4	17
Acetone	TO-15	µg/m^3	**5.9**	**J- 4D, 6G**	0.63	7.4	**22**		0.66	7.6	**9.1**		0.67	7.8	ND		64	740	ND		63	740	**1.7**	**J 6G**	0.71	8.3
Acrylonitrile	TO-15	µg/m^3	ND	UJ 4D	0.40	2.9	ND		0.41	3.1	ND		0.42	3.1	ND		40	300	ND		40	290	ND		0.45	3.3
Allyl chloride	TO-15	µg/m^3	ND	UJ 4D	0.41	2.9	ND		0.43	3.1	ND		0.44	3.1	ND		42	300	ND		41	290	ND		0.46	3.3
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND	UJ 4D	0.46	7.4	ND		0.47	7.6	ND		0.48	7.8	ND		46	740	ND		46	740	ND		0.51	8.3
Benzene	TO-15	µg/m^3	**13**	**J- 4D**	0.31	2.9	**8.0**		0.32	3.1	**2.0**	**J 6G**	0.33	3.1	**2,100**		31	300	**2,500**		31	290	ND		0.35	3.3
Benzyl chloride	TO-15	µg/m^3	ND	UJ 4D	0.38	15	ND		0.40	15	ND		0.41	16	ND		39	1,500	ND		38	1,500	ND		0.43	17
Bromodichloromethane	TO-15	µg/m^3	ND	UJ 4D	0.66	7.4	**2.6**	**J 6G**	0.69	7.6	ND		0.70	7.8	ND		67	740	ND		66	740	ND		0.75	8.3
Bromoform	TO-15	µg/m^3	ND	UJ 4D	1.3	15	ND		1.3	15	ND		1.3	16	ND		130	1,500	ND		130	1,500	ND		1.4	17
Bromomethane	TO-15	µg/m^3	ND	UJ 4D	0.69	2.9	ND		0.72	3.1	ND		0.73	3.1	ND		70	300	ND		69	290	ND		0.78	3.3
1,3-Butadiene	TO-15	µg/m^3	ND	UJ 4D	0.32	2.9	ND		0.34	3.1	ND		0.34	3.1	ND		33	300	ND		32	290	ND		0.37	3.3
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND	UJ 4D	1.0	7.4	ND		1.1	7.6	ND		1.1	7.8	ND		100	740	ND		100	740	ND		1.2	8.3
Carbon disulfide	TO-15	µg/m^3	**3.4**	**J- 4D**	0.28	2.9	**2.3**	**J 6G**	0.29	3.1	**4.9**		0.30	3.1	ND		28	300	ND		28	290	ND		0.32	3.3
Carbon tetrachloride	TO-15	µg/m^3	ND	UJ 4D	0.66	7.4	ND		0.69	7.6	ND		0.70	7.8	ND		67	740	ND		66	740	ND		0.75	8.3
Chlorobenzene	TO-15	µg/m^3	ND	UJ 4D	0.59	7.4	ND		0.61	7.6	ND		0.62	7.8	ND		60	740	ND		59	740	ND		0.66	8.3
Chloroethane	TO-15	µg/m^3	ND	UJ 4D	0.78	2.9	ND		0.81	3.1	ND		0.83	3.1	ND		79	300	ND		78	290	ND		0.88	3.3
Chloroform	TO-15	µg/m^3	ND	UJ 4D	0.79	7.4	**33**		0.83	7.6	ND		0.84	7.8	ND		80	740	ND		79	740	**2.0**	**J 6G**	0.90	8.3
Chloromethane	TO-15	µg/m^3	ND	UJ 4D	0.31	2.9	ND		0.32	3.1	ND		0.33	3.1	ND		31	300	ND		31	290	ND		0.35	3.3
Cyclohexane	TO-15	µg/m^3	ND	UJ 4D	0.56	2.9	ND		0.58	3.1	**9.8**		0.59	3.1	**100,000**		570	3,000	**120,000**		560	2,900	ND		0.63	3.3
Dibromochloromethane	TO-15	µg/m^3	ND	UJ 4D	0.63	7.4	ND		0.66	7.6	ND		0.67	7.8	ND		64	740	ND		63	740	ND		0.71	8.3
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND	UJ 4D	2.5	7.4	ND		2.6	7.6	ND		2.7	7.8	ND		250	740	ND		250	740	ND		2.8	8.3
1,2-Dibromoethane	TO-15	µg/m^3	ND	UJ 4D	0.85	7.4	ND		0.89	7.6	ND		0.90	7.8	ND		86	740	ND		85	740	ND		0.96	8.3
Dibromomethane	TO-15	µg/m^3	ND	UJ 4D	0.84	7.4	ND		0.87	7.6	ND		0.89	7.8	ND		85	740	ND		84	740	ND		0.95	8.3
1,2-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4D	0.74	7.4	ND		0.76	7.6	ND		0.78	7.8	ND		74	740	ND		74	740	ND		0.83	8.3
1,3-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4D	0.46	7.4	ND		0.47	7.6	ND		0.48	7.8	ND		46	740	ND		46	740	ND		0.51	8.3
1,4-Dichlorobenzene	TO-15	µg/m^3	ND	UJ 4D	0.74	7.4	**2.6**	**J 6G**	0.76	7.6	ND		0.78	7.8	ND		74	740	ND		74	740	ND		0.83	8.3
Dichlorodifluoromethane	TO-15	µg/m^3	**3.1**	**J- 4D, 6G**	0.66	7.4	**2.6**	**J 6G**	0.69	7.6	ND		0.70	7.8	ND		67	740	ND		66	740	**3.0**	**J 6G**	0.75	8.3
1,1-Dichloroethane	TO-15	µg/m^3	ND	UJ 4D	0.34	7.4	ND		0.35	7.6	ND		0.36	7.8	ND		34	740	ND		34	740	ND		0.38	8.3
1,2-Dichloroethane	TO-15	µg/m^3	ND	UJ 4D	0.38	7.4	ND		0.40	7.6	ND		0.41	7.8	ND		39	740	ND		38	740	ND		0.43	8.3
1,1-Dichloroethene	TO-15	µg/m^3	ND	UJ 4D	0.46	7.4	ND		0.47	7.6	ND		0.48	7.8	ND		46	740	ND		46	740	ND		0.51	8.3
cis-1,2-Dichloroethene	TO-15	µg/m^3	ND	UJ 4D	0.47	2.9	ND		0.49	3.1	ND		0.50	3.1	ND		48	300	ND		47	290	**5.3**		0.53	3.3
trans-1,2-Dichloroethene	TO-15	µg/m^3	ND	UJ 4D	0.40	2.9	ND		0.41	3.1	ND		0.42	3.1	ND		40	300	ND		40	290	ND		0.45	3.3
1,2-Dichloropropane	TO-15	µg/m^3	ND	UJ 4D	0.47	7.4	ND		0.49	7.6	ND		0.50	7.8	ND		48	740	ND		47	740	ND		0.53	8.3
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND	UJ 4D	0.44	7.4	ND		0.46	7.6	ND		0.47	7.8	ND		45	740	ND		44	740	ND		0.50	8.3
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND	UJ 4D	0.59	7.4	ND		0.61	7.6	ND		0.62	7.8	ND		60	740	ND		59	740	ND		0.66	8.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND	UJ 4D	1.3	7.4	ND		1.4	7.6	ND		1.4	7.8	ND		140	740	ND		130	740	ND		1.5	8.3
1,1-Difluoroethane	TO-15	µg/m^3	ND	UJ 4D	2.9	7.4	ND		3.1	7.6	ND		3.1	7.8	ND		300	740	ND		290	740	ND		3.3	8.3
Diisopropyl ether	TO-15	µg/m^3	ND	UJ 4D	0.57	7.4	ND		0.60	7.6	ND		0.61	7.8	ND		58	740	ND		57	740	ND		0.65	8.3
1,4-Dioxane	TO-15	µg/m^3	ND	UJ 4D	0.49	2.9	ND		0.50	3.1	ND		0.51	3.1	ND		49	300	ND		49	290	ND		0.55	3.3
Ethanol	TO-15	µg/m^3	**3.5**	**J- 4D**	0.62	2.9	**160**		6.8	32	**13**		0.66	3.1	ND		63	300	ND		62	290	ND		0.70	3.3
Ethyl acetate	TO-15	µg/m^3	ND	UJ 4D	0.49	2.9	ND		0.50	3.1	ND		0.51	3.1	ND		49	300	ND		49	290	ND		0.55	3.3
Ethylbenzene	TO-15	µg/m^3	**9.7**	**J- 4D**	0.47	7.4	**8.6**		0.49	7.6	**5.0**	**J 6G**	0.50	7.8	**180**	**J 6G**	48	740	**220**	**J 6G**	47	740	ND		0.53	8.3
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	**1.9**	**J- 4D, 6G**	0.44	7.4	**2.4**	**J 6G**	0.46	7.6	**3.1**	**J 6G**	0.47	7.8	ND		45	740	ND		44	740	ND		0.50	8.3
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND	UJ 4D	0.49	7.4	ND		0.50	7.6	ND		0.51	7.8	ND		49	740	ND		49	740	ND		0.55	8.3
n-Heptane	TO-15	µg/m^3	**3.8**	**J- 4D**	0.50	2.9	**1.6**	**J 6G**	0.52	3.1	**1.8**	**J 6G**	0.53	3.1	**13,000**		51	300	**16,000**		500	2,900	ND		0.56	3.3
Hexachlorobutadiene	TO-15	µg/m^3	ND	UJ 4D, 5B	2.2	15	ND	UJ 5B	2.3	15	ND	UJ 5B	2.3	16	ND	UJ 5B	220	1,500	ND	UJ 5B	220	1,500	ND		2.5	17

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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			Location ID	VW56A				VW56B				VW57A				VW57B				VW57B				VW57B			
			Sampling Date/Time	12/30/2020 12:50				12/30/2020 12:40				12/30/2020 11:40				12/30/2020 11:30				12/30/2020 11:30				3/4/2021 15:10			
			Sample Depth (feet)	5.5				14.5				5.5				14.5				14.5				14.5			
			Sample Type	N				N				N				N				FD				N			
			Field Sample ID	SG-VW56A-01				SG-VW56B-01				SG-VW57A-01				SG-VW57B-01				SG-VW57B-02				SG-VW57B-03			
			Lab Sample ID	2100036-23				2100036-24				2100036-20				2100036-21				2100036-22				2107220-09			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND	UJ 4D	1.1	2.9	ND		1.1	3.1	ND		1.1	3.1	ND		110	300	ND		110	290	ND		1.2	3.3
Hexane	TO-15	µg/m^3	ND	UJ 4D	0.29	7.4	ND		0.31	7.6	**7.0**	**J 6G**	0.31	7.8	**64,000**		300	7,400	**76,000**		290	7,400	ND		0.33	8.3
2-Hexanone	TO-15	µg/m^3	ND	UJ 4D	0.43	7.4	ND		0.44	7.6	ND		0.45	7.8	ND		43	740	ND		43	740	ND		0.48	8.3
Isooctane	TO-15	µg/m^3	ND	UJ 4D	0.51	7.4	ND		0.54	7.6	ND		0.55	7.8	ND		52	740	ND		51	740	ND		0.58	8.3
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	**94**	**J- 4D**	4.9	31	**20**		0.49	3.1	ND		0.50	3.1	ND		48	300	ND		47	290	**1.5**	**J 6G**	0.53	3.3
Methylene chloride	TO-15	µg/m^3	ND	UJ 4D	0.59	15	ND		0.61	15	ND		0.62	16	ND		60	1,500	ND		59	1,500	ND		0.66	17
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	**1.7**	**J- 4D, 6G**	0.28	2.9	**32**		0.29	3.1	**6.9**		0.30	3.1	ND		28	300	ND		28	290	ND		0.32	3.3
Methyl iodide	TO-15	µg/m^3	ND	UJ 4D	0.85	15	ND		0.89	15	ND		0.90	16	ND		86	1,500	ND		85	1,500	ND		0.96	17
Methyl isobutyl ketone	TO-15	µg/m^3	ND	UJ 4D	0.38	7.4	**3.2**	**J 6G**	0.40	7.6	ND		0.41	7.8	ND		39	740	ND		38	740	ND		0.43	8.3
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND	UJ 4D	0.41	2.9	ND		0.43	3.1	ND		0.44	3.1	ND		42	300	ND		41	290	ND		0.46	3.3
Naphthalene	TO-15	µg/m^3	ND	UJ 4D	2.1	29	**10**	**J 6G**	2.1	31	ND		2.2	31	ND		210	3,000	ND		210	2,900	ND		2.3	33
Propylene	TO-15	µg/m^3	ND	UJ 4D	0.37	2.9	ND		0.38	3.1	ND		0.39	3.1	ND		37	300	ND		37	290	ND		0.42	3.3
Styrene	TO-15	µg/m^3	ND	UJ 4D	0.35	7.4	**1.7**	**J 6G**	0.37	7.6	ND		0.37	7.8	ND		36	740	ND		35	740	ND		0.40	8.3
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND	UJ 4D	0.90	7.4	ND		0.93	7.6	ND		0.95	7.8	ND		91	740	ND		90	740	ND		1.0	8.3
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND	UJ 4D	0.69	7.4	ND		0.72	7.6	ND		0.73	7.8	ND		70	740	ND		69	740	ND		0.78	8.3
Tetrachloroethene (PCE)	TO-15	µg/m^3	**8.6**	**J- 4D**	0.74	7.4	**12**		0.76	7.6	**18**		0.78	7.8	ND		74	740	ND		74	740	**37**		0.83	8.3
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND	UJ 4D	0.98	7.4	ND		1.0	7.6	ND		1.0	7.8	ND		100	740	ND		98	740	ND		1.1	8.3
Tetrahydrofuran	TO-15	µg/m^3	ND	UJ 4D	0.40	2.9	**4.1**		0.41	3.1	**1.2**	**J 6G**	0.42	3.1	ND		40	300	ND		40	290	ND		0.45	3.3
Toluene	TO-15	µg/m^3	**14**	**J- 4D**	0.40	2.9	**16**		0.41	3.1	**13**		0.42	3.1	**8,200**		40	300	**11,000**		40	290	ND		0.45	3.3
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND	UJ 4D	1.2	15	ND		1.3	15	ND		1.3	16	ND		120	1,500	ND		120	1,500	ND		1.4	17
1,1,1-Trichloroethane	TO-15	µg/m^3	ND	UJ 4D	0.57	7.4	ND		0.60	7.6	ND		0.61	7.8	ND		58	740	ND		57	740	ND		0.65	8.3
1,1,2-Trichloroethane	TO-15	µg/m^3	ND	UJ 4D	0.90	7.4	ND		0.93	7.6	ND		0.95	7.8	ND		91	740	ND		90	740	ND		1.0	8.3
Trichloroethene (TCE)	TO-15	µg/m^3	ND	UJ 4D	0.79	7.4	ND		0.83	7.6	ND		0.84	7.8	ND		80	740	ND		79	740	**5.6**	**J 6G**	0.90	8.3
Trichlorofluoromethane	TO-15	µg/m^3	ND	UJ 4D	0.69	7.4	ND		0.72	7.6	ND		0.73	7.8	ND		70	740	ND		69	740	ND		0.78	8.3
1,2,3-Trichloropropane	TO-15	µg/m^3	ND	UJ 4D	0.71	7.4	ND		0.73	7.6	ND		0.75	7.8	ND		72	740	ND		71	740	ND		0.80	8.3
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND	UJ 4D	0.81	7.4	ND		0.84	7.6	ND		0.86	7.8	ND		82	740	ND		81	740	ND		0.91	8.3
1,2,4-Trimethylbenzene	TO-15	µg/m^3	**2.7**	**J- 4D, 6G**	0.59	7.4	**4.1**	**J 6G**	0.61	7.6	**4.0**	**J 6G**	0.62	7.8	ND		60	740	ND		59	740	ND		0.66	8.3
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND	UJ 4D	0.59	7.4	ND		0.61	7.6	ND		0.62	7.8	ND		60	740	ND		59	740	ND		0.66	8.3
Vinyl acetate	TO-15	µg/m^3	ND	UJ 4D	0.49	2.9	ND		0.50	3.1	ND		0.51	3.1	ND		49	300	ND		49	290	ND		0.55	3.3
Vinyl bromide	TO-15	µg/m^3	ND	UJ 4D	0.47	7.4	ND		0.49	7.6	ND		0.50	7.8	ND		48	740	ND		47	740	ND		0.53	8.3
Vinyl chloride	TO-15	µg/m^3	ND	UJ 4D	0.57	2.9	ND		0.60	3.1	ND		0.61	3.1	ND		58	300	ND		57	290	ND		0.65	3.3
p- & *m*-Xylenes	TO-15	µg/m^3	**14**	**J- 4D**	0.90	7.4	**14**		0.93	7.6	**13**		0.95	7.8	**340**	**J 6G**	91	740	**420**	**J 6G**	90	740	ND		1.0	8.3
o-Xylene	TO-15	µg/m^3	**3.3**	**J- 4D, 6G**	0.44	7.4	**3.8**	**J 6G**	0.46	7.6	**4.1**	**J 6G**	0.47	7.8	ND		45	740	ND		44	740	ND		0.50	8.3
Total Xylenes	TO-15	µg/m^3	**17**	**J- 4D**	1.3	15	**18**		1.4	15	**17**		1.4	16	**340**	**J 6G**	140	1500	**420**	**J 6G**	130	1,500	ND		1.5	17
TPH - Gasoline	TO-15	µg/m^3	**200**	**J- 4D, 6G**	31	290	**500**		32	310	**400**		33	310	**1,500,000**		31,000	300,000	**1,900,000**		31,000	290,000	**100**	**J 6G**	35	330
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**200**	**J- 4D, 6G**	31	290	**500**		32	310	**400**		33	310	**1,500,000**		31,000	300,000	**1,900,000**		31,000	290,000	**100**	**J 6G**	35	330

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			SVM-1				SVM-1				SVM-2				SVM-2				SVM-3				SVM-3			
Sampling Date/Time			3/3/2021 9:45				3/3/2021 9:50				3/3/2021 10:05				3/3/2021 10:10				3/3/2021 10:20				3/3/2021 10:25			
Sample Depth (feet)			4				14				5				14				4				14			
Sample Type			N				N				N				N				N				N			
Field Sample ID			SVM-1-5				SVM-1-14				SVM-2-5				SVM-2-14				SVM-3-5				SVM-3-14			
Lab Sample ID			2107219-09				2107219-10				2107219-11				2107219-12				2107219-13				2107219-14			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acrolein	TO-15	µg/m^3	ND		120	1,500	ND		1.3	16	ND		1.3	15	ND		1.3	16	ND		1.3	16	ND		1.2	15
Acetone	TO-15	µg/m^3	ND		65	760	**6.7**	**J 6G**	0.67	7.8	**3.3**	**J 6G**	0.66	7.6	**4.9**	**J 6G**	0.67	7.8	**25**		0.67	7.8	**10**		0.63	7.4
Acrylonitrile	TO-15	µg/m^3	ND		41	300	ND		0.42	3.1	ND		0.41	3.1	ND		0.42	3.1	ND		0.42	3.1	ND		0.40	2.9
Allyl chloride	TO-15	µg/m^3	ND		43	300	ND		0.44	3.1	ND		0.43	3.1	ND		0.43	3.1	ND		0.44	3.1	ND		0.41	2.9
tert-Amyl Methyl ether (TAME)	TO-15	µg/m^3	ND		47	760	ND		0.48	7.8	ND		0.47	7.6	ND		0.48	7.8	ND		0.48	7.8	ND		0.46	7.4
Benzene	TO-15	µg/m^3	ND		32	300	ND		0.33	3.1	ND		0.32	3.1	ND		0.33	3.1	ND		0.33	3.1	ND		0.31	2.9
Benzyl chloride	TO-15	µg/m^3	ND		40	1,500	ND		0.41	16	ND		0.40	15	ND		0.40	16	ND		0.41	16	ND		0.38	15
Bromodichloromethane	TO-15	µg/m^3	ND		68	760	ND		0.70	7.8	ND		0.69	7.6	ND		0.70	7.8	ND		0.70	7.8	ND		0.66	7.4
Bromoform	TO-15	µg/m^3	ND		130	1,500	ND		1.3	16	ND		1.3	15	ND		1.3	16	ND		1.3	16	ND		1.3	15
Bromomethane	TO-15	µg/m^3	ND		71	300	ND		0.73	3.1	ND		0.72	3.1	ND		0.73	3.1	ND		0.73	3.1	ND		0.69	2.9
1,3-Butadiene	TO-15	µg/m^3	ND		33	300	ND		0.34	3.1	ND		0.34	3.1	ND		0.34	3.1	ND		0.34	3.1	ND		0.32	2.9
tert-Butyl alcohol (TBA)	TO-15	µg/m^3	ND		110	760	**2.2**	**J 6G**	1.1	7.8	**1.4**	**J 6G**	1.1	7.6	**2.6**	**J 6G**	1.1	7.8	**2.1**	**J 6G**	1.1	7.8	ND		1.0	7.4
Carbon disulfide	TO-15	µg/m^3	ND		29	300	ND		0.30	3.1	ND		0.29	3.1	ND		0.29	3.1	**3.3**		0.30	3.1	**6.0**		0.28	2.9
Carbon tetrachloride	TO-15	µg/m^3	ND		68	760	ND		0.70	7.8	ND		0.69	7.6	ND		0.70	7.8	ND		0.70	7.8	ND		0.66	7.4
Chlorobenzene	TO-15	µg/m^3	ND		61	760	ND		0.62	7.8	ND		0.61	7.6	ND		0.62	7.8	ND		0.62	7.8	ND		0.59	7.4
Chloroethane	TO-15	µg/m^3	ND		81	300	ND		0.83	3.1	ND		0.81	3.1	ND		0.82	3.1	ND		0.83	3.1	ND		0.78	2.9
Chloroform	TO-15	µg/m^3	ND		82	760	ND		0.84	7.8	ND		0.83	7.6	**5.8**	**J 6G**	0.84	7.8	ND		0.84	7.8	ND		0.79	7.4
Chloromethane	TO-15	µg/m^3	ND		32	300	ND		0.33	3.1	ND		0.32	3.1	ND		0.33	3.1	**1.0**	**J 6G**	0.33	3.1	**1.5**	**J 6G**	0.31	2.9
Cyclohexane	TO-15	µg/m^3	ND		58	300	ND		0.59	3.1	ND		0.58	3.1	ND		0.59	3.1	ND		0.59	3.1	ND		0.56	2.9
Dibromochloromethane	TO-15	µg/m^3	ND		65	760	ND		0.67	7.8	ND		0.66	7.6	ND		0.67	7.8	ND		0.67	7.8	ND		0.63	7.4
1,2-Dibromo-3-chloropropane	TO-15	µg/m^3	ND		260	760	ND		2.7	7.8	ND		2.6	7.6	ND		2.6	7.8	ND		2.7	7.8	ND		2.5	7.4
1,2-Dibromoethane	TO-15	µg/m^3	ND		88	760	ND		0.90	7.8	ND		0.89	7.6	ND		0.90	7.8	ND		0.90	7.8	ND		0.85	7.4
Dibromomethane	TO-15	µg/m^3	ND		87	760	ND		0.89	7.8	ND		0.87	7.6	ND		0.88	7.8	ND		0.89	7.8	ND		0.84	7.4
1,2-Dichlorobenzene	TO-15	µg/m^3	ND		76	760	ND		0.78	7.8	ND		0.76	7.6	ND		0.78	7.8	ND		0.78	7.8	ND		0.74	7.4
1,3-Dichlorobenzene	TO-15	µg/m^3	ND		47	760	ND		0.48	7.8	ND		0.47	7.6	ND		0.48	7.8	ND		0.48	7.8	ND		0.46	7.4
1,4-Dichlorobenzene	TO-15	µg/m^3	ND		76	760	ND		0.78	7.8	ND		0.76	7.6	ND		0.78	7.8	ND		0.78	7.8	ND		0.74	7.4
Dichlorodifluoromethane	TO-15	µg/m^3	ND		68	760	**3.4**	**J 6G**	0.70	7.8	**3.4**	**J 6G**	0.69	7.6	ND		0.70	7.8	**3.2**	**J 6G**	0.70	7.8	**3.4**	**J 6G**	0.66	7.4
1,1-Dichloroethane	TO-15	µg/m^3	ND		35	760	ND		0.36	7.8	ND		0.35	7.6	ND		0.36	7.8	ND		0.36	7.8	ND		0.34	7.4
1,2-Dichloroethane	TO-15	µg/m^3	ND		40	760	ND		0.41	7.8	ND		0.40	7.6	ND		0.40	7.8	ND		0.41	7.8	ND		0.38	7.4
1,1-Dichloroethene	TO-15	µg/m^3	ND		47	760	ND		0.48	7.8	ND		0.47	7.6	ND		0.48	7.8	ND		0.48	7.8	ND		0.46	7.4
cis-1,2-Dichloroethene	TO-15	µg/m^3	**35,000**		970	6,100	**82**		0.50	3.1	ND		0.49	3.1	**2.6**	**J 6G**	0.50	3.1	ND		0.50	3.1	ND		0.47	2.9
trans-1,2-Dichloroethene	TO-15	µg/m^3	**200**	**J 6G**	41	300	**1.8**	**J 6G**	0.42	3.1	ND		0.41	3.1	ND		0.42	3.1	ND		0.42	3.1	ND		0.40	2.9
1,2-Dichloropropane	TO-15	µg/m^3	**600**	**J 6G**	49	760	ND		0.50	7.8	ND		0.49	7.6	ND		0.50	7.8	ND		0.50	7.8	ND		0.47	7.4
cis-1,3-Dichloropropene	TO-15	µg/m^3	ND		46	760	ND		0.47	7.8	ND		0.46	7.6	ND		0.46	7.8	ND		0.47	7.8	ND		0.44	7.4
trans-1,3-Dichloropropene	TO-15	µg/m^3	ND		61	760	ND		0.62	7.8	ND		0.61	7.6	ND		0.62	7.8	ND		0.62	7.8	ND		0.59	7.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	TO-15	µg/m^3	ND		140	760	ND		1.4	7.8	ND		1.4	7.6	ND		1.4	7.8	ND		1.4	7.8	ND		1.3	7.4
1,1-Difluoroethane	TO-15	µg/m^3	ND		300	760	ND		3.1	7.8	ND		3.1	7.6	ND		3.1	7.8	ND		3.1	7.8	ND		2.9	7.4
Diisopropyl ether	TO-15	µg/m^3	ND		59	760	ND		0.61	7.8	ND		0.60	7.6	ND		0.60	7.8	ND		0.61	7.8	ND		0.57	7.4
1,4-Dioxane	TO-15	µg/m^3	ND		50	300	ND		0.51	3.1	ND		0.50	3.1	ND		0.51	3.1	ND		0.51	3.1	ND		0.49	2.9
Ethanol	TO-15	µg/m^3	ND		64	300	**6.5**		0.66	3.1	**4.5**		0.64	3.1	ND		0.65	3.1	**87**		0.66	3.1	**15**		0.62	2.9
Ethyl acetate	TO-15	µg/m^3	ND		50	300	ND		0.51	3.1	ND		0.50	3.1	ND		0.51	3.1	ND		0.51	3.1	ND		0.49	2.9
Ethylbenzene	TO-15	µg/m^3	ND		49	760	ND		0.50	7.8	ND		0.49	7.6	ND		0.50	7.8	**3.8**	**J 6G**	0.50	7.8	ND		0.47	7.4
1-Ethyl-4-methylbenzene	TO-15	µg/m^3	ND		46	760	ND		0.47	7.8	ND		0.46	7.6	ND		0.46	7.8	ND		0.47	7.8	ND		0.44	7.4
Ethyl *tert*-butyl ether (ETBE)	TO-15	µg/m^3	ND		50	760	ND		0.51	7.8	ND		0.50	7.6	ND		0.51	7.8	ND		0.51	7.8	ND		0.49	7.4
n-Heptane	TO-15	µg/m^3	ND		52	300	ND		0.53	3.1	ND		0.52	3.1	ND		0.53	3.1	ND		0.53	3.1	ND		0.50	2.9
Hexachlorobutadiene	TO-15	µg/m^3	ND		230	1,500	ND		2.3	16	ND		2.3	15	ND		2.3	16	ND		2.3	16	ND		2.2	15

CURRENT INVESTIGATION VALIDATED SOIL GAS ANALYTICAL RESULTS
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Location ID			SVM-1				SVM-1				SVM-2				SVM-2				SVM-3				SVM-3			
Sampling Date/Time			3/3/2021 9:45				3/3/2021 9:50				3/3/2021 10:05				3/3/2021 10:10				3/3/2021 10:20				3/3/2021 10:25			
Sample Depth (feet)			4				14				5				14				4				14			
Sample Type			N				N				N				N				N				N			
Field Sample ID			SVM-1-5				SVM-1-14				SVM-2-5				SVM-2-14				SVM-3-5				SVM-3-14			
Lab Sample ID			2107219-09				2107219-10				2107219-11				2107219-12				2107219-13				2107219-14			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Hexachloroethane	TO-15	µg/m^3	ND		110	300	ND		1.1	3.1	ND		1.1	3.1	ND		1.1	3.1	ND		1.1	3.1	ND		1.1	2.9
Hexane	TO-15	µg/m^3	ND		30	760	ND		0.31	7.8	ND		0.31	7.6	ND		0.31	7.8	ND		0.31	7.8	ND		0.29	7.4
2-Hexanone	TO-15	µg/m^3	ND		44	760	ND		0.45	7.8	ND		0.44	7.6	ND		0.45	7.8	ND		0.45	7.8	ND		0.43	7.4
Isooctane	TO-15	µg/m^3	ND		53	760	ND		0.55	7.8	ND		0.54	7.6	ND		0.54	7.8	ND		0.55	7.8	ND		0.51	7.4
Isopropyl alcohol (2-Propanol)	TO-15	µg/m^3	ND		49	300	**1.3**	**J 6G**	0.50	3.1	**0.81**	**J 6G**	0.49	3.1	ND		0.50	3.1	**30**		0.50	3.1	**4.2**		0.47	2.9
Methylene chloride	TO-15	µg/m^3	ND		61	1,500	ND		0.62	16	ND		0.61	15	ND		0.62	16	ND		0.62	16	ND		0.59	15
Methyl ethyl ketone (2-Butanone)	TO-15	µg/m^3	ND		29	300	**0.97**	**J 6G**	0.30	3.1	ND		0.29	3.1	ND		0.29	3.1	**32**		0.30	3.1	**4.2**		0.28	2.9
Methyl iodide	TO-15	µg/m^3	ND		88	1,500	ND		0.90	16	ND		0.89	15	ND		0.90	16	ND		0.90	16	ND		0.85	15
Methyl isobutyl ketone	TO-15	µg/m^3	ND		40	760	ND		0.41	7.8	ND		0.40	7.6	ND		0.40	7.8	**3.1**	**J 6G**	0.41	7.8	ND		0.38	7.4
Methyl *tert*-butyl ether (MTBE)	TO-15	µg/m^3	ND		43	300	ND		0.44	3.1	ND		0.43	3.1	ND		0.43	3.1	ND		0.44	3.1	ND		0.41	2.9
Naphthalene	TO-15	µg/m^3	ND		210	3,000	ND		2.2	31	ND		2.1	31	ND		2.2	31	ND		2.2	31	ND		2.1	29
Propylene	TO-15	µg/m^3	ND		38	300	ND		0.39	3.1	ND		0.38	3.1	ND		0.39	3.1	ND		0.39	3.1	ND		0.37	2.9
Styrene	TO-15	µg/m^3	ND		36	760	ND		0.37	7.8	ND		0.37	7.6	ND		0.37	7.8	ND		0.37	7.8	ND		0.35	7.4
1,1,1,2-Tetrachloroethane	TO-15	µg/m^3	ND		93	760	ND		0.95	7.8	ND		0.93	7.6	ND		0.95	7.8	ND		0.95	7.8	ND		0.90	7.4
1,1,2,2-Tetrachloroethane	TO-15	µg/m^3	ND		71	760	ND		0.73	7.8	ND		0.72	7.6	ND		0.73	7.8	ND		0.73	7.8	ND		0.69	7.4
Tetrachloroethene (PCE)	TO-15	µg/m^3	**320,000**		1,500	15,000	**360**		7.8	78	**15**		0.76	7.6	**62**		0.78	7.8	**39**		0.78	7.8	**19**		0.74	7.4
1,1,1,2-Tetrafluoroethane	TO-15	µg/m^3	ND		100	760	ND		1.0	7.8	ND		1.0	7.6	**4.1**	**J 6G**	1.0	7.8	ND		1.0	7.8	ND		0.98	7.4
Tetrahydrofuran	TO-15	µg/m^3	ND		41	300	ND		0.42	3.1	ND		0.41	3.1	ND		0.42	3.1	**10**		0.42	3.1	**1.0**	**J 6G**	0.40	2.9
Toluene	TO-15	µg/m^3	ND		41	300	**2.3**	**J 6G**	0.42	3.1	ND		0.41	3.1	ND		0.42	3.1	**7.9**		0.42	3.1	**1.1**	**J 6G**	0.40	2.9
1,2,4-Trichlorobenzene	TO-15	µg/m^3	ND		120	1,500	ND		1.3	16	ND		1.3	15	ND		1.3	16	ND		1.3	16	ND		1.2	15
1,1,1-Trichloroethane	TO-15	µg/m^3	ND		59	760	ND		0.61	7.8	ND		0.60	7.6	ND		0.60	7.8	ND		0.61	7.8	ND		0.57	7.4
1,1,2-Trichloroethane	TO-15	µg/m^3	ND		93	760	ND		0.95	7.8	ND		0.93	7.6	ND		0.95	7.8	ND		0.95	7.8	ND		0.90	7.4
Trichloroethene (TCE)	TO-15	µg/m^3	**15,000**		82	760	**110**		0.84	7.8	ND		0.83	7.6	**1.9**	**J 6G**	0.84	7.8	ND		0.84	7.8	ND		0.79	7.4
Trichlorofluoromethane	TO-15	µg/m^3	ND		71	760	**1.8**	**J 6G**	0.73	7.8	**1.8**	**J 6G**	0.72	7.6	ND		0.73	7.8	ND		0.73	7.8	**1.8**	**J 6G**	0.69	7.4
1,2,3-Trichloropropane	TO-15	µg/m^3	ND		73	760	ND		0.75	7.8	ND		0.73	7.6	ND		0.74	7.8	ND		0.75	7.8	ND		0.71	7.4
1,1,2-Trichloro-1,2,2-trifluoroethane	TO-15	µg/m^3	ND		84	760	ND		0.86	7.8	ND		0.84	7.6	ND		0.85	7.8	ND		0.86	7.8	ND		0.81	7.4
1,2,4-Trimethylbenzene	TO-15	µg/m^3	ND		61	760	ND		0.62	7.8	ND		0.61	7.6	ND		0.62	7.8	**2.3**	**J 6G**	0.62	7.8	ND		0.59	7.4
1,3,5-Trimethylbenzene	TO-15	µg/m^3	ND		61	760	ND		0.62	7.8	ND		0.61	7.6	ND		0.62	7.8	ND		0.62	7.8	ND		0.59	7.4
Vinyl acetate	TO-15	µg/m^3	ND		50	300	ND		0.51	3.1	ND		0.50	3.1	ND		0.51	3.1	ND		0.51	3.1	ND		0.49	2.9
Vinyl bromide	TO-15	µg/m^3	ND		49	760	ND		0.50	7.8	ND		0.49	7.6	ND		0.50	7.8	ND		0.50	7.8	ND		0.47	7.4
Vinyl chloride	TO-15	µg/m^3	ND		59	300	ND		0.61	3.1	ND		0.60	3.1	ND		0.60	3.1	ND		0.61	3.1	ND		0.57	2.9
p- & *m*-Xylenes	TO-15	µg/m^3	ND		93	760	ND		0.95	7.8	ND		0.93	7.6	ND		0.95	7.8	**9.0**		0.95	7.8	ND		0.90	7.4
o-Xylene	TO-15	µg/m^3	ND		46	760	ND		0.47	7.8	ND		0.46	7.6	ND		0.46	7.8	**2.9**	**J 6G**	0.47	7.8	ND		0.44	7.4
Total Xylenes	TO-15	µg/m^3	ND		140	1,500	ND		1.4	16	ND		1.4	15	ND		1.4	16	**12**	**J 6G**	1.4	16	ND		1.3	15
TPH - Gasoline	TO-15	µg/m^3	**500,000**		3,200	30,000	**780**		33	310	**51**	**J 6G**	32	310	**130**	**J 6G**	33	310	**520**		33	310	**130**	**J 6G**	31	290
Total Petroleum Hydrocarbons	TO-15	µg/m^3	**500,000**		3,200	30,000	**780**		33	310	**51**	**J 6G**	32	310	**130**	**J 6G**	33	310	**520**		33	310	**130**	**J 6G**	31	290

Notes:

Concentrations detected above the laboratory MDL are shown in **bold**.
Sample depths are referenced to the top of soil (bottom of pavement).
< = less than
µg/m^3 = micrograms per cubic meter
FD = field duplicate sample
ID = identification
MDL = method detection limit
N = normal sample
ND = not detected above the laboratory MDL
PQL = practical quantitation limit
QA = quality assurance data validation qualifier
TO = Toxic Organics
TPH = total petroleum hydrocarbons

Data Validation Qualifier Definitions:

J = estimated result
J- = estimated result; potential low bias
UJ = estimated result; analyte not detected at the indicated value

Data Validation Reason Code Definitions:

3D = field duplicate Imprecision
4A = canister received at ambient pressure
4D = sample associated with potential leak in sampling system
5B = low continuing calibration recovery
6G = reported between the laboratory MDL and PQL

Soil Data Validation Summary

SMUD 59TH STREET CORPORATION YARD SOIL DATA VALIDATION SUMMARY

Soil samples were collected from the SMUD Corporation Yard site located at 1708 59th Street in Sacramento, California from June 2020 through February 2021. The samples were analyzed by BC Laboratories, Inc. in Bakersfield, California.

The following samples were analyzed for arsenic only by United States Environmental Protection Agency (EPA) Method 6020.

- June 20-30, 2020 under work order (WO) 2018704: 29 soil samples, three field duplicate (FD) samples, and two project specific matrix spike (MS)/MS duplicates (MSD)
- July 20, 2020 under WO 2020984: 10 soil samples, one FD and one project specific MS/MSD
- August 7, 2020 under WO 2022938: eight soil samples, one FD, and one project specific MS/MSD
- August 26, 2020 under WO 2025110: one soil sample
- December 21, 2020 under WO 2037454: two soil samples
- December 22, 2020 under WO 2037618: 31 soil samples, two FDs, and one project specific MS/MSD

Additional soil samples were collected and analyzed for the following.

- November 23, 2020 under WO 2034585: two soil samples each were analyzed for California Assessment Manual (CAM) 17 metals by EPA Methods 6020 and 7471A, semi-volatile organic compounds (SVOCs) by EPA Method 8270C, volatile organic compounds (VOCs) by EPA 8260B, polychlorinated biphenyls (PCBs) by EPA Method 8082, total purgeable petroleum hydrocarbons by Leaking Underground Fuel Tank-gas chromatography mass spectrometry (LUFT-GCMS); and total petroleum hydrocarbons (TPH) by EPA Method 8015B/Fuel Fingerprint total (FFP). One sample was additionally analyzed for soluble threshold limit concentration (STLC) and toxicity characteristic leaching procedure (TCLP) lead by EPA Method 6010B. One project-specific MS/MSD was analyzed for metals.
- February 22-24, 2021 under WO 2106339: 31 soil samples, four FDs and two project specific MS/MSDs were analyzed for arsenic and 15 soil samples, two FDs and two project-specific MS/MSDs were analyzed for lead by EPA Method 6020. Fifteen soil samples, two FDs and one project specific MS/MSD were also analyzed for TPH by EPA Method 8015B/FFP.

The quality control (QC) samples used to assess contamination, precision, and accuracy for the soil data include blanks (method blanks), spikes (laboratory control samples [LCSs], MS, post digestion, surrogates [organic methods only]), and duplicates (laboratory, LCS duplicates and MSDs). In addition, initial and continuing calibration recoveries, interference check samples (methods 6020 and 6010B only) and calibration blanks (methods 6020, 6010B, and 7471A only) were also reviewed for each analytical batch. The analytical results were validated against laboratory accuracy and precision limits and in accordance with the promulgated method by the AECOM project chemist. Validation is performed to ensure the quality of collected data and to assess limitation on usability, as well as to evaluate laboratory compliance. The data are considered valid and usable for their intended purposes within the constraints of the final usability qualifiers assigned (EPA Flags) in the data quality assessment.

During the validation process, any analytes (detected or not detected) associated with laboratory QC samples that do not meet the accuracy or precision limits were flagged by AECOM's project chemist. Data qualified with the "J" qualifier are considered estimated and usable with acceptable quantitative uncertainty (a "+" or "-" would indicate a potential high or low bias, respectively). Data qualified with the "U" flag are considered not detected; the reported result is attributed to external contamination. The "U" flag may also be assigned to a result that is also qualified as estimated (J). Non-detect results with potential low bias are flagged "UJ". Any results (detected or not) that are associated with extreme QC issues are rejected (R) and should not be used per EPA guidance.

From a total of 533 possible results (field and FD samples), 224 results are qualified. The following bullets summarize the qualified results and Table 1 lists all qualified results. Samples qualified as estimated (J) because they were detected between the PQL and MDL or (J) because the chromatographic pattern did not match the standard pattern (TPH only) are not indicative of analytical quality control issues. These results are also flagged by the laboratory. A summary of the qualified data is provided in the bullets below.

- For SVOCs by EPA Method 8270C, all sample results in both samples (172 non-detect results) are rejected (R). The calibration check compound (CCC) (pentachlorophenol) exceeded the relative standard deviation (RSD) of 30% specified in the method. According to the method, "*high variability for these compounds may be indicative of system leaks or reactive sites on the column. If the RSD of any CCC is greater than 30%, then the chromatographic system is too reactive for analysis to begin."* Two of these results are also associated with low continuing calibration verification recoveries.
- For VOCs by EPA Method 8260B, five results are qualified. Four non-detect results are qualified as estimated PQLs (UJ) because of low initial calibration verification recoveries and one result is qualified as an estimated concentration (J) because it was detected between the PQL and MDL.
- For TPH by EPA Method 8015B/FFP, three diesel and 13 motor oil results are qualified as estimated concentrations (J) because the sample chromatographic pattern did not match the chromatographic pattern of their respective standards. In addition, diesel in two samples and motor oil in three samples were detected between the PQL and MDL. Two of these motor oil results are also qualified for field duplicate imprecision.
- For PCBs by EPA Method 8082, 10 results are qualified. Two results are qualified as estimated concentrations because they were detected between the PQL and MDL. All eight results (two detected and six non-detect results) in sample VW-35-2 are qualified as estimated concentrations with potential low bias (J-) or estimated PQLs (UJ), respectively because of a low surrogate spike recovery. The two detected results were also detected between the PQL and MDL.
- For metals by EPA Method 6020, 18 results are qualified. Six results are qualified as estimated concentrations (J) only because they were detected between the PQL and MDL. Four results are qualified as estimated concentrations with potential low bias (J-) because of low MS recoveries, four results are qualified as estimated concentrations (J) due to FD imprecision, two results are qualified as estimated concentrations with potential high bias (J+) due to high post digestion recovery, one result is qualified as an estimated concentration (J) due to both a high and low MS recovery, and one additional result is qualified for laboratory duplicate imprecision. The interference check sample (noted as IFA and IFB) results in the data package, analyzed for metals, indicated metal analytes did not meet the limits. No analytes were qualified; the laboratory provided the following response: *"With regard to the IFA/B results, apparently the CLP reporting program is putting a star on values whose absolute value is greater than the value of the PQL. The concentration for all the analytes that do not have a true value listed in the "True" column is zero; they are not spiked in either IFA or IFB. Other than Se, these are common contaminants in the IFA/B solutions that cannot be avoided in the manufacturing. We allow them to go up to 2X the PQL in the negative direction for acceptable limits so Se is still OK. The high 130% recovery for Zn is because of the amount of Zn in the IFA solution which is a known contaminant. When this amount is subtracted from the IFB solution the spike amount is recovered at 91%. The LIMS we use will not do that calculation and for that matter there are no recovery limits for the spiked compounds in EPA Method 6020. We have the DOD limits of 80 – 120% in the system for samples that come from DOD clients."*
- For TCLP lead analyzed by EPA Method 6010B, one result is qualified as an estimated concentration (J) because it was detected between the PQL and MDL.
- For mercury by EPA Method 7471A, two results are qualified for blank contamination. One result is flagged as an estimated concentration for potential high bias (J+) and the other is flagged as not detected (UJ).

TABLE 1. QUALIFIED DATA

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flag	Reason Code
EPA 6020 (mg/kg)							
WB01-0.5	12/22/2020	Arsenic	8.2	0.50	0.17	J	3D
WB01-0.5-FD	12/22/2020	Arsenic	12	0.50	0.17	J	3D
WB06-5	12/22/2020	Arsenic	70	0.50	0.17	J	3D
WB06-5FD	12/22/2020	Arsenic	39	0.50	0.17	J	3D
VW-35-W-2	02/22/2021	Arsenic	61	0.50	0.17	J+	2E+
		Lead	11	0.25	0.12	J+	2E+
VW-31-2	11/23/2020	Antimony	0.14	0.50	0.080	J	6G
		Silver	0.077	0.25	0.051	J	6G
		Thallium	0.13	0.25	0.049	J	6G
VW-35-2	11/23/2020	Antimony	0.52	0.50	0.080	J-	2B-
		Barium	170	0.25	0.054	J-	2B-
		Beryllium	0.33	0.25	0.041	J	3C
		Cadmium	0.22	0.25	0.048	J	6G
		Chromium	33	0.75	0.25	J-	2B-
		Copper	53	0.50	0.099	J	2B-,2B+
		Silver	0.093	0.25	0.051	J	6G
		Thallium	0.090	0.25	0.049	J	6G
		Vanadium	38	0.75	0.27	J-	2B-
EPA 7471A (mg/kg)							
VW-31-2	11/23/2020	Mercury	0.12	0.16	0.016	UJ	1A
VW-35-2	11/23/2020	Mercury	0.21	0.16	0.016	J+	1A
EPA 8015B/FFP (mg/kg)							
VW-35-N-2	02/22/2021	TPH–Diesel (FFP)	280	280	61	J	6H
		TPH–Hydraulic Oil / Motor Oil	6000	560	190	J	6H
VW-35-N-5	02/22/2021	TPH–Hydraulic Oil / Motor Oil	83	20	7.0	J	6H
VW-35-N-7.5	02/22/2021	TPH–Hydraulic Oil / Motor Oil	28	20	7.0	J	6H
VW-35-E-2	02/22/2021	TPH–Hydraulic Oil / Motor Oil	960	100	35	J	6H
VW-35-E-5	02/22/2021	TPH–Hydraulic Oil / Motor Oil	400	100	35	J	6H
VW-35-W-5	02/22/2021	TPH–Hydraulic Oil / Motor Oil	9.1	20	7.0	J	6G,6H
VW-35-S-2	02/23/2021	TPH–Hydraulic Oil / Motor Oil	380	100	35	J	6H
VW-35-S-5	02/23/2021	TPH–Hydraulic Oil / Motor Oil	14	20	7.0	J	6G,6H,3D
VW-35-S-5-FD	02/23/2021	TPH–Hydraulic Oil / Motor Oil	27	20	7.0	J	6H,3D
VW-35-NN-2	02/24/2021	TPH–Hydraulic Oil / Motor Oil	130	100	35	J	6H
VW-35-NN-5	02/24/2021	TPH–Hydraulic Oil / Motor Oil	8.5	20	7.0	J	6G,6H
VW-31-2	11/23/2020	TPH–Diesel (FFP)	6.3	10	2.2	J	6G,6H
		TPH–Hydraulic Oil / Motor Oil	29	20	7.0	J	6H
VW-35-2	11/23/2020	TPH–Diesel (FFP)	630	1200	250	J	6G,6H
		TPH–Hydraulic Oil / Motor Oil	3500	2300	810	J	6H
EPA 8082 (mg/kg)							
VW-31-2	11/23/2020	PCB-1260	0.0077	0.010	0.0018	J	6G
		Total PCB's (Summation)	0.0077	0.010	0.0050	J	6G
VW-35-2	11/23/2020	PCB-1016	ND	0.050	0.012	UJ	2C-
		PCB-1221	ND	0.050	0.016	UJ	2C-
		PCB-1232	ND	0.050	0.013	UJ	2C-
		PCB-1242	ND	0.050	0.0075	UJ	2C-
		PCB-1248	ND	0.050	0.010	UJ	2C-

TABLE 1. QUALIFIED DATA

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flag	Reason Code
EPA 8082 (mg/kg) (continued)							
VW-35-2	11/23/2020	PCB-1254	ND	0.050	0.0080	UJ	2C-
(continued)		PCB-1260	0.035	0.050	0.0090	J-	6G,2C-
		Total PCB's (Summation)	0.035	0.050	0.025	J-	6G,2C-
EPA 8260B (mg/kg)							
VW-31-2	11/23/2020	Dichlorodifluoromethane	ND	0.0050	0.00079	UJ	5A-
		1,1-Dichloroethene	ND	0.0050	0.0011	UJ	5A-
VW-35-2	11/23/2020	Dichlorodifluoromethane	ND	0.0050	0.00079	UJ	5A-
		1,1-Dichloroethene	ND	0.0050	0.0011	UJ	5A-
		Tetrachloroethene	0.0017	0.0050	0.00097	J	6G
EPA 8270C (mg/kg)							
VW-31-2	11/23/2020	Acenaphthene	ND	1.0	0.067	R	5A
		Acenaphthylene	ND	1.0	0.067	R	5A
		Aldrin	ND	1.0	0.067	R	5A
		Aniline	ND	2.0	0.11	R	5A
		Anthracene	ND	1.0	0.067	R	5A
		Benzidine	ND	30	0.093	R	5A
		Benzo[a]anthracene	ND	1.0	0.077	R	5A
		Benzo[b]fluoranthene	ND	1.0	0.067	R	5A
		Benzo[k]fluoranthene	ND	1.0	0.082	R	5A
		Benzo[a]pyrene	ND	1.0	0.067	R	5A
		Benzo[g,h,i]perylene	ND	1.0	0.13	R	5A,5B-
		Benzoic acid	ND	5.0	0.14	R	5A
		Benzyl alcohol	ND	1.0	0.067	R	5A
		Benzyl butyl phthalate	ND	1.0	0.067	R	5A
		alpha-BHC	ND	1.0	0.067	R	5A
		beta-BHC	ND	1.0	0.075	R	5A
		delta-BHC	ND	1.0	0.067	R	5A
		gamma-BHC (Lindane)	ND	1.0	0.067	R	5A
		bis(2-Chloroethoxy)methane	ND	1.0	0.067	R	5A
		bis(2-Chloroethyl) ether	ND	1.0	0.097	R	5A
		bis(2-Chloroisopropyl)ether	ND	1.0	0.067	R	5A
		bis(2-Ethylhexyl)phthalate	ND	2.0	0.067	R	5A
		4-Bromophenyl phenyl ether	ND	1.0	0.067	R	5A
		4-Chloroaniline	ND	1.0	0.15	R	5A
		2-Chloronaphthalene	ND	1.0	0.067	R	5A
		4-Chlorophenyl phenyl ether	ND	1.0	0.067	R	5A
		Chrysene	ND	1.0	0.067	R	5A
		4,4'-DDD	ND	1.0	0.067	R	5A
		4,4'-DDE	ND	1.0	0.068	R	5A
		4,4'-DDT	ND	1.0	0.067	R	5A
		Dibenzo[a,h]anthracene	ND	1.0	0.067	R	5A
		Dibenzofuran	ND	1.0	0.067	R	5A
		1,2-Dichlorobenzene	ND	1.0	0.067	R	5A
		1,3-Dichlorobenzene	ND	1.0	0.067	R	5A
		1,4-Dichlorobenzene	ND	1.0	0.067	R	5A
		3,3-Dichlorobenzidine	ND	2.0	0.067	R	5A
		Dieldrin	ND	1.0	0.077	R	5A

TABLE 1. QUALIFIED DATA

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flag	Reason Code
EPA 8270C (mg/kg) (continued)							
VW-31-2	11/23/2020	Diethyl phthalate	ND	1.0	0.067	R	5A
(continued)		Dimethyl phthalate	ND	1.0	0.067	R	5A
		Di-n-butyl phthalate	ND	1.0	0.067	R	5A
		2,4-Dinitrotoluene	ND	1.0	0.085	R	5A
		2,6-Dinitrotoluene	ND	1.0	0.067	R	5A
		Di-n-octyl phthalate	ND	1.0	0.067	R	5A
		1,2-Diphenylhydrazine	ND	1.0	0.067	R	5A
		Endosulfan I	ND	2.0	0.088	R	5A
		Endosulfan II	ND	2.0	0.088	R	5A
		Endosulfan sulfate	ND	1.0	0.067	R	5A
		Endrin	ND	2.0	0.086	R	5A
		Endrin aldehyde	ND	5.0	0.070	R	5A
		Fluoranthene	ND	1.0	0.067	R	5A
		Fluorene	ND	1.0	0.067	R	5A
		Heptachlor	ND	1.0	0.067	R	5A
		Heptachlor epoxide	ND	1.0	0.13	R	5A
		Hexachlorobenzene	ND	1.0	0.067	R	5A
		Hexachlorobutadiene	ND	1.0	0.067	R	5A
		Hexachlorocyclopentadiene	ND	1.0	0.15	R	5A
		Hexachloroethane	ND	1.0	0.067	R	5A
		Indeno[1,2,3-cd]pyrene	ND	1.0	0.069	R	5A
		Isophorone	ND	1.0	0.067	R	5A
		2-Methylnaphthalene	ND	1.0	0.067	R	5A
		Naphthalene	ND	1.0	0.067	R	5A
		2-Naphthylamine	ND	30	0.36	R	5A,5B-
		2-Nitroaniline	ND	1.0	0.067	R	5A
		3-Nitroaniline	ND	2.0	0.067	R	5A
		4-Nitroaniline	ND	2.0	0.11	R	5A
		Nitrobenzene	ND	1.0	0.067	R	5A
		N-Nitrosodimethylamine	ND	1.0	0.40	R	5A
		N-Nitrosodi-N-propylamine	ND	1.0	0.067	R	5A
		N-Nitrosodiphenylamine	ND	1.0	0.067	R	5A
		Phenanthrene	ND	1.0	0.067	R	5A
		Pyrene	ND	1.0	0.067	R	5A
		1,2,4-Trichlorobenzene	ND	1.0	0.067	R	5A
		4-Chloro-3-methylphenol	ND	2.0	0.067	R	5A
		2-Chlorophenol	ND	1.0	0.067	R	5A
		2,4-Dichlorophenol	ND	1.0	0.067	R	5A
		2,4-Dimethylphenol	ND	1.0	0.067	R	5A
		4,6-Dinitro-2-methylphenol	ND	5.0	0.067	R	5A
		2,4-Dinitrophenol	ND	5.0	0.067	R	5A
		2-Methylphenol	ND	1.0	0.067	R	5A
		3- & 4-Methylphenol	ND	2.0	0.14	R	5A
		2-Nitrophenol	ND	1.0	0.067	R	5A
		4-Nitrophenol	ND	2.0	0.18	R	5A
		Pentachlorophenol	ND	2.0	0.17	R	5A
		Phenol	ND	1.0	0.067	R	5A

TABLE 1. QUALIFIED DATA

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flag	Reason Code
EPA 8270C (mg/kg) (continued)							
VW-31-2	11/23/2020	2,4,5-Trichlorophenol	ND	2.0	0.11	R	5A
(continued)		2,4,6-Trichlorophenol	ND	2.0	0.067	R	5A
VW-35-2	11/23/2020	Acenaphthene	ND	36	2.4	R	5A
		Acenaphthylene	ND	36	2.4	R	5A
		Aldrin	ND	36	2.4	R	5A
		Aniline	ND	72	4.0	R	5A
		Anthracene	ND	36	2.4	R	5A
		Benzidine	ND	1100	3.3	R	5A
		Benzo[a]anthracene	ND	36	2.8	R	5A
		Benzo[b]fluoranthene	ND	36	2.4	R	5A
		Benzo[k]fluoranthene	ND	36	3.0	R	5A
		Benzo[a]pyrene	ND	36	2.4	R	5A
		Benzo[g,h,i]perylene	ND	36	4.7	R	5A,5B-
		Benzoic acid	ND	180	5.0	R	5A
		Benzyl alcohol	ND	36	2.4	R	5A
		Benzyl butyl phthalate	ND	36	2.4	R	5A
		alpha-BHC	ND	36	2.4	R	5A
		beta-BHC	ND	36	2.7	R	5A
		delta-BHC	ND	36	2.4	R	5A
		gamma-BHC (Lindane)	ND	36	2.4	R	5A
		bis(2-Chloroethoxy)methane	ND	36	2.4	R	5A
		bis(2-Chloroethyl) ether	ND	36	3.5	R	5A
		bis(2-Chloroisopropyl)ether	ND	36	2.4	R	5A
		bis(2-Ethylhexyl)phthalate	ND	72	2.4	R	5A
		4-Bromophenyl phenyl ether	ND	36	2.4	R	5A
		4-Chloroaniline	ND	36	5.4	R	5A
		2-Chloronaphthalene	ND	36	2.4	R	5A
		4-Chlorophenyl phenyl ether	ND	36	2.4	R	5A
		Chrysene	ND	36	2.4	R	5A
		4,4'-DDD	ND	36	2.4	R	5A
		4,4'-DDE	ND	36	2.4	R	5A
		4,4'-DDT	ND	36	2.4	R	5A
		Dibenzo[a,h]anthracene	ND	36	2.4	R	5A
		Dibenzofuran	ND	36	2.4	R	5A
		1,2-Dichlorobenzene	ND	36	2.4	R	5A
		1,3-Dichlorobenzene	ND	36	2.4	R	5A
		1,4-Dichlorobenzene	ND	36	2.4	R	5A
		3,3-Dichlorobenzidine	ND	72	2.4	R	5A
		Dieldrin	ND	36	2.8	R	5A
		Diethyl phthalate	ND	36	2.4	R	5A
		Dimethyl phthalate	ND	36	2.4	R	5A
		Di-n-butyl phthalate	ND	36	2.4	R	5A
		2,4-Dinitrotoluene	ND	36	3.1	R	5A
		2,6-Dinitrotoluene	ND	36	2.4	R	5A
		Di-n-octyl phthalate	ND	36	2.4	R	5A
		1,2-Diphenylhydrazine	ND	36	2.4	R	5A
		Endosulfan I	ND	72	3.2	R	5A

TABLE 1. QUALIFIED DATA

Sample Name	Sample Date	Analyte	Result	PQL	MDL	EPA Flag	Reason Code
EPA 8270C (mg/kg) (continued)							
VW-35-2	11/23/2020	Endosulfan II	ND	72	3.2	R	5A
(continued)		Endosulfan sulfate	ND	36	2.4	R	5A
		Endrin	ND	72	3.1	R	5A
		Endrin aldehyde	ND	180	2.5	R	5A
		Fluoranthene	ND	36	2.4	R	5A
		Fluorene	ND	36	2.4	R	5A
		Heptachlor	ND	36	2.4	R	5A
		Heptachlor epoxide	ND	36	4.7	R	5A
		Hexachlorobenzene	ND	36	2.4	R	5A
		Hexachlorobutadiene	ND	36	2.4	R	5A
		Hexachlorocyclopentadiene	ND	36	5.4	R	5A
		Hexachloroethane	ND	36	2.4	R	5A
		Indeno[1,2,3-cd]pyrene	ND	36	2.5	R	5A
		Isophorone	ND	36	2.4	R	5A
		2-Methylnaphthalene	ND	36	2.4	R	5A
		Naphthalene	ND	36	2.4	R	5A
		2-Naphthylamine	ND	1,100	13	R	5A,5B-
		2-Nitroaniline	ND	36	2.4	R	5A
		3-Nitroaniline	ND	72	2.4	R	5A
		4-Nitroaniline	ND	72	4.0	R	5A
		Nitrobenzene	ND	36	2.4	R	5A
		N-Nitrosodimethylamine	ND	36	14	R	5A
		N-Nitrosodi-N-propylamine	ND	36	2.4	R	5A
		N-Nitrosodiphenylamine	ND	36	2.4	R	5A
		Phenanthrene	ND	36	2.4	R	5A
		Pyrene	ND	36	2.4	R	5A
		1,2,4-Trichlorobenzene	ND	36	2.4	R	5A
		4-Chloro-3-methylphenol	ND	72	2.4	R	5A
		2-Chlorophenol	ND	36	2.4	R	5A
		2,4-Dichlorophenol	ND	36	2.4	R	5A
		2,4-Dimethylphenol	ND	36	2.4	R	5A
		4,6-Dinitro-2-methylphenol	ND	180	2.4	R	5A
		2,4-Dinitrophenol	ND	180	2.4	R	5A
		2-Methylphenol	ND	36	2.4	R	5A
		3- & 4-Methylphenol	ND	72	5.0	R	5A
		2-Nitrophenol	ND	36	2.4	R	5A
		4-Nitrophenol	ND	72	6.5	R	5A
		Pentachlorophenol	ND	72	6.1	R	5A
		Phenol	ND	36	2.4	R	5A
		2,4,5-Trichlorophenol	ND	72	4.0	R	5A
		2,4,6-Trichlorophenol	ND	72	2.4	R	5A
TCLP/EPA 6010B (mg/L)							
VW-35-2	11/23/2020	Lead	0.052	0.50	0.03	J	6G

Notes:

BHC = benzenehexachloride (hexachlorocyclohexane)
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethene
DDT = dichlorodiphenyltrichloroethane
EPA = United States Environmental Protection Agency
FFP = Fuel Fingerprint total
MDL = method detection limit
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ND = not detected above the MDL
PCB = polychlorinated biphenyl
PQL = practical quantitation limit
TCLP = Toxicity Characteristic Leaching Procedure
TPH = total petroleum hydrocarbons

EPA Flags (U and J flags can be combined):

J = estimated concentration
J+ = estimated concentration; potential high bias
J- = estimated concentration; potential low bias
R = rejected
U = associated with external contamination
UJ = analyte not detected; estimated PQL and potential for false negative result at the PQL

Reason Codes:

1A = method blank contamination
2B+ = high matrix pike recovery
2B- = low matrix spike recovery
2C- = low surrogate spike recovery
2E+ = high post digestion spike recovery
3C = laboratory duplicate imprecision
3D = field duplicate imprecision
5A = initial calibration failed
5A- = low initial calibration verification recovery
5B- = low continuing calibration verification recovery
6G = detected between the PQL and MDL
6H = chromatographic pattern of the sample did not resemble the chromatographic pattern of the standard

Validated Soil Data Set

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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		Location ID	B08-E				B08-E				B08-EE				B08-EE				B08-3-E				B08-N				B08-N			
		Sampling Date/Time	06/29/2020 11:45				06/29/2020 11:55				07/20/2020 11:05				07/20/2020 11:20				08/07/2020 10:44				06/29/2020 10:50				06/29/2020 10:55			
		Sample Depth (feet)	1.5				3				1.5				3				1.5				1.5				1.5			
		Sample Type	N				N				N				N				N				N				FD			
		Field Sample ID	B08-E-1.5				B08-E-3				B08-EE-1.5				B08-EE-3				B08-3-E-1.5				B08-N-1.5				B08-N-1.5-FD			
		Lab Sample ID	2018704-11				2018704-12				2020984-09				2020984-10				2022938-03				2018704-08				2018704-09			
		Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**29**		0.17	0.50	**40**		0.17	0.50	**99**		0.17	0.50	**13**		0.17	0.50	**9.1**		0.17	0.50	**28**		0.17	0.50	**29**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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Location ID			B08-N-3				B08-NN				B08-3-N				B08-3-N				B08-S				B08-S				B08-SS			
Sampling Date/Time			06/29/2020 11:20				07/20/2020 10:45				08/07/2020 10:27				08/07/2020 10:27				06/29/2020 12:50				06/29/2020 13:35				07/20/2020 11:45			
Sample Depth (feet)			3				1.5				1.5				1.5				1.5				3				1.5			
Sample Type			N				N				N				FD				N				N				N			
Field Sample ID			B08-N-3				B08-NN-1.5				B08-3-N-1.5				B08-3-N-1.5-FD				B08-S-1.5				B08-S-3				B08-SS-1.5			
Lab Sample ID			2018704-10				2020984-08				2022938-01				2022938-02				2018704-13				2018704-14				2020984-11			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**5.7**		0.17	0.50	**30**		0.17	0.50	**39**		0.17	0.50	**42**		0.17	0.50	**54**		0.17	0.50	**9.1**		0.17	0.50	**24**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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Location ID			B08-3-S				B08-W				B08-W				KA-10-N				KA-10-N				KA-10-S				KA-10-S			
Sampling Date/Time			08/07/2020 11:01				06/29/2020 13:55				06/29/2020 14:30				06/29/2020 09:42				06/29/2020 09:50				06/29/2020 09:00				06/29/2020 09:30			
Sample Depth (feet)			1.5				1.5				3				1.5				3				1.5				3			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			B08-3-S-1.5				B08-W-1.5				B08-W-3				KA-10-N-1.5				KA-10-N-3				KA-10-S-1.5				KA-10-S-3			
Lab Sample ID			2022938-04				2018704-15				2018704-16				2018704-04				2018704-05				2018704-01				2018704-02			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**48**		0.17	0.50	**19**		0.17	0.50	**12**		0.17	0.50	**16**		0.17	0.50	**8.0**		0.17	0.50	**110**		0.17	0.50	**6.2**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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Location ID			KA-10-S				KA-10-SS				KA-10-3-S				KA-10-SW				KA-10-W				KA-10-W				KA-10-WW			
Sampling Date/Time			06/29/2020 09:35				07/20/2020 13:15				08/07/2020 11:48				07/20/2020 13:35				06/29/2020 10:00				06/29/2020 10:10				07/20/2020 13:50			
Sample Depth (feet)			3				1.5				1.5				1.5				1.5				3				1.5			
Sample Type			FD				N				N				N				N				N				N			
Field Sample ID			KA-10-S-3-FD				KA-10-SS-1.5				KA-10-3-S-1.5				KA-10-SW-1.5				KA-10-W-1.5				KA-10-W-3				KA-10-WW-1.5			
Lab Sample ID			2018704-03				2020984-04				2022938-09				2020984-03				2018704-06				2018704-07				2020984-01			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**5.5**		0.17	0.50	**38**		0.17	0.50	**16**		0.17	0.50	**21**		0.17	0.50	**35**		0.17	0.50	**3.9**		0.17	0.50	**14**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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Location ID			KA-10-WW				KA-17-E				KA-17-E				KA-17-N				KA-17-N				KA-17-NN				KA-17-3-N			
Sampling Date/Time			07/20/2020 13:55				06/30/2020 11:30				06/30/2020 11:40				06/30/2020 11:50				06/30/2020 11:55				07/20/2020 08:35				08/07/2020 09:04			
Sample Depth (feet)			1.5				1.5				3				1.5				3				1.5				1.5			
Sample Type			FD				N				N				N				N				N				N			
Field Sample ID			KA-10-WW-1.5-FD				KA-17-E-1.5				KA-17-E-3				KA-17-N-1.5				KA-17-N-3				KA-17-NN-1.5				KA-17-3-N-1.5			
Lab Sample ID			2020984-02				2018704-26				2018704-27				2018704-28				2018704-29				2020984-05				2022938-07			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**11**		0.17	0.50	**17**		0.17	0.50	**3.6**		0.17	0.50	**78**		0.17	0.50	**3.6**		0.17	0.50	**59**		0.17	0.50	**3.4**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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		Location ID	KA-17-3-NE				KA-17-4-NE				KA-17-NW				KA-17-3-NW				KA-17-W				KA-17-W				KA-17-WW			
		Sampling Date/Time	08/07/2020 09:21				08/28/2020 07:30				07/20/2020 09:20				08/07/2020 08:17				06/30/2020 12:15				06/30/2020 12:50				07/20/2020 09:40			
		Sample Depth (feet)	1.5				1.5				1.5				1.5				1.5				3				1.5			
		Sample Type	N				N				N				N				N				N				N			
		Field Sample ID	KA-17-3-NE-1.5				KA-17-4-NE-1.5				KA-17-NW-1.5				KA-17-3-NW-1.5				KA-17-W-1.5				KA-17-W-3				KA-17-WW-1.5			
		Lab Sample ID	2022938-08				2025110-01				2020984-06				2022938-06				2018704-30				2018704-31				2020984-07			
		Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**140**		0.17	0.50	**14**		0.17	0.50	**37**		0.17	0.50	**3.9**		0.17	0.50	**150**		0.17	0.50	**4.1**		0.17	0.50	**44**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			KA-17-3-W				KA-44-N				KA-44-N				KA-44-E				KA-44-E				KA-44-S				KA-44-S			
Sampling Date/Time			08/07/2020 08:41				06/30/2020 07:55				06/30/2020 08:10				06/30/2020 08:30				06/30/2020 08:40				06/30/2020 08:50				06/30/2020 09:00			
Sample Depth (feet)			1.5				1.5				3				1.5				3				1.5				3			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			KA-17-3-W-1.5				KA-44-N-1.5				KA-44-N-3				KA-44-E-1.5				KA-44-E-3				KA-44-S-1.5				KA-44-S-3			
Lab Sample ID			2022938-05				2018704-17				2018704-18				2018704-19				2018704-20				2018704-21				2018704-22			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**60**		0.17	0.50	**5.0**		0.17	0.50	**8.8**		0.17	0.50	**6.3**		0.17	0.50	**8.5**		0.17	0.50	**14**		0.17	0.50	**6.6**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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Location ID			KA-44-W				KA-44-W				KA-44-W				VW31				VW31				VW31				VW31			
Sampling Date/Time			06/30/2020 09:30				06/30/2020 09:35				06/30/2020 09:45				11/23/2020 14:48				02/23/2021 09:35				02/23/2021 09:40				02/23/2021 09:45			
Sample Depth (feet)			1.5				1.5				3				2				2				5				5			
Sample Type			N				FD				N				N				N				N				FD			
Field Sample ID			KA-44-W-1.5				KA-44-W-1.5-FD				KA-44-W-3				VW-31-2				VW-31-S-2				VW-31-S-5				VW-31-S-5-FD			
Lab Sample ID			2018704-23				2018704-24				2018704-25				2034585-02				2106339-14				2106339-11				2106339-12			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				**0.14**	**J 6G**	0.080	0.50	-				-				-			
Arsenic	SW6020	mg/kg	**4.4**		0.17	0.50	**4.6**		0.17	0.50	**9.5**		0.17	0.50	**26**		0.17	0.50	**150**		0.17	0.50	**6.0**		0.17	0.50	**6.0**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				**120**		0.054	0.25	-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				**0.33**		0.041	0.25	-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				ND		0.048	0.25	-				-				-			
Chromium	SW6020	mg/kg	-				-				-				**29**		0.25	0.75	-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				**7.9**		0.049	0.25	-				-				-			
Copper	SW6020	mg/kg	-				-				-				**22**		0.099	0.50	-				-				-			
Lead	SW6020	mg/kg	-				-				-				**10**		0.12	0.25	-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				0.12	UJ 1A	0.016	0.16	-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				**0.46**		0.045	0.25	-				-				-			
Nickel	SW6020	mg/kg	-				-				-				**25**		0.11	0.50	-				-				-			
Selenium	SW6020	mg/kg	-				-				-				ND		0.11	0.50	-				-				-			
Silver	SW6020	mg/kg	-				-				-				**0.077**	**J 6G**	0.051	0.25	-				-				-			
Thallium	SW6020	mg/kg	-				-				-				**0.13**	**J 6G**	0.049	0.25	-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				**44**		0.27	0.75	-				-				-			
Zinc	SW6020	mg/kg	-				-				-				**46**		0.50	2.5	-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			VW35				VW35-E				VW35-E				VW35-N				VW35-N				VW35-N				VW35-NN			
Sampling Date/Time			11/23/2020 14:25				02/22/2021 14:30				02/22/2021 14:40				02/22/2021 11:20				02/22/2021 11:55				02/22/2021 13:35				02/24/2021 14:10			
Sample Depth (feet)			2				2				5				2				5				7.5				2			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			VW-35-2				VW-35-E-2				VW-35-E-5				VW-35-N-2				VW-35-N-5				VW-35-N-7.5				VW-35-NN-2			
Lab Sample ID			2034585-01				2106339-04				2106339-05				2106339-01				2106339-02				2106339-03				2106339-29			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	**0.52**	**J- 2B-**	0.080	0.50	-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**46**		0.17	0.50	**50**		0.17	0.50	**8.1**		0.17	0.50	**44**		0.17	0.50	**180**		0.17	0.50	**8.4**		0.17	0.50	**100**		0.17	0.50
Barium	SW6020	mg/kg	**170**	**J- 2B-**	0.054	0.25	-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	**0.33**	**J 3C**	0.041	0.25	-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	**0.22**	**J 6G**	0.048	0.25	-				-				-				-				-				-			
Chromium	SW6020	mg/kg	**33**	**J- 2B-**	0.25	0.75	-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	**8.1**		0.049	0.25	-				-				-				-				-				-			
Copper	SW6020	mg/kg	**53**	**J 2B-, 2B+**	0.099	0.50	-				-				-				-				-				-			
Lead	SW6020	mg/kg	**120**		0.12	0.25	**13**		0.12	0.25	**10**		0.12	0.25	**130**		0.12	0.25	**10**		0.12	0.25	**7.7**		0.12	0.25	**55**		0.12	0.25
Mercury	SW7471A	mg/kg	**0.21**	**J+ 1A**	0.016	0.16	-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	**0.61**		0.045	0.25	-				-				-				-				-				-			
Nickel	SW6020	mg/kg	**29**		0.11	0.50	-				-				-				-				-				-			
Selenium	SW6020	mg/kg	ND		0.11	0.50	-				-				-				-				-				-			
Silver	SW6020	mg/kg	**0.093**	**J 6G**	0.051	0.25	-				-				-				-				-				-			
Thallium	SW6020	mg/kg	**0.090**	**J 6G**	0.049	0.25	-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	**38**	**J- 2B-**	0.27	0.75	-				-				-				-				-				-			
Zinc	SW6020	mg/kg	**170**		0.50	2.5	-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	**7.6**		0.50	0.16	-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	**0.052**	**J 6G**	0.50	0.030	-				-				-				-				-				-			

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Location ID			VW35-NN				VW35-S				VW35-S				VW35-S				VW35-SS				VW35-SS				VW35-SS			
Sampling Date/Time			02/24/2021 14:15				02/23/2021 07:55				02/23/2021 08:05				02/23/2021 08:10				02/24/2021 12:55				02/24/2021 13:10				02/24/2021 13:15			
Sample Depth (feet)			5				2				5				5				2				5				5			
Sample Type			N				N				N				FD				N				N				FD			
Field Sample ID			VW-35-NN-5				VW-35-S-2				VW-35-S-5				VW-35-S-5-FD				VW-35-SS-2				VW-35-SS-5				VW-35-SS-5-FD			
Lab Sample ID			2106339-30				2106339-08				2106339-09				2106339-10				2106339-26				2106339-27				2106339-28			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**4.4**		0.17	0.50	**280**		0.17	0.50	**8.5**		0.17	0.50	**6.6**		0.17	0.50	**94**		0.17	0.50	**4.3**		0.17	0.50	**4.1**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	**6.8**		0.12	0.25	**13**		0.12	0.25	**6.5**		0.12	0.25	**6.7**		0.12	0.25	**7.9**		0.12	0.25	**6.6**		0.12	0.25	**6.5**		0.12	0.25
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			VW35-W				VW35-W				VW56				VW57				WB01				WB01				WB01			
Sampling Date/Time			02/22/2021 16:05				02/22/2021 16:15				12/21/2020 11:35				12/21/2020 11:10				12/22/2020 08:15				12/22/2020 08:40				12/22/2020 08:40			
Sample Depth (feet)			2				5				1.5				1.5				1.5*				0.5				0.5			
Sample Type			N				N				N				N				N				N				FD			
Field Sample ID			VW-35-W-2				VW-35-W-5				VW56-1.5				VW57-1.5				WB01-Dock				WB01-0.5				WB01-0.5-FD			
Lab Sample ID			2106339-06				2106339-07				2037454-02				2037454-01				2037618-02				2037618-01				2037618-03			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**61**		0.17	0.50	**4.4**		0.17	0.50	**5.7**		0.85	2.5	**30**		0.85	2.5	**19**		0.17	0.50	**8.2**	**J 3D**	0.17	0.50	**12**	**J 3D**	0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	**11**		0.12	0.25	**6.6**		0.12	0.25	-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			WB01A				WB02				WB02				WB03				WB04				WB05				WB05			
Sampling Date/Time			12/22/2020 12:30				12/22/2020 11:40				12/22/2020 11:45				12/22/2020 11:10				12/22/2020 11:15				12/22/2020 10:05				12/22/2020 10:15			
Sample Depth (feet)			1.5				1.5*				0.5				1.5				1.5				1.5				5			
Sample Type			N				N				N				N				N				N				N			
Field Sample ID			WB01A-1.5				WB02-Dock				WB02-0.5				WB03-1.5				WB04-1.5				WB05-1.5				WB05-5			
Lab Sample ID			2037618-15				2037618-13				2037618-14				2037618-11				2037618-12				2037618-09				2037618-10			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**8.8**		0.17	0.50	**4.3**		0.17	0.50	**3.7**		0.17	0.50	**4.2**		0.17	0.50	**3.9**		0.17	0.50	**4.4**		0.17	0.50	**4.0**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			WB06				WB06				WB06				WB07				WB07				WB08				WB08			
Sampling Date/Time			12/22/2020 09:45				12/22/2020 09:55				12/22/2020 09:55				12/22/2020 09:10				12/22/2020 09:40				02/23/2021 11:05				02/23/2021 11:25			
Sample Depth (feet)			1.5				5				5				1.5				5				1.5*				1.5			
Sample Type			N				N				FD				N				N				N				N			
Field Sample ID			WB06-1.5				WB06-5				WB06-5FD				WB07-1.5-MS/MSD				WB07-5				WB08-DOCK				WB08-1.5			
Lab Sample ID			2037618-06				2037618-07				2037618-08				2037618-04				2037618-05				2106339-13				2106339-15			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**9.2**		0.17	0.50	**70**	**J 3D**	0.17	0.50	**39**	**J 3D**	0.17	0.50	**7.2**		0.17	0.50	**170**		0.17	0.50	**6.4**		0.17	0.50	**12**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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Location ID			WB09				WB09				WB10				WB10				WB11				WB11				WB11			
Sampling Date/Time			02/23/2021 14:05				02/23/2021 14:10				02/23/2021 15:10				02/23/2021 15:15				02/24/2021 08:30				02/24/2021 08:35				02/24/2021 08:40			
Sample Depth (feet)			1.5*				1.5				7.5				10				5				5				7.5			
Sample Type			N				N				N				N				N				FD				N			
Field Sample ID			WB09-DOCK				WB09-1.5				WB10-7.5				WB10-10				WB11-5				WB11-5-FD				WB11-7.5			
Lab Sample ID			2106339-16				2106339-17				2106339-18				2106339-19				2106339-20				2106339-31				2106339-21			
Status			*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-				-				-				-			
Arsenic	SW6020	mg/kg	**4.2**		0.17	0.50	**4.4**		0.17	0.50	**65**		0.17	0.50	**55**		0.17	0.50	**4.3**		0.17	0.50	**4.1**		0.17	0.50	**5.8**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-				-				-				-			

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		Location ID	WB11				WB12				WB12				WB12			
		Sampling Date/Time	02/24/2021 08:50				02/24/2021 09:25				02/24/2021 09:30				02/24/2021 09:40			
		Sample Depth (feet)	10				5				7.5				10			
		Sample Type	N				N				N				N			
		Field Sample ID	WB11-10				WB12-5				WB12-7.5				WB12-10			
		Lab Sample ID	2106339-22				2106339-23				2106339-24				2106339-25			
		Status	*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Antimony	SW6020	mg/kg	-				-				-				-			
Arsenic	SW6020	mg/kg	**3.1**		0.17	0.50	**15**		0.17	0.50	**6.7**		0.17	0.50	**3.6**		0.17	0.50
Barium	SW6020	mg/kg	-				-				-				-			
Beryllium	SW6020	mg/kg	-				-				-				-			
Cadmium	SW6020	mg/kg	-				-				-				-			
Chromium	SW6020	mg/kg	-				-				-				-			
Cobalt	SW6020	mg/kg	-				-				-				-			
Copper	SW6020	mg/kg	-				-				-				-			
Lead	SW6020	mg/kg	-				-				-				-			
Mercury	SW7471A	mg/kg	-				-				-				-			
Molybdenum	SW6020	mg/kg	-				-				-				-			
Nickel	SW6020	mg/kg	-				-				-				-			
Selenium	SW6020	mg/kg	-				-				-				-			
Silver	SW6020	mg/kg	-				-				-				-			
Thallium	SW6020	mg/kg	-				-				-				-			
Vanadium	SW6020	mg/kg	-				-				-				-			
Zinc	SW6020	mg/kg	-				-				-				-			
Lead	STLC/SW6010B	mg/L	-				-				-				-			
Lead	TCLP/SW6010B	mg/L	-				-				-				-			

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		Location ID	VW31				VW35			
		Sampling Date/Time	11/23/2020 14:48				11/23/2020 14:25			
		Sample Depth (feet)	2				2			
		Sample Type	N				N			
		Field Sample ID	VW-31-2				VW-35-2			
		Lab Sample ID	2034585-02				2034585-01			
		Status	*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
PCB-1016	SW8082	mg/kg	ND		0.010	0.0023	ND	UJ 2C-	0.012	0.050
PCB-1221	SW8082	mg/kg	ND		0.010	0.0033	ND	UJ 2C-	0.016	0.050
PCB-1232	SW8082	mg/kg	ND		0.010	0.0026	ND	UJ 2C-	0.013	0.050
PCB-1242	SW8082	mg/kg	ND		0.010	0.0015	ND	UJ 2C-	0.0075	0.050
PCB-1248	SW8082	mg/kg	ND		0.010	0.0021	ND	UJ 2C-	0.010	0.050
PCB-1254	SW8082	mg/kg	ND		0.010	0.0016	ND	UJ 2C-	0.0080	0.050
PCB-1260	SW8082	mg/kg	**0.0077**	**J 6G**	0.010	0.0018	**0.035**	**J- 2C-, 6G**	0.0090	0.050
Total PCB's (Summation)	SW8082	mg/kg	**0.0077**	**J 6G**	0.010	0.0050	**0.035**	**J- 2C-, 6G**	0.025	0.050

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			Location ID					VW31					VW35					VW35-E					VW35-E					VW35-N					VW35-N			
			Sampling Date/Time					11/23/2020 14:48					11/23/2020 14:25					02/22/2021 14:30					02/22/2021 14:40					02/22/2021 11:20					02/22/2021 11:55			
			Sample Depth (feet)					2					2					2					5					2					5			
			Sample Type					N					N					N					N					N					N			
			Field Sample ID					VW-31-2					VW-35-2					VW-35-E-2					VW-35-E-5					VW-35-N-2					VW-35-N-5			
			Lab Sample ID					2034585-02					2034585-01					2106339-04					2106339-05					2106339-01					2106339-02			
			Status					*Validated*					*Validated*					*Validated*					*Validated*					*Validated*					*Validated*			
Analyte		Method		Units	Result		QA Reason	MDL	PQL	Result		QA Reason	MDL	PQL	Result		QA Reason	MDL	PQL	Result		QA Reason	MDL	PQL	Result		QA Reason	MDL	PQL	Result		QA Reason	MDL	PQL
TPH - Light Naptha		SW8015/FFP		mg/kg	ND			20	50	ND			2,300	5,800	ND			100	250	ND			100	250	ND			560	1,400	ND			20	50
TPH - Aviation Gas		SW8015/FFP		mg/kg	ND			20	50	ND			2,300	5,800	ND			100	250	ND			100	250	ND			560	1,400	ND			20	50
TPH - Stoddard Solvent		SW8015/FFP		mg/kg	ND			5.0	20	ND			580	2,300	ND			25	100	ND			25	100	ND			140	560	ND			5.0	20
TPH - Heavy Naptha		SW8015/FFP		mg/kg	ND			5.0	10	ND			580	1,200	ND			25	50	ND			25	50	ND			140	280	ND			5.0	10
TPH - Gasoline		SW8015/FFP		mg/kg	ND			5.0	20	ND			580	2,300	ND			25	100	ND			25	100	ND			140	560	ND			5.0	20
TPH - Jet Fuel (JP4)		SW8015/FFP		mg/kg	ND			5.0	10	ND			580	1,200	ND			25	50	ND			25	50	ND			140	280	ND			5.0	10
TPH - Jet Fuel (JP5)		SW8015/FFP		mg/kg	ND			4.6	10	ND			530	1,200	ND			23	50	ND			23	50	ND			130	280	ND			4.6	10
TPH - Jet Fuel (JP8)		SW8015/FFP		mg/kg	ND			5.0	10	ND			580	1,200	ND			25	50	ND			25	50	ND			140	280	ND			5.0	10
TPH - Kerosene		SW8015/FFP		mg/kg	ND			1.4	10	ND			160	1,200	ND			7.0	50	ND			7.0	50	ND			39	280	ND			1.4	10
TPH - Diesel (FFP)		SW8015/FFP		mg/kg	**6.3**		**J 6G, 6H**	2.2	10	**630**		**J 6G, 6H**	250	1,200	ND			11	50	ND			11	50	**280**		**J 6H**	61	280	ND			2.2	10
TPH - Fuel Oil #6		SW8015/FFP		mg/kg	ND			5.0	10	ND			580	1,200	ND			25	50	ND			25	50	ND			140	280	ND			5.0	10
TPH - Crude Oil		SW8015/FFP		mg/kg	ND			2.8	20	ND			320	2,300	ND			14	100	ND			14	100	ND			78	560	ND			2.8	20
TPH - Hydraulic Oil / Motor Oil		SW8015/FFP		mg/kg	**29**		**J 6H**	7.0	20	**3,500**		**J 6H**	810	2,300	**960**		**J 6H**	35	100	**400**		**J 6H**	35	100	**6,000**		**J 6H**	190	560	**83**		**J 6H**	7.0	20
TPH - WD-40		SW8015/FFP		mg/kg	ND			5.0	10	ND			580	1,200	ND			25	50	ND			25	50	ND			140	280	ND			5.0	10

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			Location ID	VW35-N				VW35-NN				VW35-NN				VW35-S				VW35-S				VW35-S				VW35-SS			
			Sampling Date/Time	02/22/2021 13:35				02/24/2021 14:10				02/24/2021 14:15				02/23/2021 07:55				02/23/2021 08:05				02/23/2021 08:10				02/24/2021 12:55			
			Sample Depth (feet)	7.5				2				5				2				5				5				2			
			Sample Type	N				N				N				N				N				FD				N			
			Field Sample ID	VW-35-N-7.5				VW-35-NN-2				VW-35-NN-5				VW-35-S-2				VW-35-S-5				VW-35-S-5-FD				VW-35-SS-2			
			Lab Sample ID	2106339-03				2106339-29				2106339-30				2106339-08				2106339-09				2106339-10				2106339-26			
			Status	*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
TPH - Light Naptha	SW8015/FFP	mg/kg	ND		20	50	ND		100	250	ND		20	50	ND		100	250	ND		20	50	ND		20	50	ND		20	50
TPH - Aviation Gas	SW8015/FFP	mg/kg	ND		20	50	ND		100	250	ND		20	50	ND		100	250	ND		20	50	ND		20	50	ND		20	50
TPH - Stoddard Solvent	SW8015/FFP	mg/kg	ND		5.0	20	ND		25	100	ND		5.0	20	ND		25	100	ND		5.0	20	ND		5.0	20	ND		5.0	20
TPH - Heavy Naptha	SW8015/FFP	mg/kg	ND		5.0	10	ND		25	50	ND		5.0	10	ND		25	50	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Gasoline	SW8015/FFP	mg/kg	ND		5.0	20	ND		25	100	ND		5.0	20	ND		25	100	ND		5.0	20	ND		5.0	20	ND		5.0	20
TPH - Jet Fuel (JP4)	SW8015/FFP	mg/kg	ND		5.0	10	ND		25	50	ND		5.0	10	ND		25	50	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Jet Fuel (JP5)	SW8015/FFP	mg/kg	ND		4.6	10	ND		23	50	ND		4.6	10	ND		23	50	ND		4.6	10	ND		4.6	10	ND		4.6	10
TPH - Jet Fuel (JP8)	SW8015/FFP	mg/kg	ND		5.0	10	ND		25	50	ND		5.0	10	ND		25	50	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Kerosene	SW8015/FFP	mg/kg	ND		1.4	10	ND		7.0	50	ND		1.4	10	ND		7.0	50	ND		1.4	10	ND		1.4	10	ND		1.4	10
TPH - Diesel (FFP)	SW8015/FFP	mg/kg	ND		2.2	10	ND		11	50	ND		2.2	10	ND		11	50	ND		2.2	10	ND		2.2	10	ND		2.2	10
TPH - Fuel Oil #6	SW8015/FFP	mg/kg	ND		5.0	10	ND		25	50	ND		5.0	10	ND		25	50	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Crude Oil	SW8015/FFP	mg/kg	ND		2.8	20	ND		14	100	ND		2.8	20	ND		14	100	ND		2.8	20	ND		2.8	20	ND		2.8	20
TPH - Hydraulic Oil / Motor Oil	SW8015/FFP	mg/kg	**28**	**J 6H**	7.0	20	**130**	**J 6H**	35	100	**8.5**	**J 6G, 6H**	7.0	20	**380**	**J 6H**	35	100	**14**	**J 3D, 6G, 6H**	7.0	20	**27**	**J 3D, 6H**	7.0	20	ND		7.0	20
TPH - WD-40	SW8015/FFP	mg/kg	ND		5.0	10	ND		25	50	ND		5.0	10	ND		25	50	ND		5.0	10	ND		5.0	10	ND		5.0	10

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		Location ID	VW35-SS				VW35-SS				VW35-W				VW35-W			
		Sampling Date/Time	02/24/2021 13:10				02/24/2021 13:15				02/22/2021 16:05				02/22/2021 16:15			
		Sample Depth (feet)	5				5				2				5			
		Sample Type	N				FD				N				N			
		Field Sample ID	VW-35-SS-5				VW-35-SS-5-FD				VW-35-W-2				VW-35-W-5			
		Lab Sample ID	2106339-27				2106339-28				2106339-06				2106339-07			
		Status	*Validated*				*Validated*				*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
TPH - Light Naptha	SW8015/FFP	mg/kg	ND		20	50	ND		20	50	ND		20	50	ND		20	50
TPH - Aviation Gas	SW8015/FFP	mg/kg	ND		20	50	ND		20	50	ND		20	50	ND		20	50
TPH - Stoddard Solvent	SW8015/FFP	mg/kg	ND		5.0	20	ND		5.0	20	ND		5.0	20	ND		5.0	20
TPH - Heavy Naptha	SW8015/FFP	mg/kg	ND		5.0	10	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Gasoline	SW8015/FFP	mg/kg	ND		5.0	20	ND		5.0	20	ND		5.0	20	ND		5.0	20
TPH - Jet Fuel (JP4)	SW8015/FFP	mg/kg	ND		5.0	10	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Jet Fuel (JP5)	SW8015/FFP	mg/kg	ND		4.6	10	ND		4.6	10	ND		4.6	10	ND		4.6	10
TPH - Jet Fuel (JP8)	SW8015/FFP	mg/kg	ND		5.0	10	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Kerosene	SW8015/FFP	mg/kg	ND		1.4	10	ND		1.4	10	ND		1.4	10	ND		1.4	10
TPH - Diesel (FFP)	SW8015/FFP	mg/kg	ND		2.2	10	ND		2.2	10	ND		2.2	10	ND		2.2	10
TPH - Fuel Oil #6	SW8015/FFP	mg/kg	ND		5.0	10	ND		5.0	10	ND		5.0	10	ND		5.0	10
TPH - Crude Oil	SW8015/FFP	mg/kg	ND		2.8	20	ND		2.8	20	ND		2.8	20	ND		2.8	20
TPH - Hydraulic Oil / Motor Oil	SW8015/FFP	mg/kg	ND		7.0	20	ND		7.0	20	ND		7.0	20	**9.1**	**J 6G, 6H**	7.0	20
TPH - WD-40	SW8015/FFP	mg/kg	ND		5.0	10	ND		5.0	10	ND		5.0	10	ND		5.0	10

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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		Location ID	VW31				VW35			
		Sampling Date/Time	11/23/2020 14:48				11/23/2020 14:25			
		Sample Depth (feet)	2				2			
		Sample Type	N				N			
		Field Sample ID	VW-31-2				VW-35-2			
		Lab Sample ID	2034585-02				2034585-01			
		Status	*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Benzene	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050
Bromobenzene	SW8260B	mg/kg	ND		0.00087	0.0050	ND		0.00087	0.0050
Bromochloromethane	SW8260B	mg/kg	ND		0.00081	0.0050	ND		0.00081	0.0050
Bromodichloromethane	SW8260B	mg/kg	ND		0.00078	0.0050	ND		0.00078	0.0050
Bromoform	SW8260B	mg/kg	ND		0.00070	0.0050	ND		0.00070	0.0050
Bromomethane	SW8260B	mg/kg	ND		0.0017	0.0050	ND		0.0017	0.0050
n-Butylbenzene	SW8260B	mg/kg	ND		0.00076	0.0050	ND		0.00076	0.0050
sec-Butylbenzene	SW8260B	mg/kg	ND		0.00071	0.0050	ND		0.00071	0.0050
tert-Butylbenzene	SW8260B	mg/kg	ND		0.00085	0.0050	ND		0.00085	0.0050
Carbon tetrachloride	SW8260B	mg/kg	ND		0.00078	0.0050	ND		0.00078	0.0050
Chlorobenzene	SW8260B	mg/kg	ND		0.00077	0.0050	ND		0.00077	0.0050
Chloroethane	SW8260B	mg/kg	ND		0.0011	0.0050	ND		0.0011	0.0050
Chloroform	SW8260B	mg/kg	ND		0.00090	0.0050	ND		0.00090	0.0050
Chloromethane	SW8260B	mg/kg	ND		0.0011	0.0050	ND		0.0011	0.0050
2-Chlorotoluene	SW8260B	mg/kg	ND		0.00087	0.0050	ND		0.00087	0.0050
4-Chlorotoluene	SW8260B	mg/kg	ND		0.00070	0.0050	ND		0.00070	0.0050
Dibromochloromethane	SW8260B	mg/kg	ND		0.00080	0.0050	ND		0.00080	0.0050
1,2-Dibromo-3-chloropropane	SW8260B	mg/kg	ND		0.00096	0.0050	ND		0.00096	0.0050
1,2-Dibromoethane	SW8260B	mg/kg	ND		0.00082	0.0050	ND		0.00082	0.0050
Dibromomethane	SW8260B	mg/kg	ND		0.0014	0.0050	ND		0.0014	0.0050
1,2-Dichlorobenzene	SW8260B	mg/kg	ND		0.00079	0.0050	ND		0.00079	0.0050
1,3-Dichlorobenzene	SW8260B	mg/kg	ND		0.00073	0.0050	ND		0.00073	0.0050
1,4-Dichlorobenzene	SW8260B	mg/kg	ND		0.00073	0.0050	ND		0.00073	0.0050
Dichlorodifluoromethane	SW8260B	mg/kg	ND	UJ 5A-	0.00079	0.0050	ND	UJ 5A-	0.00079	0.0050
1,1-Dichloroethane	SW8260B	mg/kg	ND		0.00064	0.0050	ND		0.00064	0.0050
1,2-Dichloroethane	SW8260B	mg/kg	ND		0.00073	0.0050	ND		0.00073	0.0050
1,1-Dichloroethene	SW8260B	mg/kg	ND	UJ 5A-	0.0011	0.0050	ND	UJ 5A-	0.0011	0.0050
cis-1,2-Dichloroethene	SW8260B	mg/kg	ND		0.00054	0.0050	ND		0.00054	0.0050
trans-1,2-Dichloroethene	SW8260B	mg/kg	ND		0.0037	0.0050	ND		0.0037	0.0050
Total 1,2-Dichloroethene	SW8260B	mg/kg	ND		0.0043	0.010	ND		0.0043	0.010
1,2-Dichloropropane	SW8260B	mg/kg	ND		0.00080	0.0050	ND		0.00080	0.0050
1,3-Dichloropropane	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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		Location ID	VW31				VW35			
		Sampling Date/Time	11/23/2020 14:48				11/23/2020 14:25			
		Sample Depth (feet)	2				2			
		Sample Type	N				N			
		Field Sample ID	VW-31-2				VW-35-2			
		Lab Sample ID	2034585-02				2034585-01			
		Status	*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
2,2-Dichloropropane	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050
1,1-Dichloropropene	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050
cis-1,3-Dichloropropene	SW8260B	mg/kg	ND		0.00058	0.0050	ND		0.00058	0.0050
trans-1,3-Dichloropropene	SW8260B	mg/kg	ND		0.00066	0.0050	ND		0.00066	0.0050
Total 1,3-Dichloropropene	SW8260B	mg/kg	ND		0.0013	0.010	ND		0.0013	0.010
Ethylbenzene	SW8260B	mg/kg	ND		0.00069	0.0050	ND		0.00069	0.0050
Hexachlorobutadiene	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050
Isopropylbenzene	SW8260B	mg/kg	ND		0.00080	0.0050	ND		0.00080	0.0050
p-Isopropyltoluene	SW8260B	mg/kg	ND		0.00059	0.0050	ND		0.00059	0.0050
Methylene chloride	SW8260B	mg/kg	ND		0.0011	0.010	ND		0.0011	0.010
Methyl t-butyl ether	SW8260B	mg/kg	ND		0.00056	0.0050	ND		0.00056	0.0050
Naphthalene	SW8260B	mg/kg	ND		0.00099	0.0050	ND		0.00099	0.0050
n-Propylbenzene	SW8260B	mg/kg	ND		0.00071	0.0050	ND		0.00071	0.0050
Styrene	SW8260B	mg/kg	ND		0.00062	0.0050	ND		0.00062	0.0050
1,1,1,2-Tetrachloroethane	SW8260B	mg/kg	ND		0.00095	0.0050	ND		0.00095	0.0050
1,1,2,2-Tetrachloroethane	SW8260B	mg/kg	ND		0.00084	0.0050	ND		0.00084	0.0050
Tetrachloroethene	SW8260B	mg/kg	ND		0.00097	0.0050	**0.0017**	**J 6G**	0.00097	0.0050
Toluene	SW8260B	mg/kg	ND		0.00069	0.0050	ND		0.00069	0.0050
1,2,3-Trichlorobenzene	SW8260B	mg/kg	ND		0.0015	0.0050	ND		0.0015	0.0050
1,2,4-Trichlorobenzene	SW8260B	mg/kg	ND		0.0014	0.0050	ND		0.0014	0.0050
1,1,1-Trichloroethane	SW8260B	mg/kg	ND		0.00067	0.0050	ND		0.00067	0.0050
1,1,2-Trichloroethane	SW8260B	mg/kg	ND		0.00094	0.0050	ND		0.00094	0.0050
Trichloroethene	SW8260B	mg/kg	ND		0.00074	0.0050	ND		0.00074	0.0050
Trichlorofluoromethane	SW8260B	mg/kg	ND		0.0015	0.0050	ND		0.0015	0.0050
1,2,3-Trichloropropane	SW8260B	mg/kg	ND		0.0019	0.0050	ND		0.0019	0.0050
1,1,2-Trichloro-1,2,2-trifluoroethane	SW8260B	mg/kg	ND		0.0010	0.0050	ND		0.0010	0.0050
1,2,4-Trimethylbenzene	SW8260B	mg/kg	ND		0.00080	0.0050	ND		0.00080	0.0050
1,3,5-Trimethylbenzene	SW8260B	mg/kg	ND		0.00066	0.0050	ND		0.00066	0.0050
Vinyl chloride	SW8260B	mg/kg	ND		0.00059	0.0050	ND		0.00059	0.0050
Total Purgeable Petroleum Hydrocarbons	LUFT GC/MS	mg/kg	ND		0.058	0.20	ND		0.058	0.20

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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	Location ID		VW31				VW35			
	Sampling Date/Time		11/23/2020 14:48				11/23/2020 14:25			
	Sample Depth (feet)		2				2			
	Sample Type		N				N			
	Field Sample ID		VW-31-2				VW-35-2			
	Lab Sample ID		2034585-02				2034585-01			
	Status		*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
Acenaphthene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Acenaphthylene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Aldrin	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Aniline	SW8270C	mg/kg	ND	R 5A	0.11	2.0	ND	R 5A	4.0	72
Anthracene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Benzidine	SW8270C	mg/kg	ND	R 5A	0.093	30	ND	R 5A	3.3	1,100
Benzo[a]anthracene	SW8270C	mg/kg	ND	R 5A	0.077	1.0	ND	R 5A	2.8	36
Benzo[b]fluoranthene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Benzo[k]fluoranthene	SW8270C	mg/kg	ND	R 5A	0.082	1.0	ND	R 5A	3.0	36
Benzo[a]pyrene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Benzo[g,h,i]perylene	SW8270C	mg/kg	ND	R 5A, 5B-	0.13	1.0	ND	R 5A, 5B-	4.7	36
Benzoic acid	SW8270C	mg/kg	ND	R 5A	0.14	5.0	ND	R 5A	5.0	180
Benzyl alcohol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Benzyl butyl phthalate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
alpha-BHC	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
beta-BHC	SW8270C	mg/kg	ND	R 5A	0.075	1.0	ND	R 5A	2.7	36
delta-BHC	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
gamma-BHC (Lindane)	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
bis(2-Chloroethoxy)methane	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
bis(2-Chloroethyl) ether	SW8270C	mg/kg	ND	R 5A	0.097	1.0	ND	R 5A	3.5	36
bis(2-Chloroisopropyl)ether	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
bis(2-Ethylhexyl)phthalate	SW8270C	mg/kg	ND	R 5A	0.067	2.0	ND	R 5A	2.4	72
4-Bromophenyl phenyl ether	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4-Chloroaniline	SW8270C	mg/kg	ND	R 5A	0.15	1.0	ND	R 5A	5.4	36
2-Chloronaphthalene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4-Chlorophenyl phenyl ether	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Chrysene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4,4'-DDD	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4,4'-DDE	SW8270C	mg/kg	ND	R 5A	0.068	1.0	ND	R 5A	2.4	36
4,4'-DDT	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Dibenzo[a,h]anthracene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Dibenzofuran	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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		Location ID	VW31				VW35			
		Sampling Date/Time	11/23/2020 14:48				11/23/2020 14:25			
		Sample Depth (feet)	2				2			
		Sample Type	N				N			
		Field Sample ID	VW-31-2				VW-35-2			
		Lab Sample ID	2034585-02				2034585-01			
		Status	*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
1,2-Dichlorobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
1,3-Dichlorobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
1,4-Dichlorobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
3,3-Dichlorobenzidine	SW8270C	mg/kg	ND	R 5A	0.067	2.0	ND	R 5A	2.4	72
Dieldrin	SW8270C	mg/kg	ND	R 5A	0.077	1.0	ND	R 5A	2.8	36
Diethyl phthalate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Dimethyl phthalate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Di-n-butyl phthalate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2,4-Dinitrotoluene	SW8270C	mg/kg	ND	R 5A	0.085	1.0	ND	R 5A	3.1	36
2,6-Dinitrotoluene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Di-n-octyl phthalate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
1,2-Diphenylhydrazine	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Endosulfan I	SW8270C	mg/kg	ND	R 5A	0.088	2.0	ND	R 5A	3.2	72
Endosulfan II	SW8270C	mg/kg	ND	R 5A	0.088	2.0	ND	R 5A	3.2	72
Endosulfan sulfate	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Endrin	SW8270C	mg/kg	ND	R 5A	0.086	2.0	ND	R 5A	3.1	72
Endrin aldehyde	SW8270C	mg/kg	ND	R 5A	0.070	5.0	ND	R 5A	2.5	180
Fluoranthene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Fluorene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Heptachlor	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Heptachlor epoxide	SW8270C	mg/kg	ND	R 5A	0.13	1.0	ND	R 5A	4.7	36
Hexachlorobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Hexachlorobutadiene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Hexachlorocyclopentadiene	SW8270C	mg/kg	ND	R 5A	0.15	1.0	ND	R 5A	5.4	36
Hexachloroethane	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Indeno[1,2,3-cd]pyrene	SW8270C	mg/kg	ND	R 5A	0.069	1.0	ND	R 5A	2.5	36
Isophorone	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2-Methylnaphthalene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Naphthalene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2-Naphthylamine	SW8270C	mg/kg	ND	R 5A, 5B-	0.36	30	ND	R 5A, 5B-	13	1,100
2-Nitroaniline	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
3-Nitroaniline	SW8270C	mg/kg	ND	R 5A	0.067	2.0	ND	R 5A	2.4	72

CURRENT INVESTIGATION VALIDATED SOIL ANALYTICAL RESULTS
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	Location ID		VW31				VW35			
	Sampling Date/Time		11/23/2020 14:48				11/23/2020 14:25			
	Sample Depth (feet)		2				2			
	Sample Type		N				N			
	Field Sample ID		VW-31-2				VW-35-2			
	Lab Sample ID		2034585-02				2034585-01			
	Status		*Validated*				*Validated*			
Analyte	Method	Units	Result	QA Reason	MDL	PQL	Result	QA Reason	MDL	PQL
4-Nitroaniline	SW8270C	mg/kg	ND	R 5A	0.11	2.0	ND	R 5A	4.0	72
Nitrobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
N-Nitrosodimethylamine	SW8270C	mg/kg	ND	R 5A	0.40	1.0	ND	R 5A	14	36
N-Nitrosodi-N-propylamine	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
N-Nitrosodiphenylamine	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Phenanthrene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
Pyrene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
1,2,4-Trichlorobenzene	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4-Chloro-3-methylphenol	SW8270C	mg/kg	ND	R 5A	0.067	2.0	ND	R 5A	2.4	72
2-Chlorophenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2,4-Dichlorophenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2,4-Dimethylphenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4,6-Dinitro-2-methylphenol	SW8270C	mg/kg	ND	R 5A	0.067	5.0	ND	R 5A	2.4	180
2,4-Dinitrophenol	SW8270C	mg/kg	ND	R 5A	0.067	5.0	ND	R 5A	2.4	180
2-Methylphenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
3- & 4-Methylphenol	SW8270C	mg/kg	ND	R 5A	0.14	2.0	ND	R 5A	5.0	72
2-Nitrophenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
4-Nitrophenol	SW8270C	mg/kg	ND	R 5A	0.18	2.0	ND	R 5A	6.5	72
Pentachlorophenol	SW8270C	mg/kg	ND	R 5A	0.17	2.0	ND	R 5A	6.1	72
Phenol	SW8270C	mg/kg	ND	R 5A	0.067	1.0	ND	R 5A	2.4	36
2,4,5-Trichlorophenol	SW8270C	mg/kg	ND	R 5A	0.11	2.0	ND	R 5A	4.0	72
2,4,6-Trichlorophenol	SW8270C	mg/kg	ND	R 5A	0.067	2.0	ND	R 5A	2.4	72

Notes:

Concentrations detected above the laboratory MDL are shown in **bold**.
Sample depths are referenced to the top of soil. In paved ares, top of soil is at the bottom of pavement unless indicated otherwise.
*Depth from bottom of dock/top of underlying fill material.
< = less than
BHC = benzenehexachloride
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethene
DDT = dichlorodiphenyltrichloroethane
FD = field duplicate sample
FFP = fuel fingerprint
GC/MS = gas chromatograph/mass spectrometer
ID = identification
LUFT = leaking underground fuel tank
MDL = method detection limit
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
N = normal sample
ND = not detected above the laboratory MDL
PCB = polychlorinated biphenyl
PQL = practical quantitation limit
QA = quality assurance data validation qualifier
STLC = soluble threshold limit concentration
TCLP = Toxicity Leaching Characteristic Procedure
TPH = total petroleum hydrocarbons

Data Validation Qualifier Definitions:

J = estimated result
J+ = estimated concentration; potential high bias
J- = estimated concentration; potential low bias
R = rejected due to quality control failure
UJ = estimated concentration; analyte not detected at the indicated value

Data Validation Reason Code Definitions:

1A = method blank contamination
2B+ = high matrix pike recovery
2B- = low matrix spike recovery
2C- = low surrogate spike recovery
2E+ = high post digestion spike recovery
3C = laboratory duplicate imprecision
3D = field duplicate imprecision
5A = initial calibration failed
5A- = low initial calibration verification recovery
5B- = low continuing calibration verification recovery
6G = detected between the PQL and MDL
6H = chromatographic pattern of the sample did not resemble the chromatographic pattern of the standard

Appendix D

Laboratory Analytical Data Reports

Soil Gas
Laboratory Analytical Data Reports

BC LABORATORIES, INC.

Work Order Number: 2035147

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

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Case Narrative

Sample Receipt

Work Order: 2035147
COC Number:
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1
EPA-TO-15	MS-A2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The internal standard on the Initial Calibration Verification (ICV) was not within the control limits.

Lab Number	Method	Analyte
2022100-ICV2	EPA-TO-15	Chlorobenzene-d5 (IS)

LCS / LCSD

The LCS recoveries were within QC limits.

Lab Number	Receipt Pressure	Units
20-35147-01	13.3	PSIA
20-35147-02	13.2	PSIA
20-35147-03	13.3	PSIA
20-35147-04	12.5	PSIA
20-35147-05	12.6	PSIA
20-35147-06	12.3	PSIA
20-35147-07	12.4	PSIA
20-35147-08	12.5	PSIA

Chain of Custody and Cooler Receipt Form for 2035147 Page 1 of 2

RUSH!

CHAIN OF CUSTODY

Page 1 of 1

AECOM

20-35147

Lab: BC Laboratories

TAT: ~~Standard~~ 5 day

Report results to:	Keegan George (Keegan.George@smud.org)
Name	Andy Shepard (andy.shepard@aecom.com)
Company	AECOM
Mailing Address	2020 L Street, Suite 400
City, State, Zip	Sacramento, CA 95811
Telephone No.	916.286.3843
Fax No.	916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No. 60632793.06

CHK BY DISTRIBUTION SUB OUT

Special instructions and/or specific regulatory requirements:
Full TO-15 analyte list including naphthalene. CLP Report requested. Send Invoices to SMUD

Analyses Requested: USEPA Method TO-15

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cons.		Sample Condition/Comments Intl vac final vac Can# FRI#	Preservative
-1	SG-VW116A-01	11/30/20	1107	AIR	1	x	-30 -5 1526 1244	N
-2	SG-VW116B-01	11/30/20	0944	AIR	1	x	-30 -5 1084 1049	N
-3	SG-VW126A-01	11/30/20	1243	AIR	1	x	-30 -5 1084 1049	N
-4	SG-VW126B-01	11/30/20	1251	AIR	1	x	-31 -5 3053 X468	N
-5	SG-VW320A-01	11/30/20	1351	AIR	1	x	-29.5 -5 6022 1349	N
-6	SG-VW320B-01	11/30/20	1410	AIR	1	x	-30 -5 1478 1337	N
-7	SG-VW331A-01	12/1/20	1432	AIR	1	x	-30 -5 6121 1030	N
-8	SG-VW331B-01	12/1/20	1422	AIR	1	x	-30 -5 1083 1234	N
				AIR	1	x	29.5 -5 9466 1210	N
				AIR				N
				AIR				N
				AIR				N
				AIR				N

1.4L Canister

Collected by:	Brian Weeks	Date/Time 12/1/20 @ 1530	Received by:	Date/Time 12-4-2020 1554
Relinquished by:		Date/Time 12/1/20 @ 1530	Received by:	Date/Time
Relinquished by:		Date/Time 12/1/20 1600	Received by:	Date/Time
Relinquished by:		Date/Time	Sample Condition on Rcpt:	
Method of Shipment:				

Chain of Custody and Cooler Receipt Form for 2035147 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-35147

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

~~Emissivity:~~ Container: Summa ~~Thermometer ID:~~ Date/Time 12-2-20 935

Temperature: (A) room °C / (C) temp °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
SOIL SLEEVE										
VOA VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER	A	A	A	A	A	A	A	A		

Comments:

Sample Numbering Completed By: CMC Date/Time: 12/2/20 1130

A = Actual / C = Corrected

Rev 21 05/23/2016

[S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2035147**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

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Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW16A-01	2035147-01
SG-VW16A-01	2035147-01RE1
SG-VW16B-01	2035147-02
SG-VW26A-01	2035147-03
SG-VW26A-01	2035147-03RE1
SG-VW26B-01	2035147-04
SG-VW20A-01	2035147-05
SG-VW20A-01	2035147-05RE1
SG-VW20B-01	2035147-06
SG-VW31A-01	2035147-07
SG-VW31B-01	2035147-08

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 01-07-2021
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

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Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

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Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

AECOM - Sacramento
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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-01RE1	File ID:	03DEC12.D
Sampled:	11/30/20 11:07	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 16:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.2	210	D
108-88-3	Toluene	15.2	310	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73902	7.5	68963	7.505	
Chlorobenzene-d5 (IS)	76392	11.011	68255	11.021	
1,4-Difluorobenzene (IS)	139719	8.688	111106	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-01	File ID:	11DEC09.D
Sampled:	11/30/20 11:07	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 20:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	37	D
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	14	D
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	12	D
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	5.9	D
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	0.88	UD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	3.1	JD
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	0.40	UD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD
78-87-5	1,2-Dichloropropane	1.52	0.49	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-01	File ID:	11DEC09.D
Sampled:	11/30/20 11:07	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 20:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	3.0	UD
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	0.64	UD
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	66	D
622-96-8	1-Ethyl-4-methylbenzene	1.52	53	D
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	10	D
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	0.30	UD
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	12	D
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
78-93-3	Methyl ethyl ketone	1.52	93	D
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	46	D
1634-04-4	Methyl t-butyl ether	1.52	0.60	JD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	2.6	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	20	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	40	D
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-01	File ID:	11DEC09.D
Sampled:	11/30/20 11:07	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 20:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.52	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	1.7	JD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	69	D
108-67-8	1,3,5-Trimethylbenzene	1.52	28	D
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	210	D
95-47-6	o-Xylene	1.52	75	D
1330-20-7	Total Xylenes	1.52	280	D
---	TPH - Gasoline	1.52	3400	D
---	Total Petroleum Hydrocarbons	1.52	3400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.04	90.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92020	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	149591	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	268378	8.795	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-02	File ID:	11DEC10.D
Sampled:	11/30/20 09:46	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 21:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	9.7	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	0.59	JD
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	0.29	UD
56-23-5	Carbon tetrachloride	1.53	2.7	JD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	130	D
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	0.69	UD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-02	File ID:	11DEC10.D
Sampled:	11/30/20 09:46	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 21:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	0.64	UD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	2.8	JD
622-96-8	1-Ethyl-4-methylbenzene	1.53	3.7	JD
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	3.3	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	2.0	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	100	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW16B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-02	File ID:	11DEC10.D
Sampled:	11/30/20 09:46	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 21:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.53	15	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	1.4	JD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	11	D
75-69-4	Trichlorofluoromethane	1.53	2.7	JD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	6.2	JD
108-67-8	1,3,5-Trimethylbenzene	1.53	2.1	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	13	D
95-47-6	o-Xylene	1.53	4.3	JD
1330-20-7	Total Xylenes	1.53	17	D
---	TPH - Gasoline	1.53	490	D
---	Total Petroleum Hydrocarbons	1.53	490	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.31	93.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92558	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	141305	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	268754	8.789	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-03RE1	File ID:	03DEC14.D
Sampled:	11/30/20 12:28	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 17:21
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15	460	D
78-93-3	Methyl ethyl ketone	15	180	D
108-88-3	Toluene	15	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.42	94.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73113	7.501	68963	7.505	
Chlorobenzene-d5 (IS)	71225	11.012	68255	11.021	
1,4-Difluorobenzene (IS)	134438	8.69	111106	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-03
File ID: 11DEC11.D
Sampled: 11/30/20 12:28
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 21:57
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	20	D
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	11	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	0.95	JD
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	0.68	UD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD
78-87-5	1,2-Dichloropropane	1.5	0.48	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-03
File ID: 11DEC11.D
Sampled: 11/30/20 12:28
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 21:57
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	16	D
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	51	D
622-96-8	1-Ethyl-4-methylbenzene	1.5	46	D
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	4.7	D
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	3.6	JD
67-63-0	Isopropyl alcohol	1.5	0.48	UD
75-09-2	Methylene chloride	1.5	0.60	UD
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	95	D
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	2.5	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	42	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	64	D
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-03	File ID:	11DEC11.D
Sampled:	11/30/20 12:28	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 21:57
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	1.5	JD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	69	D
108-67-8	1,3,5-Trimethylbenzene	1.5	22	D
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	170	D
95-47-6	o-Xylene	1.5	63	D
1330-20-7	Total Xylenes	1.5	230	D
---	TPH - Gasoline	1.5	2700	D
---	Total Petroleum Hydrocarbons	1.5	2700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.06	90.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94647	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	148537	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	278529	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26B-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-04
File ID: 03DEC15.D
Sampled: 11/30/20 12:51
Prepared: 12/03/20 09:47
Analyzed: 12/03/20 17:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094190
Sequence: 2021907
Calibration: 2012011
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	15.7	13	UD
67-64-1	Acetone	15.7	19	JD
107-13-1	Acrylonitrile	15.7	4.2	UD
107-05-1	Allyl chloride	15.7	4.4	UD
994-05-8	t-Amyl Methyl ether	15.7	4.9	UD
71-43-2	Benzene	15.7	3.3	UD
100-44-7	Benzyl chloride	15.7	4.1	UD
75-27-4	Bromodichloromethane	15.7	7.1	UD
75-25-2	Bromoform	15.7	14	UD
74-83-9	Bromomethane	15.7	7.4	UD
106-99-0	1,3-Butadiene	15.7	3.5	UD
75-65-0	t-Butyl alcohol	15.7	11	UD
75-15-0	Carbon disulfide	15.7	3.0	UD
56-23-5	Carbon tetrachloride	15.7	7.1	UD
108-90-7	Chlorobenzene	15.7	6.3	UD
75-00-3	Chloroethane	15.7	8.3	UD
67-66-3	Chloroform	15.7	8.5	UD
74-87-3	Chloromethane	15.7	3.3	UD
110-82-7	Cyclohexane	15.7	6.0	UD
124-48-1	Dibromochloromethane	15.7	6.8	UD
96-12-8	1,2-Dibromo-3-chloropropane	15.7	27	UD
106-93-4	1,2-Dibromoethane	15.7	9.1	UD
74-95-3	Dibromomethane	15.7	8.9	UD
95-50-1	1,2-Dichlorobenzene	15.7	7.8	UD
541-73-1	1,3-Dichlorobenzene	15.7	4.9	UD
106-46-7	1,4-Dichlorobenzene	15.7	7.8	UD
75-71-8	Dichlorodifluoromethane	15.7	7.1	UD
75-34-3	1,1-Dichloroethane	15.7	3.6	UD
107-06-2	1,2-Dichloroethane	15.7	4.1	UD
75-35-4	1,1-Dichloroethene	15.7	4.9	UD
156-59-2	cis-1,2-Dichloroethene	15.7	5.0	UD
156-60-5	trans-1,2-Dichloroethene	15.7	4.2	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-04	File ID:	03DEC15.D
Sampled:	11/30/20 12:51	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 17:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	15.7	5.0	UD
10061-01-5	cis-1,3-Dichloropropene	15.7	4.7	UD
10061-02-6	trans-1,3-Dichloropropene	15.7	6.3	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	15.7	14	UD
75-37-6	1,1-Difluoroethane	15.7	31	UD
108-20-3	Diisopropyl ether	15.7	6.1	UD
123-91-1	1,4-Dioxane	15.7	5.2	UD
64-17-5	Ethanol	15.7	6.6	UD
141-78-6	Ethyl acetate	15.7	5.2	UD
100-41-4	Ethylbenzene	15.7	5.0	UD
622-96-8	1-Ethyl-4-methylbenzene	15.7	4.7	UD
637-92-3	Ethyl t-butyl ether	15.7	5.2	UD
142-82-5	n-Heptane	15.7	5.3	UD
87-68-3	Hexachlorobutadiene	15.7	24	UD
67-72-1	Hexachloroethane	15.7	11	UD
110-54-3	Hexane	15.7	3.1	UD
591-78-6	2-Hexanone	15.7	4.6	UD
540-84-1	Isooctane	15.7	5.5	UD
67-63-0	Isopropyl alcohol	15.7	5.0	UD
75-09-2	Methylene chloride	15.7	6.3	UD
78-93-3	Methyl ethyl ketone	15.7	3.0	UD
74-88-4	Methyl iodide	15.7	9.1	UD
108-10-1	Methyl isobutyl ketone	15.7	4.1	UD
1634-04-4	Methyl t-butyl ether	15.7	4.4	UD
91-20-3	Naphthalene	15.7	22	UD
115-07-1	Propylene	15.7	3.9	UD
100-42-5	Styrene	15.7	3.8	UD
630-20-6	1,1,1,2-Tetrachloroethane	15.7	9.6	UD
79-34-5	1,1,2,2-Tetrachloroethane	15.7	7.4	UD
127-18-4	Tetrachloroethene	15.7	53	JD
811-97-2	1,1,1,2-Tetrafluoroethane	15.7	11	UD
109-99-9	Tetrahydrofuran	15.7	4.2	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW26B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-04	File ID:	03DEC15.D
Sampled:	11/30/20 12:51	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 17:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.7	32	D
120-82-1	1,2,4-Trichlorobenzene	15.7	13	UD
71-55-6	1,1,1-Trichloroethane	15.7	6.1	UD
79-00-5	1,1,2-Trichloroethane	15.7	9.6	UD
79-01-6	Trichloroethene	15.7	8.5	UD
75-69-4	Trichlorofluoromethane	15.7	7.4	UD
96-18-4	1,2,3-Trichloropropane	15.7	7.5	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15.7	8.6	UD
95-63-6	1,2,4-Trimethylbenzene	15.7	6.3	UD
108-67-8	1,3,5-Trimethylbenzene	15.7	6.3	UD
108-05-4	Vinyl acetate	15.7	5.2	UD
593-60-2	Vinyl bromide	15.7	5.0	UD
75-01-4	Vinyl chloride	15.7	6.1	UD
179601-23-1	p- & m-Xylenes	15.7	9.6	UD
95-47-6	o-Xylene	15.7	4.7	UD
1330-20-7	Total Xylenes	15.7	14	UD
---	TPH - Gasoline	15.7	3400	D
---	Total Petroleum Hydrocarbons	15.7	3400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.91	89.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	70421	7.499	68963	7.505	
Chlorobenzene-d5 (IS)	69129	11.015	68255	11.021	
1,4-Difluorobenzene (IS)	135210	8.692	111106	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-05RE1	File ID:	03DEC16.D
Sampled:	11/30/20 13:51	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 18:20
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.6	360	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.42	94.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	69139	7.499	68963	7.505	
Chlorobenzene-d5 (IS)	68006	11.015	68255	11.021	
1,4-Difluorobenzene (IS)	130600	8.693	111106	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-05
File ID: 11DEC12.D
Sampled: 11/30/20 13:51
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 22:33
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
67-64-1	Acetone	1.56	16	D
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	8.7	D
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.1	UD
75-15-0	Carbon disulfide	1.56	30	D
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	0.91	JD
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	0.59	UD
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	0.90	UD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	0.70	UD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-05
File ID: 11DEC12.D
Sampled: 11/30/20 13:51
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 22:33
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.56	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	25	D
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	54	D
622-96-8	1-Ethyl-4-methylbenzene	1.56	46	D
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	0.77	JD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	0.31	UD
591-78-6	2-Hexanone	1.56	0.45	UD
540-84-1	Isooctane	1.56	0.55	UD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	13	D
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	12	D
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	1.9	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
127-18-4	Tetrachloroethene	1.56	28	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	24	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-05	File ID:	11DEC12.D
Sampled:	11/30/20 13:51	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 22:33
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.56	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	0.92	JD
75-69-4	Trichlorofluoromethane	1.56	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	71	D
108-67-8	1,3,5-Trimethylbenzene	1.56	20	D
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	170	D
95-47-6	o-Xylene	1.56	67	D
1330-20-7	Total Xylenes	1.56	240	D
---	TPH - Gasoline	1.56	2200	D
---	Total Petroleum Hydrocarbons	1.56	2200	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.29	92.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92611	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	147830	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	274828	8.795	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20B-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-06
File ID: 03DEC17.D
Sampled: 11/30/20 14:10
Prepared: 12/03/20 09:47
Analyzed: 12/03/20 18:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094190
Sequence: 2021907
Calibration: 2012011
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	16	13	UD
67-64-1	Acetone	16	6.9	UD
107-13-1	Acrylonitrile	16	4.3	UD
107-05-1	Allyl chloride	16	4.5	UD
994-05-8	t-Amyl Methyl ether	16	5.0	UD
71-43-2	Benzene	16	34	D
100-44-7	Benzyl chloride	16	4.2	UD
75-27-4	Bromodichloromethane	16	7.2	UD
75-25-2	Bromoform	16	14	UD
74-83-9	Bromomethane	16	7.5	UD
106-99-0	1,3-Butadiene	16	3.5	UD
75-65-0	t-Butyl alcohol	16	11	UD
75-15-0	Carbon disulfide	16	130	D
56-23-5	Carbon tetrachloride	16	7.2	UD
108-90-7	Chlorobenzene	16	6.4	UD
75-00-3	Chloroethane	16	8.5	UD
67-66-3	Chloroform	16	8.6	UD
74-87-3	Chloromethane	16	3.4	UD
110-82-7	Cyclohexane	16	6.1	UD
124-48-1	Dibromochloromethane	16	6.9	UD
96-12-8	1,2-Dibromo-3-chloropropane	16	27	UD
106-93-4	1,2-Dibromoethane	16	9.3	UD
74-95-3	Dibromomethane	16	9.1	UD
95-50-1	1,2-Dichlorobenzene	16	8.0	UD
541-73-1	1,3-Dichlorobenzene	16	5.0	UD
106-46-7	1,4-Dichlorobenzene	16	8.0	UD
75-71-8	Dichlorodifluoromethane	16	7.2	UD
75-34-3	1,1-Dichloroethane	16	3.7	UD
107-06-2	1,2-Dichloroethane	16	4.2	UD
75-35-4	1,1-Dichloroethene	16	5.0	UD
156-59-2	cis-1,2-Dichloroethene	16	5.1	UD
156-60-5	trans-1,2-Dichloroethene	16	4.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-06	File ID:	03DEC17.D
Sampled:	11/30/20 14:10	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 18:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	16	5.1	UD
10061-01-5	cis-1,3-Dichloropropene	16	4.8	UD
10061-02-6	trans-1,3-Dichloropropene	16	6.4	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	16	15	UD
75-37-6	1,1-Difluoroethane	16	32	UD
108-20-3	Diisopropyl ether	16	6.2	UD
123-91-1	1,4-Dioxane	16	5.3	UD
64-17-5	Ethanol	16	6.7	UD
141-78-6	Ethyl acetate	16	5.3	UD
100-41-4	Ethylbenzene	16	14	JD
622-96-8	1-Ethyl-4-methylbenzene	16	4.8	UD
637-92-3	Ethyl t-butyl ether	16	5.3	UD
142-82-5	n-Heptane	16	5.4	UD
87-68-3	Hexachlorobutadiene	16	24	UD
67-72-1	Hexachloroethane	16	12	UD
110-54-3	Hexane	16	3.2	UD
591-78-6	2-Hexanone	16	4.6	UD
540-84-1	Isooctane	16	89	D
67-63-0	Isopropyl alcohol	16	5.1	UD
75-09-2	Methylene chloride	16	6.4	UD
78-93-3	Methyl ethyl ketone	16	3.0	UD
74-88-4	Methyl iodide	16	9.3	UD
108-10-1	Methyl isobutyl ketone	16	4.2	UD
1634-04-4	Methyl t-butyl ether	16	4.5	UD
91-20-3	Naphthalene	16	22	UD
115-07-1	Propylene	16	4.0	UD
100-42-5	Styrene	16	3.8	UD
630-20-6	1,1,1,2-Tetrachloroethane	16	9.8	UD
79-34-5	1,1,2,2-Tetrachloroethane	16	7.5	UD
127-18-4	Tetrachloroethene	16	39	JD
811-97-2	1,1,1,2-Tetrafluoroethane	16	11	UD
109-99-9	Tetrahydrofuran	16	4.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW20B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-06	File ID:	03DEC17.D
Sampled:	11/30/20 14:10	Prepared:	12/03/20 09:47	Analyzed:	12/03/20 18:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094190	Sequence:	2021907	Calibration:	2012011
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	16	270	D
120-82-1	1,2,4-Trichlorobenzene	16	13	UD
71-55-6	1,1,1-Trichloroethane	16	6.2	UD
79-00-5	1,1,2-Trichloroethane	16	9.8	UD
79-01-6	Trichloroethene	16	70	JD
75-69-4	Trichlorofluoromethane	16	7.5	UD
96-18-4	1,2,3-Trichloropropane	16	7.7	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	16	8.8	UD
95-63-6	1,2,4-Trimethylbenzene	16	6.4	UD
108-67-8	1,3,5-Trimethylbenzene	16	6.4	UD
108-05-4	Vinyl acetate	16	5.3	UD
593-60-2	Vinyl bromide	16	5.1	UD
75-01-4	Vinyl chloride	16	6.2	UD
179601-23-1	p- & m-Xylenes	16	42	JD
95-47-6	o-Xylene	16	20	JD
1330-20-7	Total Xylenes	16	62	JD
---	TPH - Gasoline	16	8200	D
---	Total Petroleum Hydrocarbons	16	8200	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.73	87.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	70713	7.5	68963	7.505	
Chlorobenzene-d5 (IS)	72290	11.011	68255	11.021	
1,4-Difluorobenzene (IS)	132967	8.693	111106	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-07
File ID: 11DEC13.D
Sampled: 12/01/20 14:32
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 23:08
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	38	D
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	1.5	JD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	1.1	UD
75-15-0	Carbon disulfide	1.59	7.9	D
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	0.86	UD
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	0.72	UD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31A-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-07
File ID: 11DEC13.D
Sampled: 12/01/20 14:32
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 23:08
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	22	D
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	7.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.59	4.9	JD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.85	JD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.97	JD
67-63-0	Isopropyl alcohol	1.59	0.51	UD
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	17	D
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	2.3	JD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	2.2	UD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	64	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	4.4	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31A-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-07	File ID:	11DEC13.D
Sampled:	12/01/20 14:32	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 23:08
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	89	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	2.6	JD
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	9.8	D
108-67-8	1,3,5-Trimethylbenzene	1.59	2.4	JD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	22	D
95-47-6	o-Xylene	1.59	9.5	D
1330-20-7	Total Xylenes	1.59	32	D
---	TPH - Gasoline	1.59	610	D
---	Total Petroleum Hydrocarbons	1.59	610	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.36	93.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95612	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	144963	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	274691	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31B-01

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035147-08
File ID: 11DEC14.D
Sampled: 12/01/20 14:22
Prepared: 12/11/20 08:34
Analyzed: 12/11/20 23:44
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094905
Sequence: 2022100
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.57	1.3	UD
67-64-1	Acetone	1.57	0.68	UD
107-13-1	Acrylonitrile	1.57	0.42	UD
107-05-1	Allyl chloride	1.57	0.44	UD
994-05-8	t-Amyl Methyl ether	1.57	0.49	UD
71-43-2	Benzene	1.57	0.33	UD
100-44-7	Benzyl chloride	1.57	0.41	UD
75-27-4	Bromodichloromethane	1.57	0.71	UD
75-25-2	Bromoform	1.57	1.4	UD
74-83-9	Bromomethane	1.57	0.74	UD
106-99-0	1,3-Butadiene	1.57	0.35	UD
75-65-0	t-Butyl alcohol	1.57	1.1	UD
75-15-0	Carbon disulfide	1.57	2.7	JD
56-23-5	Carbon tetrachloride	1.57	1.4	JD
108-90-7	Chlorobenzene	1.57	0.63	UD
75-00-3	Chloroethane	1.57	0.83	UD
67-66-3	Chloroform	1.57	0.92	JD
74-87-3	Chloromethane	1.57	0.33	UD
110-82-7	Cyclohexane	1.57	0.60	UD
124-48-1	Dibromochloromethane	1.57	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.57	2.7	UD
106-93-4	1,2-Dibromoethane	1.57	0.91	UD
74-95-3	Dibromomethane	1.57	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.57	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.57	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.57	0.78	UD
75-71-8	Dichlorodifluoromethane	1.57	0.71	UD
75-34-3	1,1-Dichloroethane	1.57	0.36	UD
107-06-2	1,2-Dichloroethane	1.57	0.41	UD
75-35-4	1,1-Dichloroethene	1.57	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.57	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.57	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-08	File ID:	11DEC14.D
Sampled:	12/01/20 14:22	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 23:44
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.57	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.57	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.57	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.57	1.4	UD
75-37-6	1,1-Difluoroethane	1.57	3.1	UD
108-20-3	Diisopropyl ether	1.57	0.61	UD
123-91-1	1,4-Dioxane	1.57	0.52	UD
64-17-5	Ethanol	1.57	0.66	UD
141-78-6	Ethyl acetate	1.57	0.52	UD
100-41-4	Ethylbenzene	1.57	2.8	JD
622-96-8	1-Ethyl-4-methylbenzene	1.57	5.9	JD
637-92-3	Ethyl t-butyl ether	1.57	0.52	UD
142-82-5	n-Heptane	1.57	0.53	UD
87-68-3	Hexachlorobutadiene	1.57	2.4	UD
67-72-1	Hexachloroethane	1.57	1.1	UD
110-54-3	Hexane	1.57	0.31	UD
591-78-6	2-Hexanone	1.57	0.46	UD
540-84-1	Isooctane	1.57	0.55	UD
67-63-0	Isopropyl alcohol	1.57	0.50	UD
75-09-2	Methylene chloride	1.57	0.63	UD
78-93-3	Methyl ethyl ketone	1.57	0.30	UD
74-88-4	Methyl iodide	1.57	0.91	UD
108-10-1	Methyl isobutyl ketone	1.57	0.41	UD
1634-04-4	Methyl t-butyl ether	1.57	0.44	UD
91-20-3	Naphthalene	1.57	2.2	UD
115-07-1	Propylene	1.57	0.39	UD
100-42-5	Styrene	1.57	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.57	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.57	0.74	UD
127-18-4	Tetrachloroethene	1.57	160	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.57	1.1	UD
109-99-9	Tetrahydrofuran	1.57	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW31B-01

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035147-08	File ID:	11DEC14.D
Sampled:	12/01/20 14:22	Prepared:	12/11/20 08:34	Analyzed:	12/11/20 23:44
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094905	Sequence:	2022100	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.57	4.5	D
120-82-1	1,2,4-Trichlorobenzene	1.57	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.57	1.2	JD
79-00-5	1,1,2-Trichloroethane	1.57	0.96	UD
79-01-6	Trichloroethene	1.57	0.85	UD
75-69-4	Trichlorofluoromethane	1.57	0.74	UD
96-18-4	1,2,3-Trichloropropane	1.57	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.57	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.57	9.0	D
108-67-8	1,3,5-Trimethylbenzene	1.57	2.2	JD
108-05-4	Vinyl acetate	1.57	0.52	UD
593-60-2	Vinyl bromide	1.57	0.50	UD
75-01-4	Vinyl chloride	1.57	0.61	UD
179601-23-1	p- & m-Xylenes	1.57	12	D
95-47-6	o-Xylene	1.57	2.5	JD
1330-20-7	Total Xylenes	1.57	15	JD
---	TPH - Gasoline	1.57	590	D
---	Total Petroleum Hydrocarbons	1.57	590	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.02	90.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	86748	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	138120	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	254329	8.794	289206	8.79	

* Values outside of QC limits

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094190 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW16A-01	2035147-01RE1	03DEC12.D	12/03/20 09:47	FULL Customized List-All Table 8
SG-VW26A-01	2035147-03RE1	03DEC14.D	12/03/20 09:47	FULL Customized List-All Table 8
SG-VW26B-01	2035147-04	03DEC15.D	12/03/20 09:47	FULL Customized List-All Table 8
SG-VW20A-01	2035147-05RE1	03DEC16.D	12/03/20 09:47	FULL Customized List-All Table 8
SG-VW20B-01	2035147-06	03DEC17.D	12/03/20 09:47	FULL Customized List-All Table 8
Blank	B094190-BLK1	03DEC22.D	12/03/20 08:47	
LCS	B094190-BS1	03DEC20.D	12/03/20 08:47	
LCS Dup	B094190-BSD1	03DEC21.D	12/03/20 08:47	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094905 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW16A-01	2035147-01	11DEC09.D	12/11/20 08:34	FULL Customized List-All Table 8
SG-VW16B-01	2035147-02	11DEC10.D	12/11/20 08:34	FULL Customized List-All Table 8
SG-VW26A-01	2035147-03	11DEC11.D	12/11/20 08:34	FULL Customized List-All Table 8
SG-VW20A-01	2035147-05	11DEC12.D	12/11/20 08:34	FULL Customized List-All Table 8
SG-VW31A-01	2035147-07	11DEC13.D	12/11/20 08:34	FULL Customized List-All Table 8
SG-VW31B-01	2035147-08	11DEC14.D	12/11/20 08:34	FULL Customized List-All Table 8
Blank	B094905-BLK1	11DEC08.D	12/11/20 08:34	
LCS	B094905-BS1	11DEC06.D	12/11/20 08:34	
LCS Dup	B094905-BSD1	11DEC07.D	12/11/20 08:34	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094190-BLK1	File ID:	03DEC22.D
Prepared:	12/03/20 08:47	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/03/20 21:20	Instrument:	MS-A1		
Batch:	B094190	Sequence:	2021907	Calibration:	2012011

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094190-BLK1	File ID:	03DEC22.D
Prepared:	12/03/20 08:47	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/03/20 21:20	Instrument:	MS-A1		
Batch:	B094190	Sequence:	2021907	Calibration:	2012011

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094190-BLK1	File ID:	03DEC22.D
Prepared:	12/03/20 08:47	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/03/20 21:20	Instrument:	MS-A1		
Batch:	B094190	Sequence:	2021907	Calibration:	2012011

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094190-BLK1	File ID:	03DEC22.D
Prepared:	12/03/20 08:47	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/03/20 21:20	Instrument:	MS-A1		
Batch:	B094190	Sequence:	2021907	Calibration:	2012011

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.60	86.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	67755	7.499	68963	7.505	
Chlorobenzene-d5 (IS)	63936	11.01	68255	11.021	
1,4-Difluorobenzene (IS)	127041	8.688	111106	8.698	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094905-BLK1	File ID:	11DEC08.D
Prepared:	12/11/20 08:34	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/11/20 20:10	Instrument:	MS-A2		
Batch:	B094905	Sequence:	2022100	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094905-BLK1	File ID:	11DEC08.D
Prepared:	12/11/20 08:34	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/11/20 20:10	Instrument:	MS-A2		
Batch:	B094905	Sequence:	2022100	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094905-BLK1	File ID:	11DEC08.D
Prepared:	12/11/20 08:34	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/11/20 20:10	Instrument:	MS-A2		
Batch:	B094905	Sequence:	2022100	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

AECOM - Sacramento
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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035147
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094905-BLK1	File ID:	11DEC08.D
Prepared:	12/11/20 08:34	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/11/20 20:10	Instrument:	MS-A2		
Batch:	B094905	Sequence:	2022100	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.98	89.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94410	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	138522	11.078	152269	11.083	
1,4-Difluorobenzene (IS)	272716	8.785	289206	8.79	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094190
Preparation: EPA TO-15

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094190-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	15.552	97.4	70 - 130
Chloroform	24.413	24.574	101	70 - 130
Ethylbenzene	21.711	22.036	102	70 - 130
Tetrachloroethene	33.913	32.556	96.0	70 - 130
Toluene	18.842	16.856	89.5	70 - 130
Trichloroethene	26.869	26.047	96.9	70 - 130
Trichlorofluoromethane	28.092	30.833	110	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	39.345	103	70 - 130
p- & m-Xylenes	43.421	43.821	101	70 - 130
o-Xylene	21.711	22.145	102	70 - 130
Total Xylenes	65.132	65.966	101	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	15.929	99.7	2.39	30	70 - 130
Chloroform	24.413	24.891	102	1.28	30	70 - 130
Ethylbenzene	21.711	22.136	102	0.452	30	70 - 130
Tetrachloroethene	33.913	32.841	96.8	0.871	30	70 - 130
Toluene	18.842	17.161	91.1	1.79	30	70 - 130
Trichloroethene	26.869	26.004	96.8	0.165	30	70 - 130
Trichlorofluoromethane	28.092	30.451	108	1.25	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	39.154	102	0.488	30	70 - 130
p- & m-Xylenes	43.421	43.925	101	0.238	30	70 - 130
o-Xylene	21.711	22.097	102	0.216	30	70 - 130

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094190
Preparation: EPA TO-15

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094190-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	66.022	101	0.0855	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094905
Preparation: EPA TO-15

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094905-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	17.124	107	70 - 130
Chloroform	24.413	25.047	103	70 - 130
Ethylbenzene	21.711	25.097	116	70 - 130
Tetrachloroethene	33.913	36.151	107	70 - 130
Toluene	18.842	21.141	112	70 - 130
Trichloroethene	26.869	27.997	104	70 - 130
Trichlorofluoromethane	28.092	28.934	103	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	38.088	99.4	70 - 130
p- & m-Xylenes	43.421	49.109	113	70 - 130
o-Xylene	21.711	24.924	115	70 - 130
Total Xylenes	65.132	74.033	114	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	16.389	103	4.39	30	70 - 130
Chloroform	24.413	23.534	96.4	6.23	30	70 - 130
Ethylbenzene	21.711	24.403	112	2.81	30	70 - 130
Tetrachloroethene	33.913	35.337	104	2.28	30	70 - 130
Toluene	18.842	20.915	111	1.08	30	70 - 130
Trichloroethene	26.869	27.245	101	2.72	30	70 - 130
Trichlorofluoromethane	28.092	27.586	98.2	4.77	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	37.628	98.2	1.21	30	70 - 130
p- & m-Xylenes	43.421	46.591	107	5.26	30	70 - 130
o-Xylene	21.711	23.925	110	4.09	30	70 - 130

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094905
Preparation: EPA TO-15

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094905-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	70.516	108	4.87	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021907
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2021907-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2021907-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2021907-ICV1	23NOV08.D	11/23/20 14:14
Initial Cal Blank	2021907-ICB1	23NOV10.D	11/23/20 15:14
MS Tune	2021907-TUN1	03DEC01.D	12/03/20 10:24
Calibration Check	2021907-CCV1	03DEC02.D	12/03/20 10:56
Calibration Check	2021907-CCV2	03DEC03.D	12/03/20 11:28
Calibration Blank	2021907-CCB1	03DEC04.D	12/03/20 11:56
SG-VW16A-01	2035147-01RE1	03DEC12.D	12/03/20 16:22
SG-VW26A-01	2035147-03RE1	03DEC14.D	12/03/20 17:21
SG-VW26B-01	2035147-04	03DEC15.D	12/03/20 17:50
SG-VW20A-01	2035147-05RE1	03DEC16.D	12/03/20 18:20
SG-VW20B-01	2035147-06	03DEC17.D	12/03/20 18:50
LCS	B094190-BS1	03DEC20.D	12/03/20 20:21
LCS Dup	B094190-BSD1	03DEC21.D	12/03/20 20:52
Blank	B094190-BLK1	03DEC22.D	12/03/20 21:20

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022100
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022100-ICV2	15AUG11.D	08/15/18 18:29
Initial Cal Blank	2022100-ICB2	15AUG13.D	08/15/18 19:39
Initial Cal Check	2022100-ICV1	09DEC14.D	12/09/20 21:28
Initial Cal Blank	2022100-ICB1	09DEC16.D	12/09/20 22:27
MS Tune	2022100-TUN1	11DEC01.D	12/11/20 16:23
Calibration Check	2022100-CCV1	11DEC02.D	12/11/20 16:55
Calibration Check	2022100-CCV2	11DEC03.D	12/11/20 17:27
Calibration Blank	2022100-CCB1	11DEC04.D	12/11/20 17:55
LCS	B094905-BS1	11DEC06.D	12/11/20 19:10
LCS Dup	B094905-BSD1	11DEC07.D	12/11/20 19:42
Blank	B094905-BLK1	11DEC08.D	12/11/20 20:10
SG-VW16A-01	2035147-01	11DEC09.D	12/11/20 20:46
SG-VW16B-01	2035147-02	11DEC10.D	12/11/20 21:22
SG-VW26A-01	2035147-03	11DEC11.D	12/11/20 21:57
SG-VW20A-01	2035147-05	11DEC12.D	12/11/20 22:33
SG-VW31A-01	2035147-07	11DEC13.D	12/11/20 23:08
SG-VW31B-01	2035147-08	11DEC14.D	12/11/20 23:44

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022117-TUN2	15AUG04.D	08/15/18 14:24
Cal Standard	2022117-CAL7	15AUG05.D	08/15/18 14:58
Cal Standard	2022117-CAL8	15AUG06.D	08/15/18 15:32
Cal Standard	2022117-CAL9	15AUG07.D	08/15/18 16:06
Cal Standard	2022117-CALA	15AUG08.D	08/15/18 16:41
Cal Standard	2022117-CALB	15AUG09.D	08/15/18 17:15
Cal Standard	2022117-CALC	15AUG10.D	08/15/18 17:52
MS Tune	2022117-TUN1	09DEC07.D	12/09/20 17:22
Cal Standard	2022117-CAL1	09DEC08.D	12/09/20 17:51
Cal Standard	2022117-CAL2	09DEC09.D	12/09/20 18:20
Cal Standard	2022117-CAL3	09DEC10.D	12/09/20 18:51
Cal Standard	2022117-CAL4	09DEC11.D	12/09/20 19:29
Cal Standard	2022117-CAL5	09DEC12.D	12/09/20 20:12
Cal Standard	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022118
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022118-TUN2	16OCT09.D	10/16/20 13:36
Cal Standard	2022118-CAL7	16OCT10.D	10/16/20 14:05
Cal Standard	2022118-CAL8	16OCT11.D	10/16/20 14:34
Cal Standard	2022118-CAL9	16OCT12.D	10/16/20 15:03
Cal Standard	2022118-CALA	16OCT13.D	10/16/20 15:34
Cal Standard	2022118-CALB	16OCT14.D	10/16/20 16:05
Cal Standard	2022118-CALC	16OCT15.D	10/16/20 16:41
MS Tune	2022118-TUN1	23NOV01.D	11/23/20 10:04
Cal Standard	2022118-CAL1	23NOV02.D	11/23/20 10:34
Cal Standard	2022118-CAL2	23NOV03.D	11/23/20 11:03
Cal Standard	2022118-CAL3	23NOV04.D	11/23/20 11:35
Cal Standard	2022118-CAL4	23NOV05.D	11/23/20 12:14
Cal Standard	2022118-CAL5	23NOV06.D	11/23/20 12:55
Cal Standard	2022118-CAL6	23NOV07.D	11/23/20 13:41

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	03DEC01.D	Injection Date:	12/03/20
Instrument ID:	MS-A1	Injection Time:	10:24
Sequence:	2021907	Lab Sample ID:	2021907-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28.1	PASS
Mass 75	30 - 66% of Mass 95	53.4	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.47	PASS
Mass 173	Less than 2% of Mass 174	0.487	PASS
Mass 174	50 - 120% of Mass 95	76	PASS
Mass 175	4 - 9% of Mass 174	7.29	PASS
Mass 176	93 - 101% of Mass 174	95.4	PASS
Mass 177	5 - 9% of Mass 176	6.48	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	11DEC01.D	Injection Date:	12/11/20
Instrument ID:	MS-A2	Injection Time:	16:23
Sequence:	2022100	Lab Sample ID:	2022100-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.7	PASS
Mass 75	30 - 66% of Mass 95	52.2	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.68	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	89.2	PASS
Mass 175	4 - 9% of Mass 174	8.47	PASS
Mass 176	93 - 101% of Mass 174	100	PASS
Mass 177	5 - 9% of Mass 176	6.51	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	09DEC07.D	Injection Date:	12/09/20
Instrument ID:	MS-A2	Injection Time:	17:22
Sequence:	2022117	Lab Sample ID:	2022117-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.3	PASS
Mass 75	30 - 66% of Mass 95	51.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.59	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	94.2	PASS
Mass 175	4 - 9% of Mass 174	8.08	PASS
Mass 176	93 - 101% of Mass 174	97.1	PASS
Mass 177	5 - 9% of Mass 176	6.51	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	15AUG04.D	Injection Date:	08/15/18
Instrument ID:	MS-A2	Injection Time:	14:24
Sequence:	2022117	Lab Sample ID:	2022117-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	26.2	PASS
Mass 75	30 - 66% of Mass 95	53.7	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.38	PASS
Mass 173	Less than 2% of Mass 174	0.697	PASS
Mass 174	50 - 120% of Mass 95	94.3	PASS
Mass 175	4 - 9% of Mass 174	7.46	PASS
Mass 176	93 - 101% of Mass 174	96.3	PASS
Mass 177	5 - 9% of Mass 176	6.33	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	23NOV01.D	Injection Date:	11/23/20
Instrument ID:	MS-A1	Injection Time:	10:04
Sequence:	2022118	Lab Sample ID:	2022118-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	34	PASS
Mass 75	30 - 66% of Mass 95	61.4	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.15	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	64.6	PASS
Mass 175	4 - 9% of Mass 174	7.51	PASS
Mass 176	93 - 101% of Mass 174	98	PASS
Mass 177	5 - 9% of Mass 176	6.34	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	16OCT09.D	Injection Date:	10/16/20
Instrument ID:	MS-A1	Injection Time:	13:36
Sequence:	2022118	Lab Sample ID:	2022118-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28	PASS
Mass 75	30 - 66% of Mass 95	54.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.88	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.7	PASS
Mass 175	4 - 9% of Mass 174	7.82	PASS
Mass 176	93 - 101% of Mass 174	97.7	PASS
Mass 177	5 - 9% of Mass 176	6.13	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	10/16/20
Lab Sample ID:	2021907-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	23NOV08.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	11/23/20
Lab Sample ID:	2021907-ICV1	Injection Time:	14:14

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.2950	1.47859	1.565837		5.9	30
Acrylonitrile	A	5.0000	6.3400	0.6095328	0.772919		26.8	30
Allyl chloride	A	5.0000	5.8900	1.066507	1.25628		17.8	30
t-Amyl Methyl ether	A	5.0000	5.0720	1.15066	1.167206		1.4	30
Benzene	A	5.0000	5.4900	1.20977	1.328444		9.8	30
Benzyl chloride	L	5.0000	4.0560	1.471378	1.357605		-18.9	30
Bromodichloromethane	A	5.0000	4.8440	0.8783722	0.8509799		-3.1	30
Bromoform	A	5.0000	5.2800	1.249891	1.319896		5.6	30
Bromomethane	A	5.0000	6.0490	0.3591527	0.4345337		21.0	30
1,3-Butadiene	A	5.0000	5.8920	0.5416325	0.6382323		17.8	30
t-Butyl alcohol	A	10.000	11.572	2.068115	2.393203		15.7	30
Carbon disulfide	A	5.0000	6.1800	1.217116	1.504473		23.6	30
Carbon tetrachloride	A	5.0000	4.9170	1.43992	1.415902		-1.7	30
Chlorobenzene	A	5.0000	5.0210	0.8214871	0.8248798		0.4	30
Chloroethane	A	5.0000	5.9390	0.2289449	0.2719225		18.8	30
Chloroform	A	5.0000	5.1040	1.122256	1.145671		2.1	30
Chloromethane	A	5.0000	5.5990	0.6017158	0.6738042		12.0	30
Cyclohexane	L	5.0000	5.4710	1.510512	1.38668		9.4	30
Dibromochloromethane	A	5.0000	4.8360	0.8683332	0.8398684		-3.3	30
1,2-Dibromo-3-chloropropane	A	5.0000	4.6610	6.435703E-02	5.999001E-02		-6.8	30
1,2-Dibromoethane	A	5.0000	4.9150	0.5183601	0.5095994		-1.7	30
Dibromomethane	A	5.0000	4.8100	0.6770087	0.6512384		-3.8	30
1,2-Dichlorobenzene	A	5.0000	5.2900	1.263718	1.337113		5.8	30

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 23NOV08.D
Sequence: 2021907
Lab Sample ID: 2021907-ICV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012011
Calibration Date: 10/16/20 14:05
Injection Date: 11/23/20
Injection Time: 14:14

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.0240	1.354411	1.360788		0.5	30
1,4-Dichlorobenzene	A	5.0000	5.1220	1.112444	1.139485		2.4	30
Dichlorodifluoromethane	A	5.0000	5.3500	1.511136	1.616773		7.0	30
1,1-Dichloroethane	A	5.0000	5.2640	0.9387319	0.9882972		5.3	30
1,2-Dichloroethane	A	5.0000	4.8550	1.042877	1.012722		-2.9	30
1,1-Dichloroethene	A	5.0000	5.7650	0.9579048	1.104491		15.3	30
cis-1,2-Dichloroethene	A	5.0000	5.3130	0.7782523	0.8270069		6.3	30
trans-1,2-Dichloroethene	A	5.0000	5.4610	0.8748054	0.9554829		9.2	30
1,2-Dichloropropane	A	5.0000	5.1470	0.3153005	0.3245933		2.9	30
cis-1,3-Dichloropropene	A	5.0000	5.1020	0.4781118	0.4878692		2.0	30
trans-1,3-Dichloropropene	A	5.0000	5.2330	0.4673813	0.4891882		4.7	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.5600	1.108091	1.23211		11.2	30
1,1-Difluoroethane	A	5.0000	5.8740	0.8567095	1.006535		17.5	30
Diisopropyl ether	A	5.0000	5.5690	0.4971495	0.5537171		11.4	30
1,4-Dioxane	A	5.0000	5.5190	0.1862337	0.2055638		10.4	30
Ethanol	A	10.000	11.622	0.3474238	0.4037704		16.2	30
Ethyl acetate	A	5.0000	5.5630	0.175448	0.1951937		11.3	30
Ethylbenzene	A	5.0000	5.5190	0.6974591	0.7697866		10.4	30
1-Ethyl-4-methylbenzene	A	5.0000	5.2770	3.252002	3.432116		5.5	30
Ethyl t-butyl ether	A	5.0000	5.3100	2.855609	3.032629		6.2	30
n-Heptane	A	5.0000	5.1740	0.4268987	0.4417842		3.5	30
Hexachlorobutadiene	A	5.0000	4.8230	1.215087	1.172036		-3.5	30
Hexachloroethane	A	5.0000	5.0940	0.208178	0.2120793		1.9	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	23NOV08.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	11/23/20
Lab Sample ID:	2021907-ICV1	Injection Time:	14:14

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3670	1.100494	1.181174		7.3	30
2-Hexanone	A	5.0000	4.7740	1.062505	1.014536		-4.5	30
Isooctane	A	5.0000	5.0790	2.236937	2.272166		1.6	30
Isopropyl alcohol	A	5.0000	6.1740	1.197631	1.478726		23.5	30
Methylene chloride	A	5.0000	5.5540	0.8468858	0.9406516		11.1	30
Methyl ethyl ketone	A	5.0000	5.3360	1.751014	1.868511		6.7	30
Methyl iodide	A	5.0000	6.4020	1.47531	1.889067		28.0	30
Methyl isobutyl ketone	A	5.0000	5.1090	1.31655	1.345204		2.2	30
Methyl t-butyl ether	A	5.0000	5.4450	1.590821	1.732341		8.9	30
Naphthalene	Q	5.0000	4.6320	0.1554653	0.145003		-7.4	30
Propylene	A	5.0000	6.0460	0.6685901	0.8083982		20.9	30
Styrene	A	5.0000	5.6050	1.227598	1.376122		12.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.8050	0.689642	0.6628029		-3.9	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.4510	1.197772	1.30591		9.0	30
Tetrachloroethene	A	5.0000	4.9500	0.4936235	0.4886553		-1.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4860	0.8484722	0.9310113		9.7	30
Tetrahydrofuran	A	5.0000	5.2840	1.047582	1.106994		5.7	30
Toluene	A	5.0000	5.1570	1.008561	1.040143		3.1	30
1,2,4-Trichlorobenzene	Q	5.0000	4.8000	0.4182441	0.3654465		-4.0	30
1,1,1-Trichloroethane	A	5.0000	4.9230	1.303388	1.28344		-1.5	30
1,1,2-Trichloroethane	A	5.0000	4.9060	0.3474483	0.3409142		-1.9	30
Trichloroethene	A	5.0000	5.1220	0.3602313	0.3689996		2.4	30
Trichlorofluoromethane	A	5.0000	5.3720	1.563504	1.679899		7.4	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	23NOV08.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	11/23/20
Lab Sample ID:	2021907-ICV1	Injection Time:	14:14

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.2590	0.4159832	0.4375182		5.2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.6680	0.9118981	1.033788		13.4	30
1,2,4-Trimethylbenzene	A	5.0000	5.4410	2.358332	2.566466		8.8	30
1,3,5-Trimethylbenzene	A	5.0000	5.2020	2.364917	2.460404		4.0	30
Vinyl acetate	A	5.0000	5.3720	2.404492	2.583565		7.4	30
Vinyl bromide	A	5.0000	6.4960	0.3894792	0.506002		29.9	30
Vinyl chloride	A	5.0000	5.9800	0.4539464	0.5429412		19.6	30
p- & m-Xylenes	A	10.000	10.850	1.98686	2.155842		8.5	30
o-Xylene	A	5.0000	5.4190	2.094129	2.269723		8.4	30
Total Xylenes	A	15.000	16.269	2.022616	2.193802		8.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 03DEC02.D
Sequence: 2021907
Lab Sample ID: 2021907-CCV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012011
Calibration Date: 10/16/20 14:05
Injection Date: 12/03/20
Injection Time: 10:56

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.4590	1.47859	1.318564		-10.8	30
Acrylonitrile	A	5.0000	4.8560	0.6095328	0.5919621		-2.9	30
Allyl chloride	A	5.0000	4.5880	1.066507	0.9785957		-8.2	30
t-Amyl Methyl ether	A	5.0000	4.4920	1.15066	1.033774		-10.2	30
Benzene	A	5.0000	5.0190	1.20977	1.214423		0.4	30
Benzyl chloride	L	5.0000	4.0350	1.471378	1.348679		-19.3	30
Bromodichloromethane	A	5.0000	4.4600	0.8783722	0.7834313		-10.8	30
Bromoform	A	5.0000	5.3250	1.249891	1.331164		6.5	30
Bromomethane	A	5.0000	5.0300	0.3591527	0.3612771		0.6	30
1,3-Butadiene	A	5.0000	4.8890	0.5416325	0.5296064		-2.2	30
t-Butyl alcohol	A	10.000	9.6910	2.068115	2.00425		-3.1	30
Carbon disulfide	A	5.0000	5.1110	1.217116	1.244185		2.2	30
Carbon tetrachloride	A	5.0000	5.0880	1.43992	1.465203		1.8	30
Chlorobenzene	A	5.0000	4.6190	0.8214871	0.7589064		-7.6	30
Chloroethane	A	5.0000	4.9870	0.2289449	0.2283517		-0.3	30
Chloroform	A	5.0000	4.9830	1.122256	1.118473		-0.3	30
Chloromethane	A	5.0000	4.6640	0.6017158	0.5612962		-6.7	30
Cyclohexane	L	5.0000	4.9950	1.510512	1.272898		-0.1	30
Dibromochloromethane	A	5.0000	4.6930	0.8683332	0.8150928		-6.1	30
1,2-Dibromo-3-chloropropane	A	5.0000	4.2360	6.435703E-02	5.452743E-02		-15.3	30
1,2-Dibromoethane	A	5.0000	4.6490	0.5183601	0.4820212		-7.0	30
Dibromomethane	A	5.0000	4.3830	0.6770087	0.5934238		-12.3	30
1,2-Dichlorobenzene	A	5.0000	5.3300	1.263718	1.347163		6.6	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	03DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	12/03/20
Lab Sample ID:	2021907-CCV1	Injection Time:	10:56

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.0870	1.354411	1.377925		1.7	30
1,4-Dichlorobenzene	A	5.0000	5.4440	1.112444	1.211288		8.9	30
Dichlorodifluoromethane	A	5.0000	4.8940	1.511136	1.479012		-2.1	30
1,1-Dichloroethane	A	5.0000	5.0450	0.9387319	0.9471679		0.9	30
1,2-Dichloroethane	A	5.0000	4.7180	1.042877	0.984048		-5.6	30
1,1-Dichloroethene	A	5.0000	4.8480	0.9579048	0.9286922		-3.0	30
cis-1,2-Dichloroethene	A	5.0000	5.0320	0.7782523	0.7832671		0.6	30
trans-1,2-Dichloroethene	A	5.0000	5.0740	0.8748054	0.8878122		1.5	30
1,2-Dichloropropane	A	5.0000	4.3700	0.3153005	0.2755574		-12.6	30
cis-1,3-Dichloropropene	A	5.0000	4.4150	0.4781118	0.4221707		-11.7	30
trans-1,3-Dichloropropene	A	5.0000	4.4170	0.4673813	0.4129276		-11.7	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9340	1.108091	1.093498		-1.3	30
1,1-Difluoroethane	A	5.0000	4.7520	0.8567095	0.8141473		-5.0	30
Diisopropyl ether	A	5.0000	5.3310	0.4971495	0.5301064		6.6	30
1,4-Dioxane	A	5.0000	5.0680	0.1862337	0.1887563		1.4	30
Ethanol	A	10.000	9.5060	0.3474238	0.330254		-4.9	30
Ethyl acetate	A	5.0000	5.0580	0.175448	0.1774958		1.2	30
Ethylbenzene	A	5.0000	5.1860	0.6974591	0.7233631		3.7	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1720	3.252002	3.363652		3.4	30
Ethyl t-butyl ether	A	5.0000	5.0440	2.855609	2.880503		0.9	30
n-Heptane	A	5.0000	4.4780	0.4268987	0.382364		-10.4	30
Hexachlorobutadiene	A	5.0000	4.8200	1.215087	1.171314		-3.6	30
Hexachloroethane	A	5.0000	4.9480	0.208178	0.2060288		-1.0	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	03DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	12/03/20
Lab Sample ID:	2021907-CCV1	Injection Time:	10:56

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.9630	1.100494	1.092379		-0.7	30
2-Hexanone	A	5.0000	4.0330	1.062505	0.8570061		-19.3	30
Isooctane	A	5.0000	4.4430	2.236937	1.987744		-11.1	30
Isopropyl alcohol	A	5.0000	4.8170	1.197631	1.153734		-3.7	30
Methylene chloride	A	5.0000	4.4840	0.8468858	0.7594343		-10.3	30
Methyl ethyl ketone	A	5.0000	4.7410	1.751014	1.66027		-5.2	30
Methyl iodide	A	5.0000	5.6220	1.47531	1.658746		12.4	30
Methyl isobutyl ketone	A	5.0000	4.0600	1.31655	1.069164		-18.8	30
Methyl t-butyl ether	A	5.0000	5.1970	1.590821	1.653413		3.9	30
Naphthalene	Q	5.0000	3.9310	0.1554653	0.1176141		-21.4	30
Propylene	A	5.0000	4.5480	0.6685901	0.6081522		-9.0	30
Styrene	A	5.0000	5.2910	1.227598	1.299003		5.8	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.5930	0.689642	0.633537		-8.1	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9930	1.197772	1.196082		-0.1	30
Tetrachloroethene	A	5.0000	4.7900	0.4936235	0.4729313		-4.2	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.9100	0.8484722	0.8331468		-1.8	30
Tetrahydrofuran	A	5.0000	4.5680	1.047582	0.9570725		-8.6	30
Toluene	A	5.0000	4.5380	1.008561	0.9153629		-9.2	30
1,2,4-Trichlorobenzene	Q	5.0000	4.2500	0.4182441	0.3121917		-15.0	30
1,1,1-Trichloroethane	A	5.0000	5.0140	1.303388	1.306921		0.3	30
1,1,2-Trichloroethane	A	5.0000	4.4200	0.3474483	0.3071424		-11.6	30
Trichloroethene	A	5.0000	4.7740	0.3602313	0.3439744		-4.5	30
Trichlorofluoromethane	A	5.0000	5.0530	1.563504	1.580105		1.1	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	03DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	12/03/20
Lab Sample ID:	2021907-CCV1	Injection Time:	10:56

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.0070	0.4159832	0.4165821		0.1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0290	0.9118981	0.917121		0.6	30
1,2,4-Trimethylbenzene	A	5.0000	5.2590	2.358332	2.480508		5.2	30
1,3,5-Trimethylbenzene	A	5.0000	5.2440	2.364917	2.480345		4.9	30
Vinyl acetate	A	5.0000	4.4930	2.404492	2.160496		-10.1	30
Vinyl bromide	A	5.0000	5.6090	0.3894792	0.4368944		12.2	30
Vinyl chloride	A	5.0000	4.9950	0.4539464	0.4534654		-0.1	30
p- & m-Xylenes	A	10.000	10.217	1.98686	2.030004		2.2	30
o-Xylene	A	5.0000	5.1570	2.094129	2.159711		3.1	30
Total Xylenes	A	15.000	15.374	2.022616	2.07324		2.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012011
Lab File ID:	03DEC03.D	Calibration Date:	10/16/20 14:05
Sequence:	2021907	Injection Date:	12/03/20
Lab Sample ID:	2021907-CCV2	Injection Time:	11:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	470.74	3.784361	3.562863		-5.9	30
Total Petroleum Hydrocarbons	A	500.00	470.74	3.784361	3.562863		-5.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	15AUG11.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	08/15/18
Lab Sample ID:	2022100-ICV2	Injection Time:	18:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	490.55	4.288774	4.207688		-1.9	30
Total Petroleum Hydrocarbons	A	500.00	490.55	4.288774	4.207688		-1.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	12/09/20
Lab Sample ID:	2022100-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.0300	1.385321	1.39285		0.5	30
Acrylonitrile	A	5.0000	5.4200	0.4734002	0.5133195		8.4	30
Allyl chloride	A	5.0000	5.5800	0.9311473	1.038662		11.5	30
t-Amyl Methyl ether	A	5.0000	5.8500	0.5084969	0.5948481		17.0	30
Benzene	A	5.0000	5.4800	2.310203	2.534081		9.7	30
Benzyl chloride	L	5.0000	4.6900	1.21796	1.329562		-6.2	30
Bromodichloromethane	A	5.0000	5.1900	0.7498123	0.7787605		3.9	30
Bromoform	A	5.0000	5.6900	1.29582	1.473501		13.7	30
Bromomethane	A	5.0000	5.0500	0.5721625	0.5779802		1.0	30
1,3-Butadiene	A	5.0000	5.1400	0.4373898	0.4498363		2.8	30
t-Butyl alcohol	A	10.000	11.970	1.144382	1.369723		19.7	30
Carbon disulfide	A	5.0000	5.2900	2.556243	2.704926		5.8	30
Carbon tetrachloride	A	5.0000	5.0600	1.931421	1.952713		1.1	30
Chlorobenzene	A	5.0000	5.1000	0.7977157	0.814334		2.1	30
Chloroethane	A	5.0000	5.0800	0.2597023	0.2638489		1.6	30
Chloroform	A	5.0000	5.0800	1.858315	1.888321		1.6	30
Chloromethane	A	5.0000	4.8900	0.4590853	0.4490719		-2.2	30
Cyclohexane	A	5.0000	4.5900	1.652539	1.51647		-8.2	30
Dibromochloromethane	A	5.0000	5.3600	0.6776753	0.7260836		7.1	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.3400	0.1651741	0.176527		6.9	30
1,2-Dibromoethane	A	5.0000	5.3700	0.4694284	0.5041782		7.4	30
Dibromomethane	A	5.0000	5.1400	0.1316079	0.1351959		2.7	30
1,2-Dichlorobenzene	A	5.0000	5.7800	1.088648	1.258492		15.6	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 09DEC14.D
Sequence: 2022100
Lab Sample ID: 2022100-ICV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/09/20
Injection Time: 21:28

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.8800	1.261041	1.483273		17.6	30
1,4-Dichlorobenzene	A	5.0000	5.4900	1.150627	1.262439		9.7	30
Dichlorodifluoromethane	A	5.0000	5.0800	2.297283	2.335719		1.7	30
1,1-Dichloroethane	A	5.0000	5.2500	1.501032	1.57578		5.0	30
1,2-Dichloroethane	A	5.0000	5.1100	1.259162	1.285716		2.1	30
1,1-Dichloroethene	A	5.0000	5.4700	1.264693	1.383513		9.4	30
cis-1,2-Dichloroethene	A	5.0000	5.4500	1.054343	1.149185		9.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4800	1.231126	1.348373		9.5	30
1,2-Dichloropropane	A	5.0000	5.3400	0.2973131	0.3175814		6.8	30
cis-1,3-Dichloropropene	A	5.0000	5.7400	0.3819551	0.4388394		14.9	30
trans-1,3-Dichloropropene	A	5.0000	5.7600	0.4130522	0.4761559		15.3	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9900	1.617365	1.614122		-0.2	30
1,1-Difluoroethane	A	5.0000	5.0800	1.308935	1.329945		1.6	30
Diisopropyl ether	A	5.0000	5.5100	0.5202863	0.5737246		10.3	30
1,4-Dioxane	A	5.0000	4.9300	0.1396685	0.1378245		-1.3	30
Ethanol	A	10.000	9.9400	0.143483	0.1426771		-0.6	30
Ethyl acetate	A	5.0000	5.6600	0.2696996	0.3055375		13.3	30
Ethylbenzene	A	5.0000	6.0100	0.6525795	0.7841801		20.2	30
1-Ethyl-4-methylbenzene	A	5.0000	6.4600	2.860951	3.694484		29.1	30
Ethyl t-butyl ether	A	5.0000	5.7300	1.81201	2.076147		14.6	30
n-Heptane	A	5.0000	5.7100	0.2699023	0.3081407		14.2	30
Hexachlorobutadiene	A	5.0000	5.5800	0.6202578	0.6925375		11.7	30
Hexachloroethane	A	5.0000	5.4200	0.2645854	0.2869578		8.5	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 09DEC14.D
Sequence: 2022100
Lab Sample ID: 2022100-ICV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/09/20
Injection Time: 21:28

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3400	1.320847	1.411856		6.9	30
2-Hexanone	L	5.0000	5.0500	0.4702171	0.5562207		1.0	30
Isooctane	A	5.0000	5.5500	1.450681	1.60994		11.0	30
Isopropyl alcohol	A	5.0000	5.6700	0.9542893	1.081941		13.4	30
Methylene chloride	A	5.0000	4.7700	0.946655	0.9029366		-4.6	30
Methyl ethyl ketone	A	5.0000	5.4800	1.599616	1.753029		9.6	30
Methyl iodide	A	5.0000	5.4900	0.9312524	1.02321		9.9	30
Methyl isobutyl ketone	A	5.0000	5.9400	0.5962516	0.707767		18.7	30
Methyl t-butyl ether	A	5.0000	5.7000	2.244678	2.559429		14.0	30
Naphthalene	Q	5.0000	4.6100	1.277326	1.456727		-7.8	30
Propylene	A	5.0000	5.2900	0.5884372	0.6221065		5.7	30
Styrene	A	5.0000	6.3000	1.133207	1.428193		26.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2300	0.2449739	0.256182		4.6	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.6000	1.289947	1.445751		12.1	30
Tetrachloroethene	A	5.0000	5.4000	0.487058	0.5262182		8.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.1300	1.142489	1.172281		2.6	30
Tetrahydrofuran	A	5.0000	5.7400	0.8416471	0.9654902		14.7	30
Toluene	A	5.0000	5.8100	0.8694338	1.011034		16.3	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3800	0.2835387	0.3032183		7.6	30
1,1,1-Trichloroethane	A	5.0000	5.1200	1.709834	1.749765		2.3	30
1,1,2-Trichloroethane	A	5.0000	5.1700	0.3422061	0.3537127		3.4	30
Trichloroethene	A	5.0000	5.4500	0.3311466	0.3607688		8.9	30
Trichlorofluoromethane	A	5.0000	4.9700	2.34705	2.332786		-0.6	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	12/09/20
Lab Sample ID:	2022100-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.5100	0.3545077	0.3908601		10.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0400	1.702496	1.714728		0.7	30
1,2,4-Trimethylbenzene	A	5.0000	6.2500	1.781325	2.228106		25.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.7000	1.930352	2.198911		13.9	30
Vinyl acetate	A	5.0000	5.5900	2.11964	2.368215		11.7	30
Vinyl bromide	A	5.0000	5.3200	0.7824054	0.8318511		6.3	30
Vinyl chloride	A	5.0000	5.0100	0.5526786	0.5542437		0.3	30
p- & m-Xylenes	A	10.000	11.630	1.765584	2.052499		16.3	30
o-Xylene	A	5.0000	5.8900	1.802727	2.123447		17.8	30
Total Xylenes	A	15.000	17.520	1.777965	2.076148		16.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	11DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	12/11/20
Lab Sample ID:	2022100-CCV1	Injection Time:	16:55

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.8700	1.385321	1.349761		-2.6	30
Acrylonitrile	A	5.0000	5.0900	0.4734002	0.4822455		1.9	30
Allyl chloride	A	5.0000	5.2300	0.9311473	0.9739796		4.6	30
t-Amyl Methyl ether	A	5.0000	5.8300	0.5084969	0.5928482		16.6	30
Benzene	A	5.0000	5.3400	2.310203	2.465985		6.7	30
Benzyl chloride	L	5.0000	4.8600	1.21796	1.386578		-2.8	30
Bromodichloromethane	A	5.0000	5.0100	0.7498123	0.7506268		0.1	30
Bromoform	A	5.0000	5.5800	1.29582	1.447345		11.7	30
Bromomethane	A	5.0000	4.5900	0.5721625	0.5257174		-8.1	30
1,3-Butadiene	A	5.0000	4.5400	0.4373898	0.3967856		-9.3	30
t-Butyl alcohol	A	10.000	11.830	1.144382	1.353491		18.3	30
Carbon disulfide	A	5.0000	5.0900	2.556243	2.600727		1.7	30
Carbon tetrachloride	A	5.0000	5.0900	1.931421	1.966288		1.8	30
Chlorobenzene	A	5.0000	4.9000	0.7977157	0.7823119		-1.9	30
Chloroethane	A	5.0000	4.4100	0.2597023	0.228959		-11.8	30
Chloroform	A	5.0000	5.0400	1.858315	1.874851		0.9	30
Chloromethane	A	5.0000	4.4300	0.4590853	0.4070684		-11.3	30
Cyclohexane	A	5.0000	4.5100	1.652539	1.491462		-9.7	30
Dibromochloromethane	A	5.0000	5.1000	0.6776753	0.6906627		1.9	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.3500	0.1651741	0.1768517		7.1	30
1,2-Dibromoethane	A	5.0000	5.1900	0.4694284	0.4876216		3.9	30
Dibromomethane	A	5.0000	4.9300	0.1316079	0.1296359		-1.5	30
1,2-Dichlorobenzene	A	5.0000	5.5700	1.088648	1.211753		11.3	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 11DEC02.D
Sequence: 2022100
Lab Sample ID: 2022100-CCV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/11/20
Injection Time: 16:55

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.2300	1.261041	1.319218		4.6	30
1,4-Dichlorobenzene	A	5.0000	5.4900	1.150627	1.263391		9.8	30
Dichlorodifluoromethane	A	5.0000	4.8400	2.297283	2.22271		-3.2	30
1,1-Dichloroethane	A	5.0000	5.1400	1.501032	1.542667		2.8	30
1,2-Dichloroethane	A	5.0000	5.0500	1.259162	1.271574		1.0	30
1,1-Dichloroethene	A	5.0000	5.3400	1.264693	1.351036		6.8	30
cis-1,2-Dichloroethene	A	5.0000	5.3700	1.054343	1.13144		7.3	30
trans-1,2-Dichloroethene	A	5.0000	5.2600	1.231126	1.2954		5.2	30
1,2-Dichloropropane	A	5.0000	4.9800	0.2973131	0.2961346		-0.4	30
cis-1,3-Dichloropropene	A	5.0000	5.4300	0.3819551	0.4151634		8.7	30
trans-1,3-Dichloropropene	A	5.0000	5.5700	0.4130522	0.4603578		11.5	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.6700	1.617365	1.509186		-6.7	30
1,1-Difluoroethane	A	5.0000	4.7600	1.308935	1.246034		-4.8	30
Diisopropyl ether	A	5.0000	5.4300	0.5202863	0.5649884		8.6	30
1,4-Dioxane	A	5.0000	4.6600	0.1396685	0.1300924		-6.9	30
Ethanol	A	10.000	9.0600	0.143483	0.1299977		-9.4	30
Ethyl acetate	A	5.0000	5.1800	0.2696996	0.2794742		3.6	30
Ethylbenzene	A	5.0000	5.8500	0.6525795	0.7640658		17.1	30
1-Ethyl-4-methylbenzene	A	5.0000	5.9400	2.860951	3.400219		18.8	30
Ethyl t-butyl ether	A	5.0000	5.7300	1.81201	2.078061		14.7	30
n-Heptane	A	5.0000	5.3400	0.2699023	0.2880617		6.7	30
Hexachlorobutadiene	A	5.0000	5.4000	0.6202578	0.6695847		8.0	30
Hexachloroethane	A	5.0000	5.2900	0.2645854	0.2798988		5.8	30

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 11DEC02.D
Sequence: 2022100
Lab Sample ID: 2022100-CCV1

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/11/20
Injection Time: 16:55

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2200	1.320847	1.379606		4.4	30
2-Hexanone	L	5.0000	4.9100	0.4702171	0.5393084		-1.8	30
Isooctane	A	5.0000	5.2000	1.450681	1.507943		3.9	30
Isopropyl alcohol	A	5.0000	5.4200	0.9542893	1.034192		8.4	30
Methylene chloride	A	5.0000	4.6600	0.946655	0.8814973		-6.9	30
Methyl ethyl ketone	A	5.0000	5.3300	1.599616	1.705081		6.6	30
Methyl iodide	A	5.0000	5.4600	0.9312524	1.017201		9.2	30
Methyl isobutyl ketone	A	5.0000	5.6300	0.5962516	0.6711925		12.6	30
Methyl t-butyl ether	A	5.0000	5.9200	2.244678	2.658537		18.4	30
Naphthalene	Q	5.0000	4.6000	1.277326	1.453683		-8.0	30
Propylene	A	5.0000	4.7500	0.5884372	0.5593245		-4.9	30
Styrene	A	5.0000	6.1000	1.133207	1.382563		22.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.0200	0.2449739	0.2457285		0.3	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.2600	1.289947	1.356583		5.2	30
Tetrachloroethene	A	5.0000	5.2500	0.487058	0.5113633		5.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.0700	1.142489	1.157544		1.3	30
Tetrahydrofuran	A	5.0000	5.3900	0.8416471	0.9077058		7.8	30
Toluene	A	5.0000	5.5900	0.8694338	0.9711625		11.7	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3900	0.2835387	0.303556		7.8	30
1,1,1-Trichloroethane	A	5.0000	5.1400	1.709834	1.758647		2.9	30
1,1,2-Trichloroethane	A	5.0000	4.9100	0.3422061	0.336131		-1.8	30
Trichloroethene	A	5.0000	5.2700	0.3311466	0.3487206		5.3	30
Trichlorofluoromethane	A	5.0000	4.9600	2.34705	2.326645		-0.9	30

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	11DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	12/11/20
Lab Sample ID:	2022100-CCV1	Injection Time:	16:55

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.1600	0.3545077	0.3655856		3.1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0100	1.702496	1.70552		0.2	30
1,2,4-Trimethylbenzene	A	5.0000	6.0800	1.781325	2.164835		21.5	30
1,3,5-Trimethylbenzene	A	5.0000	4.0900	1.930352	1.580682		-18.1	30
Vinyl acetate	A	5.0000	5.4900	2.11964	2.325663		9.7	30
Vinyl bromide	A	5.0000	5.0500	0.7824054	0.7897465		0.9	30
Vinyl chloride	A	5.0000	4.4500	0.5526786	0.4916296		-11.0	30
p- & m-Xylenes	A	10.000	11.320	1.765584	1.999114		13.2	30
o-Xylene	A	5.0000	5.6500	1.802727	2.037245		13.0	30
Total Xylenes	A	15.000	16.970	1.777965	2.011824		13.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035147
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	11DEC03.D	Calibration Date:	08/15/18 14:58
Sequence:	2022100	Injection Date:	12/11/20
Lab Sample ID:	2022100-CCV2	Injection Time:	17:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	414.56	4.288774	3.555871		-17.1	30
Total Petroleum Hydrocarbons	A	500.00	414.56	4.288774	3.555871		-17.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021907
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021907-ICV1)			Lab File ID: 23NOV08.D		Analyzed: 11/23/20 14:14			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.738	11.73917	-0.0012	+/-1.0	
Initial Cal Blank (2021907-ICB1)			Lab File ID: 23NOV10.D		Analyzed: 11/23/20 15:14			
4-Bromofluorobenzene (Surrogate)	10.000	93.2	70 - 130	11.739	11.73917	-0.0002	+/-1.0	
Calibration Check (2021907-CCV1)			Lab File ID: 03DEC02.D		Analyzed: 12/03/20 10:56			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.737	11.73917	-0.0022	+/-1.0	
Calibration Blank (2021907-CCB1)			Lab File ID: 03DEC04.D		Analyzed: 12/03/20 11:56			
4-Bromofluorobenzene (Surrogate)	10.000	93.7	70 - 130	11.736	11.73917	-0.0032	+/-1.0	
SG-VW16A-01 (2035147-01RE1)			Lab File ID: 03DEC12.D		Analyzed: 12/03/20 16:22			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.732	11.73917	-0.0072	+/-1.0	
SG-VW26A-01 (2035147-03RE1)			Lab File ID: 03DEC14.D		Analyzed: 12/03/20 17:21			
4-Bromofluorobenzene (Surrogate)	10.000	94.2	70 - 130	11.734	11.73917	-0.0052	+/-1.0	
SG-VW26B-01 (2035147-04)			Lab File ID: 03DEC15.D		Analyzed: 12/03/20 17:50			
4-Bromofluorobenzene (Surrogate)	10.000	89.1	70 - 130	11.736	11.73917	-0.0032	+/-1.0	
SG-VW20A-01 (2035147-05RE1)			Lab File ID: 03DEC16.D		Analyzed: 12/03/20 18:20			
4-Bromofluorobenzene (Surrogate)	10.000	94.2	70 - 130	11.737	11.73917	-0.0022	+/-1.0	
SG-VW20B-01 (2035147-06)			Lab File ID: 03DEC17.D		Analyzed: 12/03/20 18:50			
4-Bromofluorobenzene (Surrogate)	10.000	87.3	70 - 130	11.738	11.73917	-0.0012	+/-1.0	
LCS (B094190-BS1)			Lab File ID: 03DEC20.D		Analyzed: 12/03/20 20:21			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.737	11.73917	-0.0022	+/-1.0	
LCS Dup (B094190-BSD1)			Lab File ID: 03DEC21.D		Analyzed: 12/03/20 20:52			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.737	11.73917	-0.0022	+/-1.0	
Blank (B094190-BLK1)			Lab File ID: 03DEC22.D		Analyzed: 12/03/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	86.0	70 - 130	11.737	11.73917	-0.0022	+/-1.0	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022100
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022100-ICV1)			Lab File ID: 09DEC14.D		Analyzed: 12/09/20 21:28			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.8	11.798	0.0020	+/-1.0	
Initial Cal Blank (2022100-ICB1)			Lab File ID: 09DEC16.D		Analyzed: 12/09/20 22:27			
4-Bromofluorobenzene (Surrogate)	10.000	93.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Check (2022100-CCV1)			Lab File ID: 11DEC02.D		Analyzed: 12/11/20 16:55			
4-Bromofluorobenzene (Surrogate)	10.000	99.0	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Blank (2022100-CCB1)			Lab File ID: 11DEC04.D		Analyzed: 12/11/20 17:55			
4-Bromofluorobenzene (Surrogate)	10.000	92.7	70 - 130	11.795	11.798	-0.0030	+/-1.0	
LCS (B094905-BS1)			Lab File ID: 11DEC06.D		Analyzed: 12/11/20 19:10			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.8	11.798	0.0020	+/-1.0	
LCS Dup (B094905-BSD1)			Lab File ID: 11DEC07.D		Analyzed: 12/11/20 19:42			
4-Bromofluorobenzene (Surrogate)	10.000	98.7	70 - 130	11.804	11.798	0.0060	+/-1.0	
Blank (B094905-BLK1)			Lab File ID: 11DEC08.D		Analyzed: 12/11/20 20:10			
4-Bromofluorobenzene (Surrogate)	10.000	89.8	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW16A-01 (2035147-01)			Lab File ID: 11DEC09.D		Analyzed: 12/11/20 20:46			
4-Bromofluorobenzene (Surrogate)	10.000	90.4	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW16B-01 (2035147-02)			Lab File ID: 11DEC10.D		Analyzed: 12/11/20 21:22			
4-Bromofluorobenzene (Surrogate)	10.000	93.1	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW26A-01 (2035147-03)			Lab File ID: 11DEC11.D		Analyzed: 12/11/20 21:57			
4-Bromofluorobenzene (Surrogate)	10.000	90.6	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW20A-01 (2035147-05)			Lab File ID: 11DEC12.D		Analyzed: 12/11/20 22:33			
4-Bromofluorobenzene (Surrogate)	10.000	92.9	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW31A-01 (2035147-07)			Lab File ID: 11DEC13.D		Analyzed: 12/11/20 23:08			
4-Bromofluorobenzene (Surrogate)	10.000	93.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW31B-01 (2035147-08)			Lab File ID: 11DEC14.D		Analyzed: 12/11/20 23:44			
4-Bromofluorobenzene (Surrogate)	10.000	90.2	70 - 130	11.795	11.798	-0.0030	+/-1.0	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D		Analyzed: 12/09/20 17:51			
4-Bromofluorobenzene (Surrogate)	10.000	98.4		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D		Analyzed: 12/09/20 18:20			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D		Analyzed: 12/09/20 18:51			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D		Analyzed: 12/09/20 19:29			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D		Analyzed: 12/09/20 20:12			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.795	11.798	-0.0030	+/-1.0	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D		Analyzed: 12/09/20 20:57			
4-Bromofluorobenzene (Surrogate)	10.000	103		11.795	11.798	-0.0030	+/-1.0	

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Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022118
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022118-CAL1)			Lab File ID: 23NOV02.D		Analyzed: 11/23/20 10:34			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.738	11.73917	-0.0012	+/-1.0	
Cal Standard (2022118-CAL2)			Lab File ID: 23NOV03.D		Analyzed: 11/23/20 11:03			
4-Bromofluorobenzene (Surrogate)	10.000	106		11.738	11.73917	-0.0012	+/-1.0	
Cal Standard (2022118-CAL3)			Lab File ID: 23NOV04.D		Analyzed: 11/23/20 11:35			
4-Bromofluorobenzene (Surrogate)	10.000	112		11.742	11.73917	0.0028	+/-1.0	
Cal Standard (2022118-CAL4)			Lab File ID: 23NOV05.D		Analyzed: 11/23/20 12:14			
4-Bromofluorobenzene (Surrogate)	10.000	112		11.74	11.73917	0.0008	+/-1.0	
Cal Standard (2022118-CAL5)			Lab File ID: 23NOV06.D		Analyzed: 11/23/20 12:55			
4-Bromofluorobenzene (Surrogate)	10.000	108		11.739	11.73917	-0.0002	+/-1.0	
Cal Standard (2022118-CAL6)			Lab File ID: 23NOV07.D		Analyzed: 11/23/20 13:41			
4-Bromofluorobenzene (Surrogate)	10.000	107		11.738	11.73917	-0.0012	+/-1.0	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021907
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021907-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	68255	11.021	150	50 - 200	-0.0010	+/-0.50	
Initial Cal Blank (2021907-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	68255	11.021	143	50 - 200	-0.0040	+/-0.50	
Initial Cal Check (2021907-ICV1)			Lab File ID: 23NOV08.D			Analyzed: 11/23/20 14:14			
Bromochloromethane (IS)	86304	7.5	68963	7.505	125	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	86081	11.016	68255	11.021	126	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	150114	8.694	111106	8.698	135	50 - 200	-0.0040	+/-0.50	
Initial Cal Blank (2021907-ICB1)			Lab File ID: 23NOV10.D			Analyzed: 11/23/20 15:14			
Bromochloromethane (IS)	80986	7.501	68963	7.505	117	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	75988	11.017	68255	11.021	111	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	142339	8.694	111106	8.698	128	50 - 200	-0.0040	+/-0.50	
Calibration Check (2021907-CCV1)			Lab File ID: 03DEC02.D			Analyzed: 12/03/20 10:56			
Bromochloromethane (IS)	84002	7.5	68963	7.505	122	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	85755	11.016	68255	11.021	126	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	156657	8.693	111106	8.698	141	50 - 200	-0.0050	+/-0.50	
Calibration Check (2021907-CCV2)			Lab File ID: 03DEC03.D			Analyzed: 12/03/20 11:28			
Chlorobenzene-d5 (IS)	88607	11.013	68255	11.021	130	50 - 200	-0.0080	+/-0.50	
Calibration Blank (2021907-CCB1)			Lab File ID: 03DEC04.D			Analyzed: 12/03/20 11:56			
Bromochloromethane (IS)	84804	7.494	68963	7.505	123	50 - 200	-0.0110	+/-0.50	
Chlorobenzene-d5 (IS)	84154	11.015	68255	11.021	123	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	162833	8.687	111106	8.698	147	50 - 200	-0.0110	+/-0.50	
SG-VW16A-01 (2035147-01RE1)			Lab File ID: 03DEC12.D			Analyzed: 12/03/20 16:22			
Bromochloromethane (IS)	73902	7.5	68963	7.505	107	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	76392	11.011	68255	11.021	112	50 - 200	-0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	139719	8.688	111106	8.698	126	50 - 200	-0.0100	+/-0.50	
SG-VW26A-01 (2035147-03RE1)			Lab File ID: 03DEC14.D			Analyzed: 12/03/20 17:21			
Bromochloromethane (IS)	73113	7.501	68963	7.505	106	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	71225	11.012	68255	11.021	104	50 - 200	-0.0090	+/-0.50	
1,4-Difluorobenzene (IS)	134438	8.69	111106	8.698	121	50 - 200	-0.0080	+/-0.50	

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Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021907
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW26B-01 (2035147-04)			Lab File ID: 03DEC15.D			Analyzed: 12/03/20 17:50			
Bromochloromethane (IS)	70421	7.499	68963	7.505	102	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	69129	11.015	68255	11.021	101	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	135210	8.692	111106	8.698	122	50 - 200	-0.0060	+/-0.50	
SG-VW20A-01 (2035147-05RE1)			Lab File ID: 03DEC16.D			Analyzed: 12/03/20 18:20			
Bromochloromethane (IS)	69139	7.499	68963	7.505	100	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	68006	11.015	68255	11.021	100	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	130600	8.693	111106	8.698	118	50 - 200	-0.0050	+/-0.50	
SG-VW20B-01 (2035147-06)			Lab File ID: 03DEC17.D			Analyzed: 12/03/20 18:50			
Bromochloromethane (IS)	70713	7.5	68963	7.505	103	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	72290	11.011	68255	11.021	106	50 - 200	-0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	132967	8.693	111106	8.698	120	50 - 200	-0.0050	+/-0.50	
LCS (B094190-BS1)			Lab File ID: 03DEC20.D			Analyzed: 12/03/20 20:21			
Bromochloromethane (IS)	72789	7.5	68963	7.505	106	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	74871	11.015	68255	11.021	110	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	134706	8.693	111106	8.698	121	50 - 200	-0.0050	+/-0.50	
LCS Dup (B094190-BSD1)			Lab File ID: 03DEC21.D			Analyzed: 12/03/20 20:52			
Bromochloromethane (IS)	71845	7.5	68963	7.505	104	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	75498	11.016	68255	11.021	111	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	133535	8.693	111106	8.698	120	50 - 200	-0.0050	+/-0.50	
Blank (B094190-BLK1)			Lab File ID: 03DEC22.D			Analyzed: 12/03/20 21:20			
Bromochloromethane (IS)	67755	7.499	68963	7.505	98	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	63936	11.01	68255	11.021	94	50 - 200	-0.0110	+/-0.50	
1,4-Difluorobenzene (IS)	127041	8.688	111106	8.698	114	50 - 200	-0.0100	+/-0.50	

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Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022100
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022100-ICV2)			Lab File ID: 15AUG11.D			Analyzed: 08/15/18 18:29			
Chlorobenzene-d5 (IS)	315173	11.463	152269	11.083	207	50 - 200	0.3800	+/-0.50	*
Initial Cal Blank (2022100-ICB2)			Lab File ID: 15AUG13.D			Analyzed: 08/15/18 19:39			
Chlorobenzene-d5 (IS)	238323	11.458	152269	11.083	157	50 - 200	0.3750	+/-0.50	
Initial Cal Check (2022100-ICV1)			Lab File ID: 09DEC14.D			Analyzed: 12/09/20 21:28			
Bromochloromethane (IS)	96813	7.611	99484	7.611	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	147966	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	286843	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2022100-ICB1)			Lab File ID: 09DEC16.D			Analyzed: 12/09/20 22:27			
Bromochloromethane (IS)	102738	7.606	99484	7.611	103	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148227	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	294142	8.79	289206	8.79	102	50 - 200	0.0000	+/-0.50	
Calibration Check (2022100-CCV1)			Lab File ID: 11DEC02.D			Analyzed: 12/11/20 16:55			
Bromochloromethane (IS)	95694	7.606	99484	7.611	96	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148961	11.078	152269	11.083	98	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	293576	8.79	289206	8.79	102	50 - 200	0.0000	+/-0.50	
Calibration Check (2022100-CCV2)			Lab File ID: 11DEC03.D			Analyzed: 12/11/20 17:27			
Chlorobenzene-d5 (IS)	150025	11.083	152269	11.083	99	50 - 200	0.0000	+/-0.50	
Calibration Blank (2022100-CCB1)			Lab File ID: 11DEC04.D			Analyzed: 12/11/20 17:55			
Bromochloromethane (IS)	99403	7.606	99484	7.611	100	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148792	11.078	152269	11.083	98	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	294398	8.785	289206	8.79	102	50 - 200	-0.0050	+/-0.50	
LCS (B094905-BS1)			Lab File ID: 11DEC06.D			Analyzed: 12/11/20 19:10			
Bromochloromethane (IS)	91763	7.606	99484	7.611	92	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	145066	11.083	152269	11.083	95	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	279222	8.79	289206	8.79	97	50 - 200	0.0000	+/-0.50	
LCS Dup (B094905-BSD1)			Lab File ID: 11DEC07.D			Analyzed: 12/11/20 19:42			
Bromochloromethane (IS)	95707	7.606	99484	7.611	96	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	150399	11.078	152269	11.083	99	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	286444	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022100
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B094905-BLK1)			Lab File ID: 11DEC08.D			Analyzed: 12/11/20 20:10			
Bromochloromethane (IS)	94410	7.606	99484	7.611	95	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	138522	11.078	152269	11.083	91	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	272716	8.785	289206	8.79	94	50 - 200	-0.0050	+/-0.50	
SG-VW16A-01 (2035147-01)			Lab File ID: 11DEC09.D			Analyzed: 12/11/20 20:46			
Bromochloromethane (IS)	92020	7.611	99484	7.611	92	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	149591	11.083	152269	11.083	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268378	8.795	289206	8.79	93	50 - 200	0.0050	+/-0.50	
SG-VW16B-01 (2035147-02)			Lab File ID: 11DEC10.D			Analyzed: 12/11/20 21:22			
Bromochloromethane (IS)	92558	7.616	99484	7.611	93	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	141305	11.083	152269	11.083	93	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268754	8.789	289206	8.79	93	50 - 200	-0.0010	+/-0.50	
SG-VW26A-01 (2035147-03)			Lab File ID: 11DEC11.D			Analyzed: 12/11/20 21:57			
Bromochloromethane (IS)	94647	7.616	99484	7.611	95	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148537	11.083	152269	11.083	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	278529	8.794	289206	8.79	96	50 - 200	0.0040	+/-0.50	
SG-VW20A-01 (2035147-05)			Lab File ID: 11DEC12.D			Analyzed: 12/11/20 22:33			
Bromochloromethane (IS)	92611	7.616	99484	7.611	93	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147830	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	274828	8.795	289206	8.79	95	50 - 200	0.0050	+/-0.50	
SG-VW31A-01 (2035147-07)			Lab File ID: 11DEC13.D			Analyzed: 12/11/20 23:08			
Bromochloromethane (IS)	95612	7.616	99484	7.611	96	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	144963	11.083	152269	11.083	95	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	274691	8.794	289206	8.79	95	50 - 200	0.0040	+/-0.50	
SG-VW31B-01 (2035147-08)			Lab File ID: 11DEC14.D			Analyzed: 12/11/20 23:44			
Bromochloromethane (IS)	86748	7.616	99484	7.611	87	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	138120	11.083	152269	11.083	91	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	254329	8.794	289206	8.79	88	50 - 200	0.0040	+/-0.50	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL7)			Lab File ID: 15AUG05.D			Analyzed: 08/15/18 14:58			
Chlorobenzene-d5 (IS)	100626	11.458	152269	11.083	66	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL8)			Lab File ID: 15AUG06.D			Analyzed: 08/15/18 15:32			
Chlorobenzene-d5 (IS)	111220	11.458	152269	11.083	73	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL9)			Lab File ID: 15AUG07.D			Analyzed: 08/15/18 16:06			
Chlorobenzene-d5 (IS)	126204	11.463	152269	11.083	83	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALA)			Lab File ID: 15AUG08.D			Analyzed: 08/15/18 16:41			
Chlorobenzene-d5 (IS)	161152	11.463	152269	11.083	106	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALB)			Lab File ID: 15AUG09.D			Analyzed: 08/15/18 17:15			
Chlorobenzene-d5 (IS)	216625	11.463	152269	11.083	142	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALC)			Lab File ID: 15AUG10.D			Analyzed: 08/15/18 17:52			
Chlorobenzene-d5 (IS)	281647	11.463	152269	11.083	185	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D			Analyzed: 12/09/20 17:51			
Bromochloromethane (IS)	99799	7.601	99484	7.611	100	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	143805	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	276641	8.785	289206	8.79	96	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D			Analyzed: 12/09/20 18:20			
Bromochloromethane (IS)	98810	7.606	99484	7.611	99	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143300	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	279854	8.79	289206	8.79	97	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D			Analyzed: 12/09/20 18:51			
Bromochloromethane (IS)	99484	7.611	99484	7.611	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	152269	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	289206	8.79	289206	8.79	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D			Analyzed: 12/09/20 19:29			
Bromochloromethane (IS)	97426	7.611	99484	7.611	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	163565	11.083	152269	11.083	107	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295481	8.795	289206	8.79	102	50 - 200	0.0050	+/-0.50	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D			Analyzed: 12/09/20 20:12			
Bromochloromethane (IS)	95008	7.611	99484	7.611	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	168482	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	302542	8.795	289206	8.79	105	50 - 200	0.0050	+/-0.50	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D			Analyzed: 12/09/20 20:57			
Bromochloromethane (IS)	90786	7.606	99484	7.611	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	168261	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	292768	8.789	289206	8.79	101	50 - 200	-0.0010	+/-0.50	

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Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022118
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022118-CAL7)			Lab File ID: 16OCT10.D			Analyzed: 10/16/20 14:05			
Chlorobenzene-d5 (IS)	64445	11.017	68255	11.021	94	50 - 200	-0.0040	+/-0.50	
Cal Standard (2022118-CAL8)			Lab File ID: 16OCT11.D			Analyzed: 10/16/20 14:34			
Chlorobenzene-d5 (IS)	65904	11.017	68255	11.021	97	50 - 200	-0.0040	+/-0.50	
Cal Standard (2022118-CAL9)			Lab File ID: 16OCT12.D			Analyzed: 10/16/20 15:03			
Chlorobenzene-d5 (IS)	71033	11.018	68255	11.021	104	50 - 200	-0.0030	+/-0.50	
Cal Standard (2022118-CALA)			Lab File ID: 16OCT13.D			Analyzed: 10/16/20 15:34			
Chlorobenzene-d5 (IS)	75959	11.016	68255	11.021	111	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022118-CALB)			Lab File ID: 16OCT14.D			Analyzed: 10/16/20 16:05			
Chlorobenzene-d5 (IS)	81415	11.016	68255	11.021	119	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022118-CALC)			Lab File ID: 16OCT15.D			Analyzed: 10/16/20 16:41			
Chlorobenzene-d5 (IS)	92664	11.021	68255	11.021	136	50 - 200	0.0000	+/-0.50	
Cal Standard (2022118-CAL1)			Lab File ID: 23NOV02.D			Analyzed: 11/23/20 10:34			
Bromochloromethane (IS)	62719	7.5	68963	7.505	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	59711	11.016	68255	11.021	87	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	107176	8.694	111106	8.698	96	50 - 200	-0.0040	+/-0.50	
Cal Standard (2022118-CAL2)			Lab File ID: 23NOV03.D			Analyzed: 11/23/20 11:03			
Bromochloromethane (IS)	77078	7.5	68963	7.505	112	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	71726	11.016	68255	11.021	105	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	131686	8.693	111106	8.698	119	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022118-CAL3)			Lab File ID: 23NOV04.D			Analyzed: 11/23/20 11:35			
Bromochloromethane (IS)	68963	7.505	68963	7.505	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	68255	11.021	68255	11.021	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	111106	8.698	111106	8.698	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022118-CAL4)			Lab File ID: 23NOV05.D			Analyzed: 11/23/20 12:14			
Bromochloromethane (IS)	75541	7.507	68963	7.505	110	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	79517	11.018	68255	11.021	116	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	119587	8.701	111106	8.698	108	50 - 200	0.0030	+/-0.50	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022118
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012011

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022118-CAL5)			Lab File ID: 23NOV06.D			Analyzed: 11/23/20 12:55			
Bromochloromethane (IS)	80643	7.507	68963	7.505	117	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	89981	11.022	68255	11.021	132	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	131464	8.7	111106	8.698	118	50 - 200	0.0020	+/-0.50	
Cal Standard (2022118-CAL6)			Lab File ID: 23NOV07.D			Analyzed: 11/23/20 13:41			
Bromochloromethane (IS)	103141	7.506	68963	7.505	150	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	115462	11.021	68255	11.021	169	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	177582	8.699	111106	8.698	160	50 - 200	0.0010	+/-0.50	

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Calibration: 2012010

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
8G16027	TO-3/TO-14A/TO-15 BFB Working Std.	2022117-TUN2	15AUG04.D	08/15/18 14:24
9H08027	TO-14A / TO-15 CAL1 TPH	2022117-CAL7	15AUG05.D	08/15/18 14:58
9H08028	TO-14A / TO-15 CAL2 TPH	2022117-CAL8	15AUG06.D	08/15/18 15:32
9H08029	TO-14A / TO-15 CAL3 TPH	2022117-CAL9	15AUG07.D	08/15/18 16:06
9H08030	TO-14A / TO-15 CAL4 TPH	2022117-CALA	15AUG08.D	08/15/18 16:41
9H08031	TO-14A / TO-15 CAL5 TPH	2022117-CALB	15AUG09.D	08/15/18 17:15
9H08032	TO-14A / TO-15 CAL6 TPH	2022117-CALC	15AUG10.D	08/15/18 17:52
0L01028	TO-14A/TO-15 Working BFB	2022117-TUN1	09DEC07.D	12/09/20 17:22
0L10033	MS-A1 TO-14A /TO-15 CAL1	2022117-CAL1	09DEC08.D	12/09/20 17:51
0L10034	MS-A1 TO-14A /TO-15 CAL2	2022117-CAL2	09DEC09.D	12/09/20 18:20
0L10035	MS-A1 TO-14A /TO-15 CAL3	2022117-CAL3	09DEC10.D	12/09/20 18:51
0L10036	MS-A1 TO-14A /TO-15 CAL4	2022117-CAL4	09DEC11.D	12/09/20 19:29
0L10037	MS-A1 TO-14A /TO-15 CAL5	2022117-CAL5	09DEC12.D	12/09/20 20:12
0L10038	MS-A1 TO-14A /TO-15 CAL6	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022118
Calibration: 2012011

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J06018	TO-3 Working BFB STD	2022118-TUN2	16OCT09.D	10/16/20 13:36
0L12008	MS-A1 TO-14A / TO-15 CAL1 TPH	2022118-CAL7	16OCT10.D	10/16/20 14:05
0L12009	MS-A1 TO-14A / TO-15 CAL2 TPH	2022118-CAL8	16OCT11.D	10/16/20 14:34
0L12010	MS-A1 TO-14A / TO-15 CAL3 TPH	2022118-CAL9	16OCT12.D	10/16/20 15:03
0L12011	MS-A1 TO-14A / TO-15 CAL4 TPH	2022118-CALA	16OCT13.D	10/16/20 15:34
0L12012	MS-A1 TO-14A / TO-15 CAL5 TPH	2022118-CALB	16OCT14.D	10/16/20 16:05
0L12013	MS-A1 TO-14A / TO-15 CAL6 TPH	2022118-CALC	16OCT15.D	10/16/20 16:41
0K13004	TO-14A/TO-15 Working BFB	2022118-TUN1	23NOV01.D	11/23/20 10:04
0K23030	MS-A1 TO-14A /TO-15 CAL1	2022118-CAL1	23NOV02.D	11/23/20 10:34
0K23031	MS-A1 TO-14A /TO-15 CAL2	2022118-CAL2	23NOV03.D	11/23/20 11:03
0K23032	MS-A1 TO-14A /TO-15 CAL3	2022118-CAL3	23NOV04.D	11/23/20 11:35
0K23033	MS-A1 TO-14A /TO-15 CAL4	2022118-CAL4	23NOV05.D	11/23/20 12:14
0K23034	MS-A1 TO-14A /TO-15 CAL5	2022118-CAL5	23NOV06.D	11/23/20 12:55
0K23035	MS-A1 TO-14A /TO-15 CAL6	2022118-CAL6	23NOV07.D	11/23/20 13:41

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.318049	1	1.330129	5	1.313518	15	1.359268	20	1.463482	25	1.527482
Acrylonitrile	0.5	0.356717	1	0.3906487	5	0.4536408	15	0.504766	20	0.5409071	25	0.5937215
Allyl chloride	0.5	0.7016102	1	0.7586277	5	0.9155241	15	1.008341	20	1.067989	25	1.134792
t-Amyl Methyl ether	0.5	0.359455	1	0.4046753	5	0.4969192	15	0.5688059	20	0.5901445	25	0.6309815
Benzene	0.5	1.773364	1	1.969133	5	2.295726	15	2.462457	20	2.610849	25	2.749688
Benzyl chloride	0.5	0.524043	1	0.6993719	5	1.22193	15	1.598569	20	1.612576	25	1.651268
Bromodichloromethane	0.5	0.7502865	1	0.74253	5	0.7567547	15	0.7550514	20	0.7369688	25	0.7572822
Bromoform	0.5	1.180348	1	1.24843	5	1.363784	15	1.359003	20	1.321459	25	1.301896
Bromomethane	0.5	0.5869798	1	0.5809129	5	0.5200635	15	0.5535757	20	0.5854244	25	0.6060185
1,3-Butadiene	0.5	0.4174391	1	0.4243498	5	0.4105384	15	0.4309733	20	0.4597876	25	0.4812504
t-Butyl alcohol	1	0.8454995	2	0.9820868	10	1.131911	30	1.207857	40	1.298012	50	1.400927
Carbon disulfide	0.5	2.253129	1	2.331748	5	2.437216	15	2.615092	20	2.77184	25	2.928434
Carbon tetrachloride	0.5	1.768354	1	1.832203	5	1.853806	15	1.94391	20	2.051348	25	2.138902
Chlorobenzene	0.5	0.8481028	1	0.8184625	5	0.7857098	15	0.7869406	20	0.7665382	25	0.7805402
Chloroethane	0.5	0.2607241	1	0.2489627	5	0.2465723	15	0.2557633	20	0.2703825	25	0.275809
Chloroform	0.5	1.809437	1	1.834025	5	1.773491	15	1.821868	20	1.90515	25	2.005917
Chloromethane	0.5	0.4585216	1	0.4539014	5	0.4353866	15	0.4497157	20	0.4689816	25	0.4880048
Cyclohexane	0.5	2.306236	1	1.827042	5	1.422902	15	1.403075	20	1.464229	25	1.49175
Dibromochloromethane	0.5	0.6157439	1	0.6439072	5	0.6808987	15	0.7069377	20	0.7015637	25	0.7170005
1,2-Dibromo-3-chloropropane	0.5	0.1045861	1	0.122889	5	0.1614774	15	0.193766	20	0.2021462	25	0.2061797
1,2-Dibromoethane	0.5	0.3900362	1	0.4303673	5	0.4747758	15	0.4992696	20	0.500276	25	0.5218453
Dibromomethane	0.5	0.1341088	1	0.1346774	5	0.1269268	15	0.1307044	20	0.1289887	25	0.1342414
1,2-Dichlorobenzene	0.5	0.8169396	1	0.9780879	5	1.185625	15	1.210524	20	1.180921	25	1.159793
1,3-Dichlorobenzene	0.5	1.045304	1	1.246127	5	1.386375	15	1.318408	20	1.293675	25	1.276358
1,4-Dichlorobenzene	0.5	0.8774382	1	1.097278	5	1.205774	15	1.28349	20	1.224006	25	1.215775

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.32327	1	2.269507	5	2.177556	15	2.240702	20	2.350139	25	2.422523
1,1-Dichloroethane	0.5	1.393401	1	1.421415	5	1.456576	15	1.496924	20	1.577741	25	1.660137
1,2-Dichloroethane	0.5	1.1441	1	1.206659	5	1.205842	15	1.256571	20	1.339798	25	1.402005
1,1-Dichloroethene	0.5	1.026463	1	1.142091	5	1.269149	15	1.331383	20	1.374163	25	1.444906
cis-1,2-Dichloroethene	0.5	0.7966012	1	0.8438417	5	1.017229	15	1.160587	20	1.218129	25	1.28967
trans-1,2-Dichloroethene	0.5	0.9601299	1	1.041899	5	1.194524	15	1.327606	20	1.389662	25	1.472936
1,2-Dichloropropane	0.5	0.2972806	1	0.2886148	5	0.2984032	15	0.298009	20	0.2964613	25	0.3051098
cis-1,3-Dichloropropene	0.5	0.2450107	1	0.2753936	5	0.3843281	15	0.4469977	20	0.459247	25	0.4807534
trans-1,3-Dichloropropene	0.5	0.2774715	1	0.3143067	5	0.4384833	15	0.4738263	20	0.4781601	25	0.4960651
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.662943	1	1.601255	5	1.55611	15	1.575616	20	1.628021	25	1.680246
1,1-Difluoroethane	0.5	1.27837	1	1.272948	5	1.207109	15	1.297313	20	1.370369	25	1.427502
Diisopropyl ether	0.5	0.4176395	1	0.4424653	5	0.5155	15	0.5597684	20	0.5804932	25	0.6058511
1,4-Dioxane	0.5	0.1615813	1	0.1882767	5	0.1291813	15	0.1097893	20	0.1179935	25	0.1311892
Ethanol	1	0.1506027	2	0.1487198	10	0.1344839	30	0.1334038	40	0.1428143	50	0.1508735
Ethyl acetate	0.5	0.2210443	1	0.2506831	5	0.2783362	15	0.279111	20	0.2894704	25	0.2995528
Ethylbenzene	0.5	0.4513056	1	0.588067	5	0.7303916	15	0.7306127	20	0.7133997	25	0.7017003
1-Ethyl-4-methylbenzene	0.5	1.581586	1	2.365038	5	3.404002	15	3.494109	20	3.15999	25	3.160982
Ethyl t-butyl ether	0.5	1.134681	1	1.392369	5	1.833441	15	2.054558	20	2.160839	25	2.296173
n-Heptane	0.5	0.2233219	1	0.2576343	5	0.2869443	15	0.2887969	20	0.2799	25	0.2828164
Hexachlorobutadiene	0.5	0.6017871	1	0.6351012	5	0.6298459	15	0.6231692	20	0.6125432	25	0.6191001
Hexachloroethane	0.5	0.2317027	1	0.24194	5	0.2679731	15	0.2830027	20	0.2801546	25	0.2827393
Hexane	0.5	1.161334	1	1.283069	5	1.32357	15	1.361101	20	1.384347	25	1.411663
2-Hexanone	0.5	0.2064047	1	0.2940462	5	0.5131221	15	0.5994249	20	0.5953157	25	0.6129891
Isooctane	0.5	1.365307	1	1.525724	5	1.547181	15	1.468144	20	1.395833	25	1.401899
Isopropyl alcohol	0.5	0.7957996	1	0.7968829	5	0.9098146	15	0.9920897	20	1.075799	25	1.15535
Methylene chloride	0.5	1.088788	1	1.004554	5	0.853303	15	0.8743388	20	0.9057553	25	0.953191

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.196605	1	1.364336	5	1.580455	15	1.718234	20	1.808342	25	1.929725
Methyl iodide	0.5	0.755719	1	0.7820059	5	0.8648024	15	0.9870329	20	1.065052	25	1.132902
Methyl isobutyl ketone	0.5	0.4311002	1	0.5553253	5	0.6623583	15	0.6631041	20	0.6351184	25	0.6305033
Methyl t-butyl ether	0.5	1.428872	1	1.685356	5	2.217703	15	2.511616	20	2.711382	25	2.913141
Naphthalene	0.5	0.1796878	1	0.3549197	5	1.305965	15	1.845998	20	1.934052	25	2.043333
Propylene	0.5	0.5088227	1	0.4929663	5	0.5529532	15	0.6329317	20	0.6526714	25	0.6902782
Styrene	0.5	0.6311324	1	0.8736218	5	1.291281	15	1.357552	20	1.32437	25	1.321283
1,1,1,2-Tetrachloroethane	0.5	0.2412513	1	0.2410543	5	0.2415164	15	0.2481378	20	0.2449842	25	0.2528992
1,1,2,2-Tetrachloroethane	0.5	1.377838	1	1.46448	5	1.376472	15	1.232578	20	1.164032	25	1.124282
Tetrachloroethene	0.5	0.4413662	1	0.4567382	5	0.49268	15	0.5117757	20	0.5014064	25	0.5183818
1,1,1,2-Tetrafluoroethane	0.5	1.148308	1	1.137233	5	1.083913	15	1.125606	20	1.166865	25	1.193012
Tetrahydrofuran	0.5	0.6264592	1	0.7442567	5	0.8737686	15	0.9055625	20	0.9330477	25	0.9667878
Toluene	0.5	0.5888498	1	0.7035454	5	0.9519789	15	0.9855682	20	0.9742432	25	1.012417
1,2,4-Trichlorobenzene	0.5	9.498974E-02	1	0.1296581	5	0.2424656	15	0.3764701	20	0.4117888	25	0.4458597
1,1,1-Trichloroethane	0.5	1.561539	1	1.589718	5	1.623899	15	1.72999	20	1.8181	25	1.935761
1,1,2-Trichloroethane	0.5	0.3468033	1	0.3409992	5	0.3426001	15	0.3369241	20	0.3374441	25	0.3484657
Trichloroethene	0.5	0.3156437	1	0.3381406	5	0.3468531	15	0.3337496	20	0.3253763	25	0.3271164
Trichlorofluoromethane	0.5	2.365354	1	2.338427	5	2.230188	15	2.279761	20	2.375826	25	2.492746
1,2,3-Trichloropropane	0.5	0.3360106	1	0.3702722	5	0.3735494	15	0.3522677	20	0.3449449	25	0.3500015
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.739697	1	1.693756	5	1.625045	15	1.645912	20	1.704814	25	1.80575
1,2,4-Trimethylbenzene	0.5	0.968951	1	1.42254	5	2.088672	15	2.113806	20	2.047875	25	2.046107
1,3,5-Trimethylbenzene	0.5	1.538333	1	2.030147	5	2.131741	15	1.965979	20	2.076079	25	1.839832
Vinyl acetate	0.5	1.408431	1	1.693958	5	2.080254	15	2.360246	20	2.513252	25	2.661697
Vinyl bromide	0.5	0.7316707	1	0.7136929	5	0.7272526	15	0.7854577	20	0.8474023	25	0.8889564
Vinyl chloride	0.5	0.5364783	1	0.5304119	5	0.5264364	15	0.5428599	20	0.5801932	25	0.5996916
p- & m-Xylenes	1	1.482772	2	1.836741	10	1.945406	30	1.821435	40	1.773589	50	1.733564

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	1.458225	1	1.85157	5	2.029211	15	1.918858	20	1.806383	25	1.752114
Total Xylenes	1.5	1.474589	3	1.841684	15	1.973341	45	1.853909	60	1.78452	75	1.739747
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.299357	10	1.329658	10	1.329844	10	1.342598	10	1.343331	10	1.357944

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
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Matrix: Air
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Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
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Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Calibration: 2012010
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
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Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
Total Petroleum Hydrocarbons	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
4-Bromofluorobenzene (Surrogate)	10	~~1.108133~~	10	~~1.123908~~	10	~~1.17696~~	10	~~1.135282~~	10	~~1.101876~~	10	~~1.117431~~

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INITIAL CALIBRATION DATA (Continued)

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Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.385321	6.434241	5.375333	7.585906E-02			30	
Acrylonitrile	0.4734002	19.09838	5.724167	4.485642E-02			30	
Allyl chloride	0.9311473	18.52982	6.181167	2.958166E-02			30	
t-Amyl Methyl ether	0.5084969	21.25953	8.938667	5.593406E-02			30	
Benzene	2.310203	16.32816	8.611333	0.0354558			30	
Benzyl chloride	1.21796	40.86811	12.55917	5.166128E-02	0.998788		0.99	
Bromodichloromethane	0.7498123	1.115201	9.1845	2.637263E-02			30	
Bromoform	1.29582	5.444284	11.41583	7.775371E-03			30	
Bromomethane	0.5721625	5.345957	4.797333	5.836302E-02			30	
1,3-Butadiene	0.4373898	6.265987	4.580333	8.255267E-02			30	
t-Butyl alcohol	1.144382	17.87723	6.016667	0.162368			30	
Carbon disulfide	2.556243	10.27469	6.369	4.812452E-02			30	
Carbon tetrachloride	1.931421	7.323825	8.6985	2.799377E-02			30	
Chlorobenzene	0.7977157	3.759311	11.1045	2.403318E-02			30	
Chloroethane	0.2597023	4.483178	4.929167	4.551929E-02			30	
Chloroform	1.858315	4.533156	7.689833	6.832862E-02			30	
Chloromethane	0.4590853	3.909782	4.306333	0.0661716			30	
Cyclohexane	1.652539	21.5489	8.779166	1.958413E-02			30	
Dibromochloromethane	0.6776753	5.887607	10.42417	9.295585E-03			30	
1,2-Dibromo-3-chloropropane	0.1651741	26.16444	13.11533	5.121901E-02			30	
1,2-Dibromoethane	0.4694284	10.6287	10.55367	0.0345858			30	
Dibromomethane	0.1316079	2.455095	9.063667	3.849048E-02			30	
1,2-Dichlorobenzene	1.088648	14.45884	12.831	0.0493743			30	
1,3-Dichlorobenzene	1.261041	9.183964	12.5775	2.968233E-02			30	
1,4-Dichlorobenzene	1.150627	12.76119	12.61567	3.617238E-02			30	
Dichlorodifluoromethane	2.297283	3.767884	4.174833	8.952619E-02			30	

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2020 L St, Suite 400
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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Instrument: MS-A2
Matrix: Air
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.501032	6.735961	6.933333	4.629958E-02			30	
1,2-Dichloroethane	1.259162	7.596921	8.167667	5.401423E-02			30	
1,1-Dichloroethene	1.264693	12.28587	6.01	5.078188E-02			30	
cis-1,2-Dichloroethene	1.054343	19.23343	7.498833	4.922458E-02			30	
trans-1,2-Dichloroethene	1.231126	16.38681	6.786	6.697634E-02			30	
1,2-Dichloropropane	0.2973131	1.772499	9.082333	0.0332132			30	
cis-1,3-Dichloropropene	0.3819551	26.20214	9.945667	1.908951E-02			30	
trans-1,3-Dichloropropene	0.4130522	22.60837	9.673	1.900437E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.617365	3.016325	4.378333	5.738072E-02			30	
1,1-Difluoroethane	1.308935	5.973258	4.051	0.1098626			30	
Diisopropyl ether	0.5202863	14.66801	7.6135	6.986398E-02			30	
1,4-Dioxane	0.1396685	21.20894	9.206	0.1521462			30	
Ethanol	0.143483	5.538474	4.988167	9.750767E-02			30	
Ethyl acetate	0.2696996	10.7133	7.611	7.224087E-02			30	
Ethylbenzene	0.6525795	17.19123	11.26983	2.214918E-02			30	
1-Ethyl-4-methylbenzene	2.860951	25.95955	12.19117	4.650695E-02			30	
Ethyl t-butyl ether	1.81201	25.29311	7.960667	6.904968E-02			30	
n-Heptane	0.2699023	9.423343	9.353167	1.061473E-02			30	
Hexachlorobutadiene	0.6202578	1.93835	14.451	3.287711E-02			30	
Hexachloroethane	0.2645854	8.479442	13.27683	0.0254833			30	
Hexane	1.320847	6.837258	7.631	0.043305			30	
2-Hexanone	0.4702171	37.46843	10.31583	0.0848794	0.999488		0.99	
Isooctane	1.450681	5.151604	9.228333	2.658184E-02			30	
Isopropyl alcohol	0.9542893	15.43601	5.5465	7.439658E-02			30	
Methylene chloride	0.946655	9.35498	6.082333	4.280757E-02			30	
Methyl ethyl ketone	1.599616	17.34159	7.192333	7.378315E-02			30	

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.9312524	16.57855	5.966833	6.516463E-02			30	
Methyl isobutyl ketone	0.5962516	15.08928	9.6905	6.228694E-02			30	
Methyl t-butyl ether	2.244678	26.09128	6.9705	8.879637E-02			30	
Naphthalene	1.277326	64.53852	14.18017	5.710332E-02		0.9995633	0.99	
Propylene	0.5884372	13.84574	4.116667	0.1265706			30	
Styrene	1.133207	26.96022	11.523	2.137161E-02			30	
1,1,1,2-Tetrachloroethane	0.2449739	1.949129	11.09133	1.847227E-02			30	
1,1,2,2-Tetrachloroethane	1.289947	10.53074	11.574	2.054784E-02			30	
Tetrachloroethene	0.487058	6.38568	10.7705	2.452836E-02			30	
1,1,1,2-Tetrafluoroethane	1.142489	3.257289	3.987833	9.401626E-02			30	
Tetrahydrofuran	0.8416471	15.48443	7.960667	5.551932E-02			30	
Toluene	0.8694338	20.44441	10.2015	2.829269E-02			30	
1,2,4-Trichlorobenzene	0.2835387	52.86741	14.063	0.0287038		0.9995862	0.99	
1,1,1-Trichloroethane	1.709834	8.55465	8.333	0.0497117			30	
1,1,2-Trichloroethane	0.3422061	1.38609	10.04983	1.951433E-02			30	
Trichloroethene	0.3311466	3.286654	9.210333	2.207399E-02			30	
Trichlorofluoromethane	2.34705	3.841655	5.5215	5.048852E-02			30	
1,2,3-Trichloropropane	0.3545077	4.126535	11.63517	1.227276E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.702496	3.836183	6.284167	0.0386248			30	
1,2,4-Trimethylbenzene	1.781325	26.74482	12.46217	4.723045E-02			30	
1,3,5-Trimethylbenzene	1.930352	11.22834	12.22533	3.608963E-02			30	
Vinyl acetate	2.11964	23.06626	6.9995	4.111779E-02			30	
Vinyl bromide	0.7824054	9.203146	5.204167	3.659738E-02			30	
Vinyl chloride	0.5526786	5.434517	4.474667	5.633136E-02			30	
p- & m-Xylenes	1.765584	8.832349	11.3505	2.199905E-02			30	
o-Xylene	1.802727	10.76843	11.57717	2.744893E-02			30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	1.777965	9.463054	11.57717	2.744893E-02			30	
TPH - Gasoline	4.288774	3.545743	11.13	7.349294			30	
Total Petroleum Hydrocarbons	4.288774	3.545743	11.13	7.349294			30	
4-Bromofluorobenzene (Surrogate)	1.333789	1.488289	11.798	2.204781E-02			30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.828792	1	1.493811	5	1.422676	15	1.321887	20	1.513008	25	1.291366
Acrylonitrile	0.5	0.6001371	1	0.5672176	5	0.5949567	15	0.5931966	20	0.6234639	25	0.678225
Allyl chloride	0.5	1.070808	1	1.025066	5	1.055842	15	1.045851	20	1.089506	25	1.111969
t-Amyl Methyl ether	0.5	1.139994	1	1.094725	5	1.186201	15	1.173963	20	1.175364	25	1.133712
Benzene	0.5	1.21016	1	1.218376	5	1.149834	15	1.149495	20	1.205616	25	1.325141
Benzyl chloride	0.5	0.608933	1	0.738226	5	1.406842	15	1.986351	20	2.035207	25	2.05271
Bromodichloromethane	0.5	0.9153169	1	0.8398767	5	0.9230645	15	0.9023445	20	0.8843372	25	0.8052933
Bromoform	0.5	1.31701	1	1.30162	5	1.255849	15	1.24334	20	1.195541	25	1.185983
Bromomethane	0.5	0.39669	1	0.3431589	5	0.3417775	15	0.3296665	20	0.3935121	25	0.350111
1,3-Butadiene	0.5	0.5519858	1	0.510911	5	0.5114917	15	0.5154199	20	0.6093151	25	0.5506714
t-Butyl alcohol	1	2.244774	2	2.05785	10	2.087482	30	1.972086	40	2.049561	50	1.996938
Carbon disulfide	0.5	1.277444	1	1.24614	5	1.141337	15	1.132912	20	1.18009	25	1.324773
Carbon tetrachloride	0.5	1.628215	1	1.399102	5	1.489842	15	1.43004	20	1.409701	25	1.282621
Chlorobenzene	0.5	0.7957005	1	0.8084383	5	0.8175256	15	0.8437539	20	0.8391841	25	0.82432
Chloroethane	0.5	0.2480907	1	0.2285996	5	0.219074	15	0.2079224	20	0.2463822	25	0.2236007
Chloroform	0.5	1.274574	1	1.15195	5	1.102243	15	1.061463	20	1.080751	25	1.062553
Chloromethane	0.5	0.6773067	1	0.5988739	5	0.5779041	15	0.5615052	20	0.6207916	25	0.5739134
Cyclohexane	0.5	2.418087	1	1.767171	5	1.269289	15	1.173897	20	1.19577	25	1.238856
Dibromochloromethane	0.5	0.8550422	1	0.8224868	5	0.8881429	15	0.9078523	20	0.900372	25	0.8361028
1,2-Dibromo-3-chloropropane	0.5		1	4.754203E-02	5	0.0607721	15	7.349372E-02	20	7.258199E-02	25	6.739533E-02
1,2-Dibromoethane	0.5	0.4887288	1	0.4819799	5	0.5175418	15	0.54463	20	0.5433655	25	0.5339145
Dibromomethane	0.5	0.6934388	1	0.6472974	5	0.6862996	15	0.7001263	20	0.6839591	25	0.6509308
1,2-Dichlorobenzene	0.5	0.998141	1	1.078131	5	1.330745	15	1.402015	20	1.364494	25	1.408782
1,3-Dichlorobenzene	0.5	1.039674	1	1.124	5	1.406315	15	1.50206	20	1.511625	25	1.542793
1,4-Dichlorobenzene	0.5	0.7368827	1	0.8462761	5	1.170141	15	1.298171	20	1.279131	25	1.344065

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	1.789888	1	1.484211	5	1.543117	15	1.426775	20	1.542	25	1.280825
1,1-Dichloroethane	0.5	1.018192	1	0.9594177	5	0.9012369	15	0.8925925	20	0.9198133	25	0.9411388
1,2-Dichloroethane	0.5	1.188794	1	1.020784	5	1.079448	15	1.034846	20	1.016461	25	0.9169273
1,1-Dichloroethene	0.5	0.9984215	1	0.9800462	5	0.9792497	15	0.9302057	20	0.9433925	25	0.9161129
cis-1,2-Dichloroethene	0.5	0.7819002	1	0.7306884	5	0.767194	15	0.7879253	20	0.7967834	25	0.8050223
trans-1,2-Dichloroethene	0.5	0.8791594	1	0.8304575	5	0.8600264	15	0.8685526	20	0.9014112	25	0.9092252
1,2-Dichloropropane	0.5	0.3067851	1	0.3038288	5	0.3133764	15	0.3201909	20	0.3204489	25	0.3271728
cis-1,3-Dichloropropene	0.5	0.4047548	1	0.4115851	5	0.4968769	15	0.5287754	20	0.5297838	25	0.496895
trans-1,3-Dichloropropene	0.5	0.4097932	1	0.4440867	5	0.4741238	15	0.494396	20	0.4944852	25	0.487403
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.264051	1	1.053738	5	1.09885	15	1.059451	20	1.148773	25	1.023686
1,1-Difluoroethane	0.5	0.9493136	1	0.8549781	5	0.8433508	15	0.8105003	20	0.9392632	25	0.742851
Diisopropyl ether	0.5	0.4990513	1	0.4888554	5	0.4947871	15	0.4828018	20	0.4939858	25	0.5234155
1,4-Dioxane	0.5	0.1175636	1	0.2045776	5	0.217378	15	0.1942853	20	0.1947111	25	0.1888863
Ethanol	1	0.412953	2	0.3549002	10	0.3486507	30	0.3110187	40	0.3488244	50	0.3081956
Ethyl acetate	0.5	0.1696456	1	0.1834505	5	0.1696852	15	0.1688266	20	0.1764939	25	0.1845861
Ethylbenzene	0.5	0.6708982	1	0.7573265	5	0.7118013	15	0.6781946	20	0.6720196	25	0.6945142
1-Ethyl-4-methylbenzene	0.5	2.686272	1	3.038508	5	3.431456	15	3.536191	20	3.445094	25	3.374489
Ethyl t-butyl ether	0.5	2.924792	1	2.735151	5	2.908255	15	2.840621	20	2.878489	25	2.846344
n-Heptane	0.5	0.400836	1	0.4174324	5	0.4393462	15	0.4436547	20	0.4340732	25	0.4260499
Hexachlorobutadiene	0.5	1.332083	1	1.318629	5	1.199414	15	1.189515	20	1.150587	25	1.100293
Hexachloroethane	0.5	0.2344627	1	0.2046678	5	0.2115596	15	0.2098084	20	0.198114	25	0.1904557
Hexane	0.5	1.118003	1	1.139236	5	1.089309	15	1.049752	20	1.073317	25	1.133346
2-Hexanone	0.5	0.7537135	1	0.786644	5	1.09283	15	1.270707	20	1.281933	25	1.189204
Isooctane	0.5	2.274203	1	2.264098	5	2.273667	15	2.238727	20	2.210027	25	2.160901
Isopropyl alcohol	0.5	1.303911	1	1.232647	5	1.169555	15	1.117768	20	1.19559	25	1.166318
Methylene chloride	0.5	1.051356	1	0.9367135	5	0.7869147	15	0.7592963	20	0.7689384	25	0.778096

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Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.887785	1	1.679338	5	1.748271	15	1.698689	20	1.744497	25	1.747503
Methyl iodide	0.5	1.559655	1	1.487714	5	1.394168	15	1.372244	20	1.455687	25	1.582393
Methyl isobutyl ketone	0.5	1.258491	1	1.230579	5	1.406405	15	1.397744	20	1.366153	25	1.239925
Methyl t-butyl ether	0.5	1.507358	1	1.538571	5	1.616548	15	1.588656	20	1.651017	25	1.642776
Naphthalene	0.5	5.627104E-02	1	5.632546E-02	5	0.1364589	15	0.2106468	20	0.2301319	25	0.2429579
Propylene	0.5	0.7806247	1	0.6257298	5	0.6210577	15	0.6324071	20	0.7450182	25	0.6067034
Styrene	0.5	1.091256	1	1.162479	5	1.278148	15	1.28531	20	1.252081	25	1.296316
1,1,1,2-Tetrachloroethane	0.5	0.7259088	1	0.6668894	5	0.6934459	15	0.7069999	20	0.7009638	25	0.6436441
1,1,2,2-Tetrachloroethane	0.5	1.215856	1	1.319187	5	1.211428	15	1.160289	20	1.127833	25	1.15204
Tetrachloroethene	0.5	0.4695081	1	0.4769679	5	0.4901445	15	0.5058577	20	0.5081163	25	0.5111464
1,1,1,2-Tetrafluoroethane	0.5	0.9649389	1	0.8488804	5	0.9021359	15	0.8471956	20	0.8647682	25	0.6629139
Tetrahydrofuran	0.5	1.098232	1	1.082021	5	1.062773	15	1.002696	20	1.014043	25	1.025726
Toluene	0.5	0.9349108	1	0.9719332	5	1.010782	15	1.037911	20	1.048161	25	1.047667
1,2,4-Trichlorobenzene	0.5	0.1403427	1	0.1723224	5	0.3374991	15	0.5586562	20	0.6160967	25	0.6845473
1,1,1-Trichloroethane	0.5	1.480572	1	1.322037	5	1.319722	15	1.254551	20	1.269261	25	1.174187
1,1,2-Trichloroethane	0.5	0.3534373	1	0.3351913	5	0.3443198	15	0.3468549	20	0.353439	25	0.3514478
Trichloroethene	0.5	0.3618347	1	0.3701988	5	0.3567224	15	0.3578204	20	0.3569038	25	0.3579079
Trichlorofluoromethane	0.5	1.799136	1	1.600327	5	1.596798	15	1.487642	20	1.538993	25	1.358125
1,2,3-Trichloropropane	0.5	0.4280618	1	0.4232775	5	0.4383562	15	0.4185604	20	0.3945166	25	0.3931267
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.029672	1	0.9376216	5	0.8671897	15	0.8594891	20	0.8754201	25	0.9019963
1,2,4-Trimethylbenzene	0.5	2.031786	1	2.301955	5	2.501971	15	2.516812	20	2.442505	25	2.354964
1,3,5-Trimethylbenzene	0.5	2.530857	1	2.439701	5	2.489019	15	2.363176	20	2.223847	25	2.142901
Vinyl acetate	0.5	2.210813	1	2.245258	5	2.468135	15	2.463563	20	2.546135	25	2.493045
Vinyl bromide	0.5	0.2187535	1	0.4123096	5	0.4251555	15	0.4078756	20	0.4584279	25	0.4143532
Vinyl chloride	0.5	0.4834261	1	0.438906	5	0.4248365	15	0.4225079	20	0.4995288	25	0.454473
p- & m-Xylenes	1	2.070305	2	2.09652	10	2.062882	30	1.95738	40	1.893655	50	1.840417

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/7/2021 3:14:45PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	2.243808	1	2.160304	5	2.206402	15	2.074014	20	1.96946	25	1.910786
Total Xylenes	1.5	2.128139	3	2.117782	15	2.110722	45	1.996258	60	1.918924	75	1.863873
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.16754	10	1.220506	10	1.293297	10	1.287964	10	1.248986	10	1.231557

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air

SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
Total Petroleum Hydrocarbons	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
4-Bromofluorobenzene (Surrogate)	10	~~1.143828~~	10	~~1.190717~~	10	~~1.260907~~	10	~~1.289156~~	10	~~1.306602~~	10	~~1.307584~~

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012011
Matrix: Air
SDG: 2035147
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.47859	13.07215	5.312667	8.629655E-02			30	
Acrylonitrile	0.6095328	6.256219	5.6465	4.486115E-02			30	
Allyl chloride	1.066507	2.926865	6.096833	6.310269E-03			30	
t-Amyl Methyl ether	1.15066	2.99702	8.842333	2.303194E-02			30	
Benzene	1.20977	5.309255	8.515667	2.981707E-02			30	
Benzyl chloride	1.471378	45.1488	12.47983	0.0136828	0.9981695		0.99	
Bromodichloromethane	0.8783722	5.289903	9.091833	3.650868E-02			30	
Bromoform	1.249891	4.278277	11.35133	1.994468E-02			30	
Bromomethane	0.3591527	7.971664	4.775	3.889564E-02			30	
1,3-Butadiene	0.5416325	7.059031	4.569667	1.451049E-02			30	
t-Butyl alcohol	2.068115	4.654024	5.924833	7.909566E-02			30	
Carbon disulfide	1.217116	6.393368	6.279833	3.991166E-02			30	
Carbon tetrachloride	1.43992	7.940644	8.606667	2.930331E-02			30	
Chlorobenzene	0.8214871	2.223325	11.04117	1.559633E-03			30	
Chloroethane	0.2289449	6.874858	4.898	3.520873E-02			30	
Chloroform	1.122256	7.289964	7.585333	7.337594E-02			30	
Chloromethane	0.6017158	7.067664	4.303667	3.722819E-02			30	
Cyclohexane	1.510512	32.88781	8.688333	1.732729E-02	0.9984152		0.99	
Dibromochloromethane	0.8683332	4.087271	10.34717	3.140457E-02			30	
1,2-Dibromo-3-chloropropane	6.435703E-02	16.58959	13.0162	3.559766E-02			30	
1,2-Dibromoethane	0.5183601	5.289921	10.47983	2.865723E-02			30	
Dibromomethane	0.6770087	3.304057	8.968333	4.896316E-02			30	
1,2-Dichlorobenzene	1.263718	14.14628	12.74167	1.240894E-02			30	
1,3-Dichlorobenzene	1.354411	16.06935	12.49867	2.031891E-02			30	
1,4-Dichlorobenzene	1.112444	23.13384	12.53467	2.766692E-02			30	
Dichlorodifluoromethane	1.511136	11.0955	4.179333	5.696739E-02			30	

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012011
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	0.9387319	4.91416	6.835667	4.445466E-02			30	
1,2-Dichloroethane	1.042877	8.548949	8.064	3.983182E-02			30	
1,1-Dichloroethene	0.9579048	3.402648	5.932333	4.090276E-02			30	
cis-1,2-Dichloroethene	0.7782523	3.424533	7.3945	6.195704E-02			30	
trans-1,2-Dichloroethene	0.8748054	3.28762	6.691667	2.906677E-02			30	
1,2-Dichloropropane	0.3153005	2.833867	8.991333	3.483737E-02			30	
cis-1,3-Dichloropropene	0.4781118	11.7384	9.8645	4.593407E-02			30	
trans-1,3-Dichloropropene	0.4673813	7.268143	9.588667	2.412154E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.108091	7.919828	4.3765	5.653342E-02			30	
1,1-Difluoroethane	0.8567095	9.142103	4.059833	9.764184E-02			30	
Diisopropyl ether	0.4971495	2.821414	7.509167	0.0367043			30	
1,4-Dioxane	0.1862337	18.85605	9.108333	4.810261E-02			30	
Ethanol	0.3474238	10.93586	4.951	4.688294E-02			30	
Ethyl acetate	0.175448	4.105037	7.5035	5.300391E-02			30	
Ethylbenzene	0.6974591	4.764904	11.21233	2.162934E-02			30	
1-Ethyl-4-methylbenzene	3.252002	10.01992	12.12617	1.618076E-02			30	
Ethyl t-butyl ether	2.855609	2.370021	7.857	3.251549E-02			30	
n-Heptane	0.4268987	3.713821	9.274333	2.461001E-02			30	
Hexachlorobutadiene	1.215087	7.600625	14.30567	2.381036E-02			30	
Hexachloroethane	0.208178	7.229874	13.17533	2.563147E-02			30	
Hexane	1.100494	3.231936	7.536833	0.0324905			30	
2-Hexanone	1.062505	22.26903	10.236	2.537025E-02			30	
Isooctane	2.236937	1.99762	9.146667	2.911005E-02			30	
Isopropyl alcohol	1.197631	5.368946	5.474667	0.1506819			30	
Methylene chloride	0.8468858	14.16496	5.999333	3.352147E-02			30	
Methyl ethyl ketone	1.751014	4.168969	7.082	0.0548921			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012011
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	1.47531	5.777526	5.890167	8.832796E-02			30	
Methyl isobutyl ketone	1.31655	6.241358	9.6	2.547603E-02			30	
Methyl t-butyl ether	1.590821	3.631347	6.862833	5.143533E-02			30	
Naphthalene	0.1554653	54.81025	14.037	2.039908E-02		0.9992656	0.99	
Propylene	0.6685901	11.11818	4.122833	0.1341345			30	
Styrene	1.227598	6.721037	11.46583	1.967176E-02			30	
1,1,1,2-Tetrachloroethane	0.689642	4.297918	11.028	2.150416E-02			30	
1,1,2,2-Tetrachloroethane	1.197772	5.74105	11.5125	0.0200861			30	
Tetrachloroethene	0.4936235	3.552806	10.70633	2.646257E-02			30	
1,1,1,2-Tetrafluoroethane	0.8484722	11.9199	3.997667	9.253579E-02			30	
Tetrahydrofuran	1.047582	3.721523	7.852333	6.949038E-02			30	
Toluene	1.008561	4.593109	10.12617	3.247277E-02			30	
1,2,4-Trichlorobenzene	0.4182441	55.97118	13.92983	2.006542E-02		0.9996111	0.99	
1,1,1-Trichloroethane	1.303388	7.843145	8.2375	1.350127E-02			30	
1,1,2-Trichloroethane	0.3474483	2.027509	9.97	2.690702E-02			30	
Trichloroethene	0.3602313	1.45048	9.122	2.435564E-02			30	
Trichlorofluoromethane	1.563504	9.335524	5.467333	3.510245E-02			30	
1,2,3-Trichloropropane	0.4159832	4.418997	11.57567	2.152279E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.9118981	7.057065	6.205667	3.241712E-02			30	
1,2,4-Trimethylbenzene	2.358332	7.647945	12.39067	2.732095E-02			30	
1,3,5-Trimethylbenzene	2.364917	6.488339	12.16083	3.418219E-03			30	
Vinyl acetate	2.404492	5.831678	6.896167	0.0392468			30	
Vinyl bromide	0.3894792	21.98274	5.159667	7.674802E-02			30	
Vinyl chloride	0.4539464	6.972491	4.469833	5.364606E-02			30	
p- & m-Xylenes	1.98686	5.315519	11.29233	1.189086E-02			30	
o-Xylene	2.094129	6.369174	11.51983	2.461838E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012011
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	2.022616	5.619788	11.51983	2.461838E-02			30	
TPH - Gasoline	3.784361	4.390169	10.42317	4.413093			30	
Total Petroleum Hydrocarbons	3.784361	4.390169	10.42317	4.413093			30	
4-Bromofluorobenzene (Surrogate)	1.241642	3.761685	11.73917	4.377322E-03			30	

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HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035147
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW16A-01	11/30/20 11:07	12/02/20 09:35	12/11/20 08:34	11.00	30.00	12/11/20 20:46	11.00	30.00	
SG-VW16A-01	11/30/20 11:07	12/02/20 09:35	12/03/20 09:47	3.00	30.00	12/03/20 16:22	3.00	30.00	
SG-VW16B-01	11/30/20 09:46	12/02/20 09:35	12/11/20 08:34	11.00	30.00	12/11/20 21:22	11.00	30.00	
SG-VW26A-01	11/30/20 12:28	12/02/20 09:35	12/11/20 08:34	11.00	30.00	12/11/20 21:57	11.00	30.00	
SG-VW26A-01	11/30/20 12:28	12/02/20 09:35	12/03/20 09:47	3.00	30.00	12/03/20 17:21	3.00	30.00	
SG-VW26B-01	11/30/20 12:51	12/02/20 09:35	12/03/20 09:47	3.00	30.00	12/03/20 17:50	3.00	30.00	
SG-VW20A-01	11/30/20 13:51	12/02/20 09:35	12/11/20 08:34	11.00	30.00	12/11/20 22:33	11.00	30.00	
SG-VW20A-01	11/30/20 13:51	12/02/20 09:35	12/03/20 09:47	3.00	30.00	12/03/20 18:20	3.00	30.00	
SG-VW20B-01	11/30/20 14:10	12/02/20 09:35	12/03/20 09:47	3.00	30.00	12/03/20 18:50	3.00	30.00	
SG-VW31A-01	12/01/20 14:32	12/02/20 09:35	12/11/20 08:34	10.00	30.00	12/11/20 23:08	10.00	30.00	
SG-VW31B-01	12/01/20 14:22	12/02/20 09:35	12/11/20 08:34	10.00	30.00	12/11/20 23:44	10.00	30.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2035335

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-TO-15

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Case Narrative

Sample Receipt

Work Order: 2035335
COC Number:
Cooler 2 was received at 25 °C
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1
EPA-TO-15	MS-A2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The internal standard on the Initial Calibration Verification (ICV) was not within the control limits.

Lab Number	Method	Analyte
2022116-ICV2	EPA-TO-15	Chlorobenzene-d5 (IS)

LCS / LCSD

The LCS recoveries were within QC limits.

Discussion

Method TO-15 canister with sample ID 2035335-08 came into the lab at ambient pressure

Lab Number	Receipt Pressure	Units
20-35335-01	13.2	PSIA
20-35335-02	12.8	PSIA
20-35335-03	13.4	PSIA
20-35335-04	11.9	PSIA
20-35335-05	12.4	PSIA
20-35335-06	12.9	PSIA
20-35335-07	12.6	PSIA
20-35335-08	14.7	PSIA
20-35335-09	12.9	PSIA
20-35335-10	13.3	PSIA
20-35335-11	12.8	PSIA
20-35335-12	12.6	PSIA
20-35335-13	12.8	PSIA

20-35335

CHAIN OF CUSTODY

Page 1 of 1

AECOM

Lab: BC Laboratories

TAT: 6 Day

RUSH!

Report results to:	Keegan George (Keegan.George@smud.org)
Name	Andy Shepard (andy.shepard@aecom.com)
Company	AECOM
Mailing Address	2020 L Street, Suite 400
City, State, Zip	Sacramento, CA 95811
Telephone No.	916.286.3943
Fax No.	916.414.5850

Project Information

Site Address:	SMUD 59th Street SVM Sampling
AECOM No.	60632793.06

CHK BY: Cm2

DISTRIBUTION: AM

SUB OUT ☐

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send Invoices to SMUD

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont.	Analyses Requested: USEPA Method TO-15	Sample Condition/Comments: Intl vac	final vac	Can#	FR#	Preservative	Container Type
-1	SG1-VW35A-01	12/1/20	1609	AIR	1	x	-30	-5	2859	1303	N	1.4L Canister
-2	SG1-VW35B-01	12/1/20	1559	AIR	1	x	-30	-5	10278	1292	N	
-3	SG1-VW36A-01	12/2/20	0750	AIR	1	x	-29	-5	6401	1536	N	
-4	SG1-VW36B-01	12/2/20	0752	AIR	1	x	-30	-5	9480	1505	N	
-5	SG1-VW40A01	12/2/20	0855	AIR	1	x	-29.5	-5	9472	1363	N	
-6	SG1-VW40B-01	12/2/20	0842	AIR	1	x	-30	-5	6370	1287	N	
-7	SG1-VW37A-01	12/2/20	0944	AIR	1	x	-30	-5	1489	1624	N	
-8	SG1-VW37B-01	12/2/20	0947	AIR	1	x	-30	-5	9458	1156	N	
-9	SG1-VW37B-02	12/2/20	0947	AIR	1	x	-30	-5	10497	1207	N	
-10	SG1-VW42A-01	12/2/20	1057	AIR	1	x	-30	-5	6396	1163	N	
-11	SG1-VW42B-01	12/2/20	1050	AIR	1	x	-30	-5	10398	1242	N	
-9	SG1-VW19A-01	12/2/20	1210	AIR	1	x	-29.5	-5	5176	1241	N	
-12	SG1-VW19B-01	12/2/20	1155	AIR	1	x	-30	-5	2895	1286	N	

Collected by: Brian Weeks *Date/Time* 12/2/20 @ 1510

Relinquished by: [signature] AECOM *Date/Time* 12/2/20 @ 1510

Relinquished by: [signature] BC Labs *Date/Time* 12/2/20 @ 1540

Relinquished by: *Date/Time*

Method of Shipment:

Relinquished by: *Date/Time* 12/2/20 @ 1510

Relinquished by: *Date/Time* 12-3-20 1000

Relinquished by: *Date/Time*

Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2035335 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 20-35335

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: ____ Container: Summa Thermometer ID: ____ Date/Time 12-3-20 1000

Temperature: (A) room °C / (C) temp °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER GW	A	A	A	A	A	A	A	A	A	A

Comments:

Sample Numbering Completed By: JMT Date/Time: 12/03/20 11:44

A = Actual / C = Corrected

Rev 21 05/23/2016

Chain of Custody and Cooler Receipt Form for 2035335 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 20-35335

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received ☒ YES ☐ NO

Emissivity: Container: Summa Thermometer ID:

Temperature: (A) room °C / (C) temp °C

Date/Time 12-3-20 1000

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER	A	A	A							

Comments:

Sample Numbering Completed By: JMT Date/Time: 12/03/20 1144

A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDocs\WordPerfect\LAB DOCS\FORMS\SAMREC rev 20)

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2035335**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

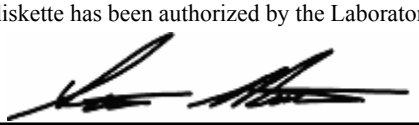
ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW35A-01	2035335-01
SG-VW35B-01	2035335-02
SG-VW35B-01	2035335-02RE1
SG-VW36A-01	2035335-03
SG-VW36A-01	2035335-03RE1
SG-VW36B-01	2035335-04
SG-VW40A-01	2035335-05
SG-VW40B-01	2035335-06
SG-VW37A-01	2035335-07
SG-VW37B-01	2035335-08
SG-VW37B-01	2035335-08RE1
SG-VW37B-02	2035335-09
SG-VW37B-02	2035335-09RE1
SG-VW42A-01	2035335-10
SG-VW42B-01	2035335-11
SG-VW19A-01	2035335-12
SG-VW19A-01	2035335-12RE1
SG-VW19B-01	2035335-13
SG-VW19B-01	2035335-13RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: Stuart Buttram

Date: 12-23-2020
Title: Technical Director

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-01
File ID: 12DEC08.D
Sampled: 12/01/20 16:09
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 20:32
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
67-64-1	Acetone	1.52	11	D
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	1.4	JD
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	12	D
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	0.82	UD
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	0.58	UD
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	0.88	UD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	0.68	UD
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	0.40	UD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD

AECOM - Sacramento
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-01
File ID: 12DEC08.D
Sampled: 12/01/20 16:09
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 20:32
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.52	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	3.0	UD
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	56	D
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	7.4	JD
622-96-8	1-Ethyl-4-methylbenzene	1.52	11	D
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	0.52	UD
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	0.30	UD
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	1.9	JD
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
78-93-3	Methyl ethyl ketone	1.52	0.29	UD
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	1.9	JD
1634-04-4	Methyl t-butyl ether	1.52	0.43	UD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	250	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	1.2	JD

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-01	File ID:	12DEC08.D
Sampled:	12/01/20 16:09	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 20:32
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.52	140	D
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.52	1.1	JD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	1.2	JD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	20	D
108-67-8	1,3,5-Trimethylbenzene	1.52	4.3	JD
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	29	D
95-47-6	o-Xylene	1.52	12	D
1330-20-7	Total Xylenes	1.52	41	D
---	TPH - Gasoline	1.52	810	D
---	Total Petroleum Hydrocarbons	1.52	810	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.33	93.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95662	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	149275	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	276795	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-02RE1	File ID:	07DEC21.D
Sampled:	12/01/20 15:59	Prepared:	12/07/20 08:12	Analyzed:	12/07/20 20:07
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	15.6	300	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.29	82.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	79895	7.509	79655	7.502	
Chlorobenzene-d5 (IS)	76566	11.015	83959	11.017	
1,4-Difluorobenzene (IS)	146621	8.697	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-02
File ID: 12DEC09.D
Sampled: 12/01/20 15:59
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 21:08
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
67-64-1	Acetone	1.56	0.67	UD
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	0.33	UD
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.1	UD
75-15-0	Carbon disulfide	1.56	6.3	D
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	31	D
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	0.59	UD
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	1.8	JD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	0.70	UD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-02	File ID:	12DEC09.D
Sampled:	12/01/20 15:59	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 21:08
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.56	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	0.66	UD
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.56	0.47	UD
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	0.53	UD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	0.31	UD
591-78-6	2-Hexanone	1.56	0.45	UD
540-84-1	Isooctane	1.56	0.55	UD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	0.30	UD
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	0.41	UD
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	0.42	UD
108-88-3	Toluene	1.56	1.1	JD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW35B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-02	File ID:	12DEC09.D
Sampled:	12/01/20 15:59	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 21:08
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.56	1.4	JD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	1.7	JD
75-69-4	Trichlorofluoromethane	1.56	1.6	JD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	0.77	JD
108-67-8	1,3,5-Trimethylbenzene	1.56	0.62	UD
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	1.5	JD
95-47-6	o-Xylene	1.56	0.75	JD
1330-20-7	Total Xylenes	1.56	2.2	JD
---	TPH - Gasoline	1.56	590	D
---	Total Petroleum Hydrocarbons	1.56	590	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.12	91.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94587	7.621	99484	7.611	
Chlorobenzene-d5 (IS)	146441	11.082	152269	11.083	
1,4-Difluorobenzene (IS)	269766	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-03RE1	File ID:	07DEC22.D
Sampled:	12/02/20 07:50	Prepared:	12/07/20 08:12	Analyzed:	12/07/20 20:37
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15	280	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.67	86.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	77207	7.499	79655	7.502	
Chlorobenzene-d5 (IS)	76734	11.014	83959	11.017	
1,4-Difluorobenzene (IS)	142486	8.692	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-03
File ID: 12DEC10.D
Sampled: 12/02/20 07:50
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 21:43
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
67-64-1	Acetone	1.5	75	D
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	23	D
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	11	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	0.81	UD
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	2.7	JD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	0.68	UD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-03	File ID:	12DEC10.D
Sampled:	12/02/20 07:50	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 21:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.5	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	0.63	UD
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	48	D
622-96-8	1-Ethyl-4-methylbenzene	1.5	37	D
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	12	D
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	9.8	D
67-63-0	Isopropyl alcohol	1.5	0.48	UD
75-09-2	Methylene chloride	1.5	0.60	UD
78-93-3	Methyl ethyl ketone	1.5	42	D
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	46	D
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	1.7	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	78	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	38	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-03	File ID:	12DEC10.D
Sampled:	12/02/20 07:50	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 21:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	1.3	JD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	50	D
108-67-8	1,3,5-Trimethylbenzene	1.5	19	D
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	150	D
95-47-6	o-Xylene	1.5	56	D
1330-20-7	Total Xylenes	1.5	210	D
---	TPH - Gasoline	1.5	2700	D
---	Total Petroleum Hydrocarbons	1.5	2700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.04	90.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99932	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	159354	11.082	152269	11.083	
1,4-Difluorobenzene (IS)	285061	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-04
File ID: 12DEC11.D
Sampled: 12/02/20 07:52
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 22:19
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.97	1.6	UD
67-64-1	Acetone	1.97	4.7	JD
107-13-1	Acrylonitrile	1.97	0.53	UD
107-05-1	Allyl chloride	1.97	0.55	UD
994-05-8	t-Amyl Methyl ether	1.97	0.61	UD
71-43-2	Benzene	1.97	0.41	UD
100-44-7	Benzyl chloride	1.97	0.51	UD
75-27-4	Bromodichloromethane	1.97	0.89	UD
75-25-2	Bromoform	1.97	1.7	UD
74-83-9	Bromomethane	1.97	0.93	UD
106-99-0	1,3-Butadiene	1.97	0.43	UD
75-65-0	t-Butyl alcohol	1.97	1.4	UD
75-15-0	Carbon disulfide	1.97	1.7	JD
56-23-5	Carbon tetrachloride	1.97	0.89	UD
108-90-7	Chlorobenzene	1.97	0.79	UD
75-00-3	Chloroethane	1.97	1.0	UD
67-66-3	Chloroform	1.97	4.7	JD
74-87-3	Chloromethane	1.97	0.41	UD
110-82-7	Cyclohexane	1.97	0.75	UD
124-48-1	Dibromochloromethane	1.97	0.85	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.97	3.3	UD
106-93-4	1,2-Dibromoethane	1.97	1.1	UD
74-95-3	Dibromomethane	1.97	1.1	UD
95-50-1	1,2-Dichlorobenzene	1.97	0.98	UD
541-73-1	1,3-Dichlorobenzene	1.97	0.61	UD
106-46-7	1,4-Dichlorobenzene	1.97	0.98	UD
75-71-8	Dichlorodifluoromethane	1.97	0.89	UD
75-34-3	1,1-Dichloroethane	1.97	0.45	UD
107-06-2	1,2-Dichloroethane	1.97	0.51	UD
75-35-4	1,1-Dichloroethene	1.97	0.61	UD
156-59-2	cis-1,2-Dichloroethene	1.97	0.63	UD
156-60-5	trans-1,2-Dichloroethene	1.97	0.53	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-04
File ID: 12DEC11.D
Sampled: 12/02/20 07:52
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 22:19
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.97	0.63	UD
10061-01-5	cis-1,3-Dichloropropene	1.97	0.59	UD
10061-02-6	trans-1,3-Dichloropropene	1.97	0.79	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.97	1.8	UD
75-37-6	1,1-Difluoroethane	1.97	3.9	UD
108-20-3	Diisopropyl ether	1.97	0.77	UD
123-91-1	1,4-Dioxane	1.97	0.65	UD
64-17-5	Ethanol	1.97	0.83	UD
141-78-6	Ethyl acetate	1.97	0.65	UD
100-41-4	Ethylbenzene	1.97	1.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.97	0.59	UD
637-92-3	Ethyl t-butyl ether	1.97	0.65	UD
142-82-5	n-Heptane	1.97	0.67	UD
87-68-3	Hexachlorobutadiene	1.97	3.0	UD
67-72-1	Hexachloroethane	1.97	1.4	UD
110-54-3	Hexane	1.97	0.39	UD
591-78-6	2-Hexanone	1.97	0.57	UD
540-84-1	Isooctane	1.97	0.69	UD
67-63-0	Isopropyl alcohol	1.97	0.63	UD
75-09-2	Methylene chloride	1.97	0.79	UD
78-93-3	Methyl ethyl ketone	1.97	0.37	UD
74-88-4	Methyl iodide	1.97	1.1	UD
108-10-1	Methyl isobutyl ketone	1.97	0.51	UD
1634-04-4	Methyl t-butyl ether	1.97	0.55	UD
91-20-3	Naphthalene	1.97	2.8	UD
115-07-1	Propylene	1.97	0.49	UD
100-42-5	Styrene	1.97	0.47	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.97	1.2	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.97	0.93	UD
127-18-4	Tetrachloroethene	1.97	260	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.97	1.3	UD
109-99-9	Tetrahydrofuran	1.97	1.2	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW36B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-04
File ID: 12DEC11.D
Sampled: 12/02/20 07:52
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 22:19
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.97	4.4	D
120-82-1	1,2,4-Trichlorobenzene	1.97	1.6	UD
71-55-6	1,1,1-Trichloroethane	1.97	2.0	JD
79-00-5	1,1,2-Trichloroethane	1.97	1.2	UD
79-01-6	Trichloroethene	1.97	1.7	JD
75-69-4	Trichlorofluoromethane	1.97	1.3	JD
96-18-4	1,2,3-Trichloropropane	1.97	0.95	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.97	1.1	UD
95-63-6	1,2,4-Trimethylbenzene	1.97	1.6	JD
108-67-8	1,3,5-Trimethylbenzene	1.97	0.79	UD
108-05-4	Vinyl acetate	1.97	0.65	UD
593-60-2	Vinyl bromide	1.97	0.63	UD
75-01-4	Vinyl chloride	1.97	0.77	UD
179601-23-1	p- & m-Xylenes	1.97	3.4	JD
95-47-6	o-Xylene	1.97	1.7	JD
1330-20-7	Total Xylenes	1.97	5.1	JD
---	TPH - Gasoline	1.97	670	D
---	Total Petroleum Hydrocarbons	1.97	670	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.32	93.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98068	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	147486	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	280162	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-05
File ID: 12DEC12.D
Sampled: 12/02/20 08:55
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 22:55
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.62	1.3	UD
67-64-1	Acetone	1.62	5.3	JD
107-13-1	Acrylonitrile	1.62	0.44	UD
107-05-1	Allyl chloride	1.62	0.45	UD
994-05-8	t-Amyl Methyl ether	1.62	0.50	UD
71-43-2	Benzene	1.62	6.0	D
100-44-7	Benzyl chloride	1.62	0.42	UD
75-27-4	Bromodichloromethane	1.62	0.73	UD
75-25-2	Bromoform	1.62	1.4	UD
74-83-9	Bromomethane	1.62	0.76	UD
106-99-0	1,3-Butadiene	1.62	0.36	UD
75-65-0	t-Butyl alcohol	1.62	1.1	UD
75-15-0	Carbon disulfide	1.62	1.4	JD
56-23-5	Carbon tetrachloride	1.62	0.73	UD
108-90-7	Chlorobenzene	1.62	0.65	UD
75-00-3	Chloroethane	1.62	0.86	UD
67-66-3	Chloroform	1.62	0.87	UD
74-87-3	Chloromethane	1.62	0.34	UD
110-82-7	Cyclohexane	1.62	0.62	UD
124-48-1	Dibromochloromethane	1.62	0.70	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.62	2.8	UD
106-93-4	1,2-Dibromoethane	1.62	0.94	UD
74-95-3	Dibromomethane	1.62	0.92	UD
95-50-1	1,2-Dichlorobenzene	1.62	0.81	UD
541-73-1	1,3-Dichlorobenzene	1.62	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.62	0.81	UD
75-71-8	Dichlorodifluoromethane	1.62	2.5	JD
75-34-3	1,1-Dichloroethane	1.62	0.37	UD
107-06-2	1,2-Dichloroethane	1.62	0.42	UD
75-35-4	1,1-Dichloroethene	1.62	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.62	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.62	0.44	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-05
File ID: 12DEC12.D
Sampled: 12/02/20 08:55
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 22:55
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.62	0.52	UD
10061-01-5	cis-1,3-Dichloropropene	1.62	0.49	UD
10061-02-6	trans-1,3-Dichloropropene	1.62	0.65	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.62	1.5	UD
75-37-6	1,1-Difluoroethane	1.62	3.2	UD
108-20-3	Diisopropyl ether	1.62	0.63	UD
123-91-1	1,4-Dioxane	1.62	0.53	UD
64-17-5	Ethanol	1.62	0.68	UD
141-78-6	Ethyl acetate	1.62	0.53	UD
100-41-4	Ethylbenzene	1.62	42	D
622-96-8	1-Ethyl-4-methylbenzene	1.62	25	D
637-92-3	Ethyl t-butyl ether	1.62	0.53	UD
142-82-5	n-Heptane	1.62	3.9	D
87-68-3	Hexachlorobutadiene	1.62	2.4	UD
67-72-1	Hexachloroethane	1.62	1.2	UD
110-54-3	Hexane	1.62	0.32	UD
591-78-6	2-Hexanone	1.62	0.47	UD
540-84-1	Isooctane	1.62	1.2	JD
67-63-0	Isopropyl alcohol	1.62	0.52	UD
75-09-2	Methylene chloride	1.62	0.65	UD
78-93-3	Methyl ethyl ketone	1.62	1.6	JD
74-88-4	Methyl iodide	1.62	0.94	UD
108-10-1	Methyl isobutyl ketone	1.62	0.42	UD
1634-04-4	Methyl t-butyl ether	1.62	0.45	UD
91-20-3	Naphthalene	1.62	2.3	UD
115-07-1	Propylene	1.62	0.40	UD
100-42-5	Styrene	1.62	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.62	0.99	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.62	0.76	UD
127-18-4	Tetrachloroethene	1.62	3.3	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.62	1.1	UD
109-99-9	Tetrahydrofuran	1.62	0.44	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-05	File ID:	12DEC12.D
Sampled:	12/02/20 08:55	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 22:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.62	130	D
120-82-1	1,2,4-Trichlorobenzene	1.62	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.62	0.63	UD
79-00-5	1,1,2-Trichloroethane	1.62	0.99	UD
79-01-6	Trichloroethene	1.62	0.87	UD
75-69-4	Trichlorofluoromethane	1.62	1.3	JD
96-18-4	1,2,3-Trichloropropane	1.62	0.78	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.62	0.89	UD
95-63-6	1,2,4-Trimethylbenzene	1.62	27	D
108-67-8	1,3,5-Trimethylbenzene	1.62	6.8	JD
108-05-4	Vinyl acetate	1.62	0.53	UD
593-60-2	Vinyl bromide	1.62	0.52	UD
75-01-4	Vinyl chloride	1.62	0.63	UD
179601-23-1	p- & m-Xylenes	1.62	84	D
95-47-6	o-Xylene	1.62	18	D
1330-20-7	Total Xylenes	1.62	100	D
---	TPH - Gasoline	1.62	560	D
---	Total Petroleum Hydrocarbons	1.62	560	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.22	92.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99883	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	154693	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	285381	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-06
File ID: 12DEC13.D
Sampled: 12/02/20 08:42
Prepared: 12/12/20 13:12
Analyzed: 12/12/20 23:31
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	1.9	JD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	0.29	UD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	0.70	UD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-06	File ID:	12DEC13.D
Sampled:	12/02/20 08:42	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 23:31
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	10	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.55	0.46	UD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	1.0	JD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	6.7	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW40B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-06	File ID:	12DEC13.D
Sampled:	12/02/20 08:42	Prepared:	12/12/20 13:12	Analyzed:	12/12/20 23:31
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.55	1.3	JD
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	1.4	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	2.1	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	3.5	JD
95-47-6	o-Xylene	1.55	1.1	JD
1330-20-7	Total Xylenes	1.55	4.6	JD
---	TPH - Gasoline	1.55	150	JD
---	Total Petroleum Hydrocarbons	1.55	150	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.18	91.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98831	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	145659	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	278756	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-07
File ID: 12DEC14.D
Sampled: 12/02/20 09:44
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 00:08
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	10	D
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	0.33	UD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	1.1	UD
75-15-0	Carbon disulfide	1.59	3.7	D
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	0.86	UD
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	2.6	JD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

AECOM - Sacramento
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-07
File ID: 12DEC14.D
Sampled: 12/02/20 09:44
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 00:08
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	0.67	UD
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	2.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.59	2.7	JD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	0.51	UD
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	6.4	D
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	0.41	UD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	2.2	UD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	0.80	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	0.75	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-07	File ID:	12DEC14.D
Sampled:	12/02/20 09:44	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 00:08
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	8.9	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	1.4	JD
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	5.2	JD
108-67-8	1,3,5-Trimethylbenzene	1.59	1.4	JD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	9.5	D
95-47-6	o-Xylene	1.59	3.9	JD
1330-20-7	Total Xylenes	1.59	13	JD
---	TPH - Gasoline	1.59	350	D
---	Total Petroleum Hydrocarbons	1.59	350	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.16	91.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	96657	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	146962	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	273263	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-08RE1	File ID:	07DEC27.D
Sampled:	12/02/20 09:47	Prepared:	12/07/20 08:12	Analyzed:	12/07/20 23:03
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	13.5	140	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.87	88.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	70352	7.503	79655	7.502	
Chlorobenzene-d5 (IS)	69183	11.014	83959	11.017	
1,4-Difluorobenzene (IS)	130838	8.691	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-08
File ID: 12DEC15.D
Sampled: 12/02/20 09:47
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 00:44
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.35	1.1	UD
67-64-1	Acetone	1.35	21	D
107-13-1	Acrylonitrile	1.35	0.36	UD
107-05-1	Allyl chloride	1.35	0.38	UD
994-05-8	t-Amyl Methyl ether	1.35	0.42	UD
71-43-2	Benzene	1.35	6.3	D
100-44-7	Benzyl chloride	1.35	0.35	UD
75-27-4	Bromodichloromethane	1.35	0.61	UD
75-25-2	Bromoform	1.35	1.2	UD
74-83-9	Bromomethane	1.35	0.63	UD
106-99-0	1,3-Butadiene	1.35	0.30	UD
75-65-0	t-Butyl alcohol	1.35	0.94	UD
75-15-0	Carbon disulfide	1.35	4.9	D
56-23-5	Carbon tetrachloride	1.35	0.61	UD
108-90-7	Chlorobenzene	1.35	0.54	UD
75-00-3	Chloroethane	1.35	0.72	UD
67-66-3	Chloroform	1.35	0.73	UD
74-87-3	Chloromethane	1.35	0.28	UD
110-82-7	Cyclohexane	1.35	0.51	UD
124-48-1	Dibromochloromethane	1.35	0.58	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.35	2.3	UD
106-93-4	1,2-Dibromoethane	1.35	0.78	UD
74-95-3	Dibromomethane	1.35	0.77	UD
95-50-1	1,2-Dichlorobenzene	1.35	0.68	UD
541-73-1	1,3-Dichlorobenzene	1.35	0.42	UD
106-46-7	1,4-Dichlorobenzene	1.35	0.68	UD
75-71-8	Dichlorodifluoromethane	1.35	2.7	JD
75-34-3	1,1-Dichloroethane	1.35	0.31	UD
107-06-2	1,2-Dichloroethane	1.35	0.35	UD
75-35-4	1,1-Dichloroethene	1.35	0.42	UD
156-59-2	cis-1,2-Dichloroethene	1.35	0.43	UD
156-60-5	trans-1,2-Dichloroethene	1.35	0.36	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-08	File ID:	12DEC15.D
Sampled:	12/02/20 09:47	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 00:44
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.35	0.43	UD
10061-01-5	cis-1,3-Dichloropropene	1.35	0.40	UD
10061-02-6	trans-1,3-Dichloropropene	1.35	0.54	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.35	1.2	UD
75-37-6	1,1-Difluoroethane	1.35	2.7	UD
108-20-3	Diisopropyl ether	1.35	0.53	UD
123-91-1	1,4-Dioxane	1.35	0.45	UD
64-17-5	Ethanol	1.35	22	D
141-78-6	Ethyl acetate	1.35	0.45	UD
100-41-4	Ethylbenzene	1.35	36	D
622-96-8	1-Ethyl-4-methylbenzene	1.35	39	D
637-92-3	Ethyl t-butyl ether	1.35	0.45	UD
142-82-5	n-Heptane	1.35	0.46	UD
87-68-3	Hexachlorobutadiene	1.35	2.0	UD
67-72-1	Hexachloroethane	1.35	0.99	UD
110-54-3	Hexane	1.35	0.27	UD
591-78-6	2-Hexanone	1.35	0.39	UD
540-84-1	Isooctane	1.35	1.4	JD
67-63-0	Isopropyl alcohol	1.35	0.43	UD
75-09-2	Methylene chloride	1.35	0.54	UD
78-93-3	Methyl ethyl ketone	1.35	10	D
74-88-4	Methyl iodide	1.35	0.78	UD
108-10-1	Methyl isobutyl ketone	1.35	16	D
1634-04-4	Methyl t-butyl ether	1.35	0.38	UD
91-20-3	Naphthalene	1.35	1.9	UD
115-07-1	Propylene	1.35	0.34	UD
100-42-5	Styrene	1.35	2.6	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.35	0.82	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.35	0.63	UD
127-18-4	Tetrachloroethene	1.35	2.9	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.35	0.90	UD
109-99-9	Tetrahydrofuran	1.35	22	D

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-08
File ID: 12DEC15.D
Sampled: 12/02/20 09:47
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 00:44
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.35	1.1	UD
71-55-6	1,1,1-Trichloroethane	1.35	0.53	UD
79-00-5	1,1,2-Trichloroethane	1.35	0.82	UD
79-01-6	Trichloroethene	1.35	16	D
75-69-4	Trichlorofluoromethane	1.35	1.6	JD
96-18-4	1,2,3-Trichloropropane	1.35	0.65	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.35	0.74	UD
95-63-6	1,2,4-Trimethylbenzene	1.35	67	D
108-67-8	1,3,5-Trimethylbenzene	1.35	19	D
108-05-4	Vinyl acetate	1.35	0.45	UD
593-60-2	Vinyl bromide	1.35	0.43	UD
75-01-4	Vinyl chloride	1.35	0.53	UD
179601-23-1	p- & m-Xylenes	1.35	120	D
95-47-6	o-Xylene	1.35	55	D
1330-20-7	Total Xylenes	1.35	180	D
---	TPH - Gasoline	1.35	1800	D
---	Total Petroleum Hydrocarbons	1.35	1800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.36	93.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98377	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	151976	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	283969	8.79	289206	8.79	

* Values outside of QC limits

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-02

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-09RE1	File ID:	07DEC28.D
Sampled:	12/02/20 09:47	Prepared:	12/07/20 08:12	Analyzed:	12/07/20 23:33
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.3	150	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.85	88.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73217	7.5	79655	7.502	
Chlorobenzene-d5 (IS)	70362	11.015	83959	11.017	
1,4-Difluorobenzene (IS)	133087	8.693	146337	8.695	

* Values outside of QC limits

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-02

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-09
File ID: 12DEC16.D
Sampled: 12/02/20 09:47
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 01:21
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	18	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	7.0	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	7.6	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	0.83	UD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	2.7	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-02

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-09	File ID:	12DEC16.D
Sampled:	12/02/20 09:47	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 01:21
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	0.64	UD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	38	D
622-96-8	1-Ethyl-4-methylbenzene	1.53	39	D
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	1.4	JD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	5.4	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	14	D
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	1.8	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	4.7	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	21	D

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW37B-02

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-09	File ID:	12DEC16.D
Sampled:	12/02/20 09:47	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 01:21
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	22	D
75-69-4	Trichlorofluoromethane	1.53	1.5	JD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	60	D
108-67-8	1,3,5-Trimethylbenzene	1.53	18	D
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	130	D
95-47-6	o-Xylene	1.53	55	D
1330-20-7	Total Xylenes	1.53	180	D
---	TPH - Gasoline	1.53	1700	D
---	Total Petroleum Hydrocarbons	1.53	1700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.08	90.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100721	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	156121	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	288806	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-10
File ID: 07DEC33.D
Sampled: 12/02/20 10:59
Prepared: 12/07/20 08:12
Analyzed: 12/08/20 08:51
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094480
Sequence: 2021783
Calibration: 2012012
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	148	120	UD
67-64-1	Acetone	148	64	UD
107-13-1	Acrylonitrile	148	40	UD
107-05-1	Allyl chloride	148	41	UD
994-05-8	t-Amyl Methyl ether	148	46	UD
71-43-2	Benzene	148	31	UD
100-44-7	Benzyl chloride	148	38	UD
75-27-4	Bromodichloromethane	148	67	UD
75-25-2	Bromoform	148	130	UD
74-83-9	Bromomethane	148	70	UD
106-99-0	1,3-Butadiene	148	33	UD
75-65-0	t-Butyl alcohol	148	100	UD
75-15-0	Carbon disulfide	148	28	UD
56-23-5	Carbon tetrachloride	148	67	UD
108-90-7	Chlorobenzene	148	59	UD
75-00-3	Chloroethane	148	78	UD
67-66-3	Chloroform	148	80	UD
74-87-3	Chloromethane	148	31	UD
110-82-7	Cyclohexane	148	56	UD
124-48-1	Dibromochloromethane	148	64	UD
96-12-8	1,2-Dibromo-3-chloropropane	148	250	UD
106-93-4	1,2-Dibromoethane	148	86	UD
74-95-3	Dibromomethane	148	84	UD
95-50-1	1,2-Dichlorobenzene	148	74	UD
541-73-1	1,3-Dichlorobenzene	148	46	UD
106-46-7	1,4-Dichlorobenzene	148	74	UD
75-71-8	Dichlorodifluoromethane	148	67	UD
75-34-3	1,1-Dichloroethane	148	34	UD
107-06-2	1,2-Dichloroethane	148	38	UD
75-35-4	1,1-Dichloroethene	148	46	UD
156-59-2	cis-1,2-Dichloroethene	148	47	UD
156-60-5	trans-1,2-Dichloroethene	148	40	UD

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-10
File ID: 07DEC33.D
Sampled: 12/02/20 10:59
Prepared: 12/07/20 08:12
Analyzed: 12/08/20 08:51
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094480
Sequence: 2021783
Calibration: 2012012
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	148	47	UD
10061-01-5	cis-1,3-Dichloropropene	148	44	UD
10061-02-6	trans-1,3-Dichloropropene	148	59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	148	130	UD
75-37-6	1,1-Difluoroethane	148	300	UD
108-20-3	Diisopropyl ether	148	58	UD
123-91-1	1,4-Dioxane	148	49	UD
64-17-5	Ethanol	148	62	UD
141-78-6	Ethyl acetate	148	49	UD
100-41-4	Ethylbenzene	148	47	UD
622-96-8	1-Ethyl-4-methylbenzene	148	44	UD
637-92-3	Ethyl t-butyl ether	148	49	UD
142-82-5	n-Heptane	148	50	UD
87-68-3	Hexachlorobutadiene	148	220	UD
67-72-1	Hexachloroethane	148	110	UD
110-54-3	Hexane	148	2300	D
591-78-6	2-Hexanone	148	43	UD
540-84-1	Isooctane	148	52	UD
67-63-0	Isopropyl alcohol	148	47	UD
75-09-2	Methylene chloride	148	59	UD
78-93-3	Methyl ethyl ketone	148	28	UD
74-88-4	Methyl iodide	148	86	UD
108-10-1	Methyl isobutyl ketone	148	38	UD
1634-04-4	Methyl t-butyl ether	148	41	UD
91-20-3	Naphthalene	148	210	UD
115-07-1	Propylene	148	37	UD
100-42-5	Styrene	148	310	JD
630-20-6	1,1,1,2-Tetrachloroethane	148	90	UD
79-34-5	1,1,2,2-Tetrachloroethane	148	70	UD
127-18-4	Tetrachloroethene	148	74	UD
811-97-2	1,1,1,2-Tetrafluoroethane	148	99	UD
109-99-9	Tetrahydrofuran	148	40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-10	File ID:	07DEC33.D
Sampled:	12/02/20 10:59	Prepared:	12/07/20 08:12	Analyzed:	12/08/20 08:51
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	148	5700	D
120-82-1	1,2,4-Trichlorobenzene	148	120	UD
71-55-6	1,1,1-Trichloroethane	148	58	UD
79-00-5	1,1,2-Trichloroethane	148	90	UD
79-01-6	Trichloroethene	148	80	UD
75-69-4	Trichlorofluoromethane	148	70	UD
96-18-4	1,2,3-Trichloropropane	148	71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	148	81	UD
95-63-6	1,2,4-Trimethylbenzene	148	59	UD
108-67-8	1,3,5-Trimethylbenzene	148	59	UD
108-05-4	Vinyl acetate	148	49	UD
593-60-2	Vinyl bromide	148	47	UD
75-01-4	Vinyl chloride	148	58	UD
179601-23-1	p- & m-Xylenes	148	90	UD
95-47-6	o-Xylene	148	44	UD
1330-20-7	Total Xylenes	148	130	UD
---	TPH - Gasoline	148	63000	D
---	Total Petroleum Hydrocarbons	148	63000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	67918	7.498	79655	7.502	
Chlorobenzene-d5 (IS)	70340	11.013	83959	11.017	
1,4-Difluorobenzene (IS)	121538	8.691	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-11	File ID:	12DEC17.D
Sampled:	12/02/20 10:50	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 01:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.74	1.4	UD
67-64-1	Acetone	1.74	3.1	JD
107-13-1	Acrylonitrile	1.74	0.47	UD
107-05-1	Allyl chloride	1.74	0.49	UD
994-05-8	t-Amyl Methyl ether	1.74	0.54	UD
71-43-2	Benzene	1.74	0.37	UD
100-44-7	Benzyl chloride	1.74	0.45	UD
75-27-4	Bromodichloromethane	1.74	0.78	UD
75-25-2	Bromoform	1.74	1.5	UD
74-83-9	Bromomethane	1.74	0.82	UD
106-99-0	1,3-Butadiene	1.74	0.38	UD
75-65-0	t-Butyl alcohol	1.74	1.2	UD
75-15-0	Carbon disulfide	1.74	0.60	JD
56-23-5	Carbon tetrachloride	1.74	0.78	UD
108-90-7	Chlorobenzene	1.74	0.70	UD
75-00-3	Chloroethane	1.74	0.92	UD
67-66-3	Chloroform	1.74	0.94	UD
74-87-3	Chloromethane	1.74	0.37	UD
110-82-7	Cyclohexane	1.74	0.66	UD
124-48-1	Dibromochloromethane	1.74	0.75	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.74	3.0	UD
106-93-4	1,2-Dibromoethane	1.74	1.0	UD
74-95-3	Dibromomethane	1.74	0.99	UD
95-50-1	1,2-Dichlorobenzene	1.74	0.87	UD
541-73-1	1,3-Dichlorobenzene	1.74	0.54	UD
106-46-7	1,4-Dichlorobenzene	1.74	0.87	UD
75-71-8	Dichlorodifluoromethane	1.74	2.4	JD
75-34-3	1,1-Dichloroethane	1.74	0.40	UD
107-06-2	1,2-Dichloroethane	1.74	0.45	UD
75-35-4	1,1-Dichloroethene	1.74	0.54	UD
156-59-2	cis-1,2-Dichloroethene	1.74	0.56	UD
156-60-5	trans-1,2-Dichloroethene	1.74	0.47	UD

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-11
File ID: 12DEC17.D
Sampled: 12/02/20 10:50
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 01:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.74	0.56	UD
10061-01-5	cis-1,3-Dichloropropene	1.74	0.52	UD
10061-02-6	trans-1,3-Dichloropropene	1.74	0.70	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.74	1.6	UD
75-37-6	1,1-Difluoroethane	1.74	3.5	UD
108-20-3	Diisopropyl ether	1.74	0.68	UD
123-91-1	1,4-Dioxane	1.74	0.57	UD
64-17-5	Ethanol	1.74	30	D
141-78-6	Ethyl acetate	1.74	0.57	UD
100-41-4	Ethylbenzene	1.74	1.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.74	2.3	JD
637-92-3	Ethyl t-butyl ether	1.74	0.57	UD
142-82-5	n-Heptane	1.74	0.59	UD
87-68-3	Hexachlorobutadiene	1.74	2.6	UD
67-72-1	Hexachloroethane	1.74	1.3	UD
110-54-3	Hexane	1.74	0.35	UD
591-78-6	2-Hexanone	1.74	0.50	UD
540-84-1	Isooctane	1.74	0.61	UD
67-63-0	Isopropyl alcohol	1.74	0.56	UD
75-09-2	Methylene chloride	1.74	0.70	UD
78-93-3	Methyl ethyl ketone	1.74	0.33	UD
74-88-4	Methyl iodide	1.74	1.0	UD
108-10-1	Methyl isobutyl ketone	1.74	0.45	UD
1634-04-4	Methyl t-butyl ether	1.74	0.49	UD
91-20-3	Naphthalene	1.74	11	JD
115-07-1	Propylene	1.74	0.44	UD
100-42-5	Styrene	1.74	0.42	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.74	1.1	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.74	0.82	UD
127-18-4	Tetrachloroethene	1.74	6.4	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.74	1.2	UD
109-99-9	Tetrahydrofuran	1.74	0.47	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-11	File ID:	12DEC17.D
Sampled:	12/02/20 10:50	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 01:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.74	6.8	D
120-82-1	1,2,4-Trichlorobenzene	1.74	1.4	UD
71-55-6	1,1,1-Trichloroethane	1.74	0.68	UD
79-00-5	1,1,2-Trichloroethane	1.74	1.1	UD
79-01-6	Trichloroethene	1.74	0.94	UD
75-69-4	Trichlorofluoromethane	1.74	1.3	JD
96-18-4	1,2,3-Trichloropropane	1.74	0.84	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.74	0.96	UD
95-63-6	1,2,4-Trimethylbenzene	1.74	5.6	JD
108-67-8	1,3,5-Trimethylbenzene	1.74	1.0	JD
108-05-4	Vinyl acetate	1.74	0.57	UD
593-60-2	Vinyl bromide	1.74	0.56	UD
75-01-4	Vinyl chloride	1.74	0.68	UD
179601-23-1	p- & m-Xylenes	1.74	6.4	JD
95-47-6	o-Xylene	1.74	2.2	JD
1330-20-7	Total Xylenes	1.74	8.6	JD
---	TPH - Gasoline	1.74	300	JD
---	Total Petroleum Hydrocarbons	1.74	300	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.27	92.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	103122	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	152803	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	290716	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-12RE1	File ID:	07DEC30.D
Sampled:	12/02/20 12:10	Prepared:	12/07/20 08:12	Analyzed:	12/08/20 00:31
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.8	260	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.66	86.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73062	7.512	79655	7.502	
Chlorobenzene-d5 (IS)	70404	11.018	83959	11.017	
1,4-Difluorobenzene (IS)	131735	8.695	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-12
File ID: 12DEC18.D
Sampled: 12/02/20 12:10
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 02:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.58	1.3	UD
107-13-1	Acrylonitrile	1.58	0.43	UD
107-05-1	Allyl chloride	1.58	0.44	UD
994-05-8	t-Amyl Methyl ether	1.58	0.49	UD
71-43-2	Benzene	1.58	3.2	D
100-44-7	Benzyl chloride	1.58	0.41	UD
75-27-4	Bromodichloromethane	1.58	0.71	UD
75-25-2	Bromoform	1.58	1.4	UD
74-83-9	Bromomethane	1.58	0.74	UD
106-99-0	1,3-Butadiene	1.58	0.35	UD
75-65-0	t-Butyl alcohol	1.58	10	D
75-15-0	Carbon disulfide	1.58	74	D
56-23-5	Carbon tetrachloride	1.58	0.71	UD
108-90-7	Chlorobenzene	1.58	0.63	UD
75-00-3	Chloroethane	1.58	0.84	UD
67-66-3	Chloroform	1.58	10	D
74-87-3	Chloromethane	1.58	0.33	UD
110-82-7	Cyclohexane	1.58	0.60	UD
124-48-1	Dibromochloromethane	1.58	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.58	2.7	UD
106-93-4	1,2-Dibromoethane	1.58	5.1	JD
74-95-3	Dibromomethane	1.58	0.90	UD
95-50-1	1,2-Dichlorobenzene	1.58	0.79	UD
541-73-1	1,3-Dichlorobenzene	1.58	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.58	0.79	UD
75-71-8	Dichlorodifluoromethane	1.58	50	D
75-34-3	1,1-Dichloroethane	1.58	0.36	UD
107-06-2	1,2-Dichloroethane	1.58	0.83	JD
75-35-4	1,1-Dichloroethene	1.58	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.58	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.58	0.43	UD
78-87-5	1,2-Dichloropropane	1.58	0.51	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19A-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-12
File ID: 12DEC18.D
Sampled: 12/02/20 12:10
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 02:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.58	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.58	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.58	1.4	UD
75-37-6	1,1-Difluoroethane	1.58	3.2	UD
108-20-3	Diisopropyl ether	1.58	0.62	UD
123-91-1	1,4-Dioxane	1.58	0.52	UD
64-17-5	Ethanol	1.58	0.66	UD
141-78-6	Ethyl acetate	1.58	0.52	UD
100-41-4	Ethylbenzene	1.58	13	D
622-96-8	1-Ethyl-4-methylbenzene	1.58	17	D
637-92-3	Ethyl t-butyl ether	1.58	0.52	UD
142-82-5	n-Heptane	1.58	0.54	UD
87-68-3	Hexachlorobutadiene	1.58	2.4	UD
67-72-1	Hexachloroethane	1.58	1.2	UD
110-54-3	Hexane	1.58	0.32	UD
591-78-6	2-Hexanone	1.58	0.46	UD
540-84-1	Isooctane	1.58	6.2	JD
67-63-0	Isopropyl alcohol	1.58	0.51	UD
75-09-2	Methylene chloride	1.58	0.63	UD
78-93-3	Methyl ethyl ketone	1.58	33	D
74-88-4	Methyl iodide	1.58	0.92	UD
108-10-1	Methyl isobutyl ketone	1.58	31	D
1634-04-4	Methyl t-butyl ether	1.58	0.44	UD
91-20-3	Naphthalene	1.58	11	JD
115-07-1	Propylene	1.58	0.40	UD
100-42-5	Styrene	1.58	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.58	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.58	0.74	UD
127-18-4	Tetrachloroethene	1.58	260	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.58	1.1	UD
109-99-9	Tetrahydrofuran	1.58	13	D
108-88-3	Toluene	1.58	60	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19A-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-12	File ID:	12DEC18.D
Sampled:	12/02/20 12:10	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 02:35
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.58	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.58	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.58	0.96	UD
79-01-6	Trichloroethene	1.58	0.85	UD
75-69-4	Trichlorofluoromethane	1.58	7.5	JD
96-18-4	1,2,3-Trichloropropane	1.58	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.58	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.58	29	D
108-67-8	1,3,5-Trimethylbenzene	1.58	7.6	JD
108-05-4	Vinyl acetate	1.58	0.52	UD
593-60-2	Vinyl bromide	1.58	0.51	UD
75-01-4	Vinyl chloride	1.58	0.62	UD
179601-23-1	p- & m-Xylenes	1.58	47	D
95-47-6	o-Xylene	1.58	16	D
1330-20-7	Total Xylenes	1.58	63	D
---	TPH - Gasoline	1.58	1300	D
---	Total Petroleum Hydrocarbons	1.58	1300	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.28	92.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	101463	7.621	99484	7.611	
Chlorobenzene-d5 (IS)	158960	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	295798	8.795	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-13RE1	File ID:	07DEC31.D
Sampled:	12/02/20 11:55	Prepared:	12/07/20 08:12	Analyzed:	12/08/20 01:01
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094480	Sequence:	2021783	Calibration:	2012012
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	14.8	340	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.35	83.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	72983	7.506	79655	7.502	
Chlorobenzene-d5 (IS)	67442	11.017	83959	11.017	
1,4-Difluorobenzene (IS)	131831	8.694	146337	8.695	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-13
File ID: 12DEC19.D
Sampled: 12/02/20 11:55
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 03:12
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	4.6	JD
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	0.33	UD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	5.0	JD
75-15-0	Carbon disulfide	1.59	1.8	JD
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	44	D
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	56	D
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19B-01

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035335-13
File ID: 12DEC19.D
Sampled: 12/02/20 11:55
Prepared: 12/12/20 13:12
Analyzed: 12/13/20 03:12
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094935
Sequence: 2022116
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	0.67	UD
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.59	0.48	UD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	0.51	UD
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	0.30	UD
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	0.72	JD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	2.2	UD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	0.43	UD
108-88-3	Toluene	1.59	0.72	JD

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW19B-01

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035335-13	File ID:	12DEC19.D
Sampled:	12/02/20 11:55	Prepared:	12/12/20 13:12	Analyzed:	12/13/20 03:12
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094935	Sequence:	2022116	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	1.2	JD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	9.7	D
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	0.64	UD
108-67-8	1,3,5-Trimethylbenzene	1.59	0.64	UD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	0.97	UD
95-47-6	o-Xylene	1.59	0.48	UD
1330-20-7	Total Xylenes	1.59	1.4	UD
---	TPH - Gasoline	1.59	430	D
---	Total Petroleum Hydrocarbons	1.59	430	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.15	91.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98863	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	152514	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	287778	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094480 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW35B-01	2035335-02RE1	07DEC21.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW36A-01	2035335-03RE1	07DEC22.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW37B-01	2035335-08RE1	07DEC27.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW37B-02	2035335-09RE1	07DEC28.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW42A-01	2035335-10	07DEC33.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW19A-01	2035335-12RE1	07DEC30.D	12/07/20 08:12	FULL Customized List-All Table 8
SG-VW19B-01	2035335-13RE1	07DEC31.D	12/07/20 08:12	FULL Customized List-All Table 8
Blank	B094480-BLK1	07DEC18.D	12/07/20 09:21	
LCS	B094480-BS1	07DEC16.D	12/07/20 09:21	
LCS Dup	B094480-BSD1	07DEC17.D	12/07/20 09:21	

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094935 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW35A-01	2035335-01	12DEC08.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW35B-01	2035335-02	12DEC09.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW36A-01	2035335-03	12DEC10.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW36B-01	2035335-04	12DEC11.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW40A-01	2035335-05	12DEC12.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW40B-01	2035335-06	12DEC13.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW37A-01	2035335-07	12DEC14.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW37B-01	2035335-08	12DEC15.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW37B-02	2035335-09	12DEC16.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW42B-01	2035335-11	12DEC17.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW19A-01	2035335-12	12DEC18.D	12/12/20 13:12	FULL Customized List-All Table 8
SG-VW19B-01	2035335-13	12DEC19.D	12/12/20 13:12	FULL Customized List-All Table 8
Blank	B094935-BLK1	12DEC07.D	12/12/20 13:10	
LCS	B094935-BS1	12DEC05.D	12/12/20 13:10	
LCS Dup	B094935-BSD1	12DEC06.D	12/12/20 13:10	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094480-BLK1	File ID:	07DEC18.D
Prepared:	12/07/20 09:21	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/07/20 18:39	Instrument:	MS-A1		
Batch:	B094480	Sequence:	2021783	Calibration:	2012012

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094480-BLK1	File ID:	07DEC18.D
Prepared:	12/07/20 09:21	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/07/20 18:39	Instrument:	MS-A1		
Batch:	B094480	Sequence:	2021783	Calibration:	2012012

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094480-BLK1	File ID:	07DEC18.D
Prepared:	12/07/20 09:21	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/07/20 18:39	Instrument:	MS-A1		
Batch:	B094480	Sequence:	2021783	Calibration:	2012012

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094480-BLK1	File ID:	07DEC18.D
Prepared:	12/07/20 09:21	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/07/20 18:39	Instrument:	MS-A1		
Batch:	B094480	Sequence:	2021783	Calibration:	2012012

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.19	81.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83829	7.497	79655	7.502	
Chlorobenzene-d5 (IS)	80326	11.013	83959	11.017	
1,4-Difluorobenzene (IS)	156942	8.69	146337	8.695	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094935-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 13:10	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:56	Instrument:	MS-A2		
Batch:	B094935	Sequence:	2022116	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094935-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 13:10	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:56	Instrument:	MS-A2		
Batch:	B094935	Sequence:	2022116	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094935-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 13:10	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:56	Instrument:	MS-A2		
Batch:	B094935	Sequence:	2022116	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035335
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094935-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 13:10	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:56	Instrument:	MS-A2		
Batch:	B094935	Sequence:	2022116	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.12	91.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97001	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	140280	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	276801	8.785	289206	8.79	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094480
Preparation: EPA TO-15

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094480-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	16.910	106	70 - 130
Chloroform	24.413	25.155	103	70 - 130
Ethylbenzene	21.711	24.407	112	70 - 130
Tetrachloroethene	33.913	34.910	103	70 - 130
Toluene	18.842	19.961	106	70 - 130
Trichloroethene	26.869	28.132	105	70 - 130
Trichlorofluoromethane	28.092	28.805	103	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	39.437	103	70 - 130
p- & m-Xylenes	43.421	46.873	108	70 - 130
o-Xylene	21.711	23.434	108	70 - 130
Total Xylenes	65.132	70.308	108	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	17.146	107	1.39	30	70 - 130
Chloroform	24.413	25.697	105	2.13	30	70 - 130
Ethylbenzene	21.711	24.325	112	0.339	30	70 - 130
Tetrachloroethene	33.913	35.323	104	1.18	30	70 - 130
Toluene	18.842	19.867	105	0.473	30	70 - 130
Trichloroethene	26.869	27.723	103	1.46	30	70 - 130
Trichlorofluoromethane	28.092	29.204	104	1.38	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	40.249	105	2.04	30	70 - 130
p- & m-Xylenes	43.421	48.106	111	2.60	30	70 - 130
o-Xylene	21.711	23.912	110	2.02	30	70 - 130

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Batch: B094480
Laboratory ID: B094480-BSD1
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	72.019	111	2.40	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094935
Preparation: EPA TO-15

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094935-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	15.686	98.2	70 - 130
Chloroform	24.413	22.850	93.6	70 - 130
Ethylbenzene	21.711	23.838	110	70 - 130
Tetrachloroethene	33.913	34.184	101	70 - 130
Toluene	18.842	19.935	106	70 - 130
Trichloroethene	26.869	27.191	101	70 - 130
Trichlorofluoromethane	28.092	26.743	95.2	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	35.636	93.0	70 - 130
p- & m-Xylenes	43.421	46.287	107	70 - 130
o-Xylene	21.711	23.795	110	70 - 130
Total Xylenes	65.132	70.082	108	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	16.102	101	2.61	30	70 - 130
Chloroform	24.413	23.631	96.8	3.36	30	70 - 130
Ethylbenzene	21.711	25.271	116	5.84	30	70 - 130
Tetrachloroethene	33.913	35.744	105	4.46	30	70 - 130
Toluene	18.842	20.576	109	3.16	30	70 - 130
Trichloroethene	26.869	28.212	105	3.69	30	70 - 130
Trichlorofluoromethane	28.092	27.530	98.0	2.90	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	36.709	95.8	2.97	30	70 - 130
p- & m-Xylenes	43.421	48.806	112	5.30	30	70 - 130
o-Xylene	21.711	24.620	113	3.41	30	70 - 130

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Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094935
Preparation: EPA TO-15

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094935-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	73.425	113	4.66	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021783
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2021783-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2021783-ICB2	16OCT17.D	10/16/20 17:40
MS Tune	2021783-TUN1	07DEC02.D	12/07/20 10:05
Initial Cal Check	2021783-ICV1	07DEC09.D	12/07/20 14:11
Calibration Check	2021783-CCV2	07DEC10.D	12/07/20 14:44
Initial Cal Blank	2021783-ICB1	07DEC11.D	12/07/20 15:12
LCS	B094480-BS1	07DEC16.D	12/07/20 17:40
LCS Dup	B094480-BSD1	07DEC17.D	12/07/20 18:12
Blank	B094480-BLK1	07DEC18.D	12/07/20 18:39
SG-VW35B-01	2035335-02RE1	07DEC21.D	12/07/20 20:07
SG-VW36A-01	2035335-03RE1	07DEC22.D	12/07/20 20:37
SG-VW37B-01	2035335-08RE1	07DEC27.D	12/07/20 23:03
SG-VW37B-02	2035335-09RE1	07DEC28.D	12/07/20 23:33
SG-VW19A-01	2035335-12RE1	07DEC30.D	12/08/20 00:31
SG-VW19B-01	2035335-13RE1	07DEC31.D	12/08/20 01:01
SG-VW42A-01	2035335-10	07DEC33.D	12/08/20 08:51

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022116-ICV2	15AUG11.D	08/15/18 18:29
Initial Cal Blank	2022116-ICB2	15AUG13.D	08/15/18 19:39
Initial Cal Check	2022116-ICV1	09DEC14.D	12/09/20 21:28
Initial Cal Blank	2022116-ICB1	09DEC16.D	12/09/20 22:27
MS Tune	2022116-TUN1	12DEC01.D	12/12/20 16:51
Calibration Check	2022116-CCV1	12DEC02.D	12/12/20 17:24
Calibration Check	2022116-CCV2	12DEC03.D	12/12/20 17:57
Calibration Blank	2022116-CCB1	12DEC04.D	12/12/20 18:25
LCS	B094935-BS1	12DEC05.D	12/12/20 18:57
LCS Dup	B094935-BSD1	12DEC06.D	12/12/20 19:29
Blank	B094935-BLK1	12DEC07.D	12/12/20 19:56
SG-VW35A-01	2035335-01	12DEC08.D	12/12/20 20:32
SG-VW35B-01	2035335-02	12DEC09.D	12/12/20 21:08
SG-VW36A-01	2035335-03	12DEC10.D	12/12/20 21:43
SG-VW36B-01	2035335-04	12DEC11.D	12/12/20 22:19
SG-VW40A-01	2035335-05	12DEC12.D	12/12/20 22:55
SG-VW40B-01	2035335-06	12DEC13.D	12/12/20 23:31
SG-VW37A-01	2035335-07	12DEC14.D	12/13/20 00:08
SG-VW37B-01	2035335-08	12DEC15.D	12/13/20 00:44
SG-VW37B-02	2035335-09	12DEC16.D	12/13/20 01:21
SG-VW42B-01	2035335-11	12DEC17.D	12/13/20 01:58
SG-VW19A-01	2035335-12	12DEC18.D	12/13/20 02:35
SG-VW19B-01	2035335-13	12DEC19.D	12/13/20 03:12

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Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022117-TUN2	15AUG04.D	08/15/18 14:24
Cal Standard	2022117-CAL7	15AUG05.D	08/15/18 14:58
Cal Standard	2022117-CAL8	15AUG06.D	08/15/18 15:32
Cal Standard	2022117-CAL9	15AUG07.D	08/15/18 16:06
Cal Standard	2022117-CALA	15AUG08.D	08/15/18 16:41
Cal Standard	2022117-CALB	15AUG09.D	08/15/18 17:15
Cal Standard	2022117-CALC	15AUG10.D	08/15/18 17:52
MS Tune	2022117-TUN1	09DEC07.D	12/09/20 17:22
Cal Standard	2022117-CAL1	09DEC08.D	12/09/20 17:51
Cal Standard	2022117-CAL2	09DEC09.D	12/09/20 18:20
Cal Standard	2022117-CAL3	09DEC10.D	12/09/20 18:51
Cal Standard	2022117-CAL4	09DEC11.D	12/09/20 19:29
Cal Standard	2022117-CAL5	09DEC12.D	12/09/20 20:12
Cal Standard	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022119
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022119-TUN2	16OCT09.D	10/16/20 13:36
Cal Standard	2022119-CAL7	16OCT10.D	10/16/20 14:05
Cal Standard	2022119-CAL8	16OCT11.D	10/16/20 14:34
Cal Standard	2022119-CAL9	16OCT12.D	10/16/20 15:03
Cal Standard	2022119-CALA	16OCT13.D	10/16/20 15:34
Cal Standard	2022119-CALB	16OCT14.D	10/16/20 16:05
Cal Standard	2022119-CALC	16OCT15.D	10/16/20 16:41
MS Tune	2022119-TUN1	07DEC02.D	12/07/20 10:05
Cal Standard	2022119-CAL1	07DEC03.D	12/07/20 10:34
Cal Standard	2022119-CAL2	07DEC04.D	12/07/20 11:02
Cal Standard	2022119-CAL3	07DEC05.D	12/07/20 11:34
Cal Standard	2022119-CAL4	07DEC06.D	12/07/20 12:13
Cal Standard	2022119-CAL5	07DEC07.D	12/07/20 12:55
Cal Standard	2022119-CAL6	07DEC08.D	12/07/20 13:40

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	07DEC02.D	Injection Date:	12/07/20
Instrument ID:	MS-A1	Injection Time:	10:05
Sequence:	2021783	Lab Sample ID:	2021783-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	30	PASS
Mass 75	30 - 66% of Mass 95	58	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.84	PASS
Mass 173	Less than 2% of Mass 174	0.409	PASS
Mass 174	50 - 120% of Mass 95	70.2	PASS
Mass 175	4 - 9% of Mass 174	7.79	PASS
Mass 176	93 - 101% of Mass 174	99	PASS
Mass 177	5 - 9% of Mass 176	6.22	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	12DEC01.D	Injection Date:	12/12/20
Instrument ID:	MS-A2	Injection Time:	16:51
Sequence:	2022116	Lab Sample ID:	2022116-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.9	PASS
Mass 75	30 - 66% of Mass 95	53.7	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.59	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	94.9	PASS
Mass 175	4 - 9% of Mass 174	8.22	PASS
Mass 176	93 - 101% of Mass 174	98.3	PASS
Mass 177	5 - 9% of Mass 176	6.56	PASS

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	09DEC07.D	Injection Date:	12/09/20
Instrument ID:	MS-A2	Injection Time:	17:22
Sequence:	2022117	Lab Sample ID:	2022117-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.3	PASS
Mass 75	30 - 66% of Mass 95	51.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.59	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	94.2	PASS
Mass 175	4 - 9% of Mass 174	8.08	PASS
Mass 176	93 - 101% of Mass 174	97.1	PASS
Mass 177	5 - 9% of Mass 176	6.51	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	15AUG04.D	Injection Date:	08/15/18
Instrument ID:	MS-A2	Injection Time:	14:24
Sequence:	2022117	Lab Sample ID:	2022117-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	26.2	PASS
Mass 75	30 - 66% of Mass 95	53.7	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.38	PASS
Mass 173	Less than 2% of Mass 174	0.697	PASS
Mass 174	50 - 120% of Mass 95	94.3	PASS
Mass 175	4 - 9% of Mass 174	7.46	PASS
Mass 176	93 - 101% of Mass 174	96.3	PASS
Mass 177	5 - 9% of Mass 176	6.33	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	07DEC02.D	Injection Date:	12/07/20
Instrument ID:	MS-A1	Injection Time:	10:05
Sequence:	2022119	Lab Sample ID:	2022119-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	30	PASS
Mass 75	30 - 66% of Mass 95	58	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.84	PASS
Mass 173	Less than 2% of Mass 174	0.409	PASS
Mass 174	50 - 120% of Mass 95	70.2	PASS
Mass 175	4 - 9% of Mass 174	7.79	PASS
Mass 176	93 - 101% of Mass 174	99	PASS
Mass 177	5 - 9% of Mass 176	6.22	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	16OCT09.D	Injection Date:	10/16/20
Instrument ID:	MS-A1	Injection Time:	13:36
Sequence:	2022119	Lab Sample ID:	2022119-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28	PASS
Mass 75	30 - 66% of Mass 95	54.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.88	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.7	PASS
Mass 175	4 - 9% of Mass 174	7.82	PASS
Mass 176	93 - 101% of Mass 174	97.7	PASS
Mass 177	5 - 9% of Mass 176	6.13	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012012
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2021783	Injection Date:	10/16/20
Lab Sample ID:	2021783-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012012
Lab File ID:	07DEC09.D	Calibration Date:	10/16/20 14:05
Sequence:	2021783	Injection Date:	12/07/20
Lab Sample ID:	2021783-ICV1	Injection Time:	14:11

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.7920	1.23964	1.18815		-4.2	30
Acrylonitrile	A	5.0000	5.3740	0.3406967	0.3661632		7.5	30
Allyl chloride	A	5.0000	5.1150	0.8619281	0.8817351		2.3	30
t-Amyl Methyl ether	A	5.0000	5.0810	0.5876446	0.5971179		1.6	30
Benzene	A	5.0000	5.4280	1.044715	1.134085		8.6	30
Benzyl chloride	L	5.0000	3.9980	1.028792	0.917012		-20.0	30
Bromodichloromethane	A	5.0000	4.5870	0.7428559	0.6815304		-8.3	30
Bromoform	A	5.0000	5.1770	1.111877	1.151267		3.5	30
Bromomethane	A	5.0000	5.3470	0.3271889	0.3498648		6.9	30
1,3-Butadiene	A	5.0000	5.2320	0.4957182	0.5186807		4.6	30
t-Butyl alcohol	A	10.000	10.341	1.137697	1.176478		3.4	30
Carbon disulfide	A	5.0000	5.4180	1.05821	1.146612		8.4	30
Carbon tetrachloride	A	5.0000	4.7080	1.387718	1.306801		-5.8	30
Chlorobenzene	A	5.0000	5.0210	0.6594653	0.6622679		0.4	30
Chloroethane	A	5.0000	5.4530	0.1998289	0.217932		9.1	30
Chloroform	A	5.0000	4.9370	1.023895	1.011093		-1.3	30
Chloromethane	A	5.0000	5.2140	0.5181695	0.540369		4.3	30
Cyclohexane	L	5.0000	5.1860	1.390694	1.212027		3.7	30
Dibromochloromethane	A	5.0000	4.7730	0.7426148	0.7089003		-4.5	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.2520	0.1447546	0.1359004		-15.0	30
1,2-Dibromoethane	A	5.0000	4.9810	0.4110764	0.4095335		-0.4	30
Dibromomethane	A	5.0000	5.0590	0.1186564	0.1200447		1.2	30
1,2-Dichlorobenzene	A	5.0000	5.3110	1.011901	1.074842		6.2	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012012
Lab File ID:	07DEC09.D	Calibration Date:	10/16/20 14:05
Sequence:	2021783	Injection Date:	12/07/20
Lab Sample ID:	2021783-ICV1	Injection Time:	14:11

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1830	1.068868	1.108084		3.7	30
1,4-Dichlorobenzene	A	5.0000	5.2490	0.9310582	0.97743		5.0	30
Dichlorodifluoromethane	A	5.0000	4.8290	1.371139	1.324332		-3.4	30
1,1-Dichloroethane	A	5.0000	5.2440	0.8129985	0.8527069		4.9	30
1,2-Dichloroethane	A	5.0000	4.5930	0.9551628	0.8775041		-8.1	30
1,1-Dichloroethene	A	5.0000	4.9340	0.8569545	0.8456062		-1.3	30
cis-1,2-Dichloroethene	A	5.0000	5.0900	0.6975886	0.7100863		1.8	30
trans-1,2-Dichloroethene	A	5.0000	5.1010	0.7967213	0.8128254		2.0	30
1,2-Dichloropropane	A	5.0000	5.1170	0.2406372	0.2462909		2.3	30
cis-1,3-Dichloropropene	A	5.0000	4.9970	0.3695082	0.3692574		-0.07	30
trans-1,3-Dichloropropene	A	5.0000	5.1120	0.3628189	0.3709311		2.2	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.0430	1.014126	1.022866		0.9	30
1,1-Difluoroethane	A	5.0000	5.3700	1.028027	1.104027		7.4	30
Diisopropyl ether	A	5.0000	5.4100	0.2954411	0.3196961		8.2	30
1,4-Dioxane	A	5.0000	5.9500	0.1464707	0.1743009		19.0	30
Ethanol	A	10.000	10.658	0.193663	0.206398		6.6	30
Ethyl acetate	A	5.0000	6.1860	0.1442225	0.1784367		23.7	30
Ethylbenzene	A	5.0000	5.5560	0.583909	0.6488039		11.1	30
1-Ethyl-4-methylbenzene	A	5.0000	5.2860	2.730851	2.887274		5.7	30
Ethyl t-butyl ether	A	5.0000	5.2520	1.608476	1.68952		5.0	30
n-Heptane	A	5.0000	5.1260	0.3352554	0.343716		2.5	30
Hexachlorobutadiene	A	5.0000	5.0740	0.6457994	0.6553846		1.5	30
Hexachloroethane	A	5.0000	4.8920	0.2670424	0.2612717		-2.2	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 07DEC09.D
Sequence: 2021783
Lab Sample ID: 2021783-ICV1

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012012
Calibration Date: 10/16/20 14:05
Injection Date: 12/07/20
Injection Time: 14:11

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.4290	0.9446479	1.025662		8.6	30
2-Hexanone	A	5.0000	4.8710	0.7755922	0.7555328		-2.6	30
Isooctane	A	5.0000	5.1820	1.729461	1.792321		3.6	30
Isopropyl alcohol	A	5.0000	5.4580	1.00437	1.096411		9.2	30
Methylene chloride	A	5.0000	4.8990	0.7305058	0.7156969		-2.0	30
Methyl ethyl ketone	A	5.0000	5.2500	1.432939	1.504479		5.0	30
Methyl iodide	A	5.0000	5.3650	0.5387371	0.5780799		7.3	30
Methyl isobutyl ketone	A	5.0000	5.1340	0.9621234	0.987834		2.7	30
Methyl t-butyl ether	A	5.0000	5.2300	1.480404	1.548371		4.6	30
Naphthalene	Q	5.0000	4.9100	0.9684349	0.9753135		-1.8	30
Propylene	A	5.0000	5.4630	0.5140722	0.5617078		9.3	30
Styrene	A	5.0000	5.5260	1.013682	1.120302		10.5	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.7930	0.300954	0.2884923		-4.1	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.3550	0.9550421	1.022944		7.1	30
Tetrachloroethene	A	5.0000	5.1700	0.4036726	0.4174185		3.4	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.9920	0.773049	0.7718769		-0.2	30
Tetrahydrofuran	A	5.0000	5.3280	0.8096431	0.8627141		6.6	30
Toluene	A	5.0000	5.1700	0.7860399	0.8127881		3.4	30
1,2,4-Trichlorobenzene	Q	5.0000	5.1330	0.2151739	0.1965496		2.7	30
1,1,1-Trichloroethane	A	5.0000	4.7280	1.24216	1.174684		-5.4	30
1,1,2-Trichloroethane	A	5.0000	5.0590	0.2736374	0.2768826		1.2	30
Trichloroethene	A	5.0000	5.2340	0.2994679	0.3134629		4.7	30
Trichlorofluoromethane	A	5.0000	4.6900	1.517101	1.423153		-6.2	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012012
Lab File ID:	07DEC09.D	Calibration Date:	10/16/20 14:05
Sequence:	2021783	Injection Date:	12/07/20
Lab Sample ID:	2021783-ICV1	Injection Time:	14:11

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.0780	0.2738831	0.2781503		1.6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0390	0.8363816	0.8428285		0.8	30
1,2,4-Trimethylbenzene	A	5.0000	5.3390	1.971018	2.104669		6.8	30
1,3,5-Trimethylbenzene	A	5.0000	5.4670	1.984568	2.170049		9.3	30
Vinyl acetate	A	5.0000	5.1580	2.010171	2.073509		3.2	30
Vinyl bromide	A	5.0000	5.4350	0.3916442	0.4257096		8.7	30
Vinyl chloride	A	5.0000	5.3860	0.4015148	0.432516		7.7	30
p- & m-Xylenes	A	10.000	10.445	1.675924	1.750485		4.4	30
o-Xylene	A	5.0000	5.2070	1.771683	1.845051		4.1	30
Total Xylenes	A	15.000	15.652	1.707844	1.782007		4.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012012
Lab File ID:	07DEC10.D	Calibration Date:	10/16/20 14:05
Sequence:	2021783	Injection Date:	12/07/20
Lab Sample ID:	2021783-CCV2	Injection Time:	14:44

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	378.76	3.784361	2.866747		-24.2	30
Total Petroleum Hydrocarbons	A	500.00	378.76	3.784361	2.866747		-24.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	15AUG11.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	08/15/18
Lab Sample ID:	2022116-ICV2	Injection Time:	18:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	490.55	4.288774	4.207688		-1.9	30
Total Petroleum Hydrocarbons	A	500.00	490.55	4.288774	4.207688		-1.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/09/20
Lab Sample ID:	2022116-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.0300	1.385321	1.39285		0.5	30
Acrylonitrile	A	5.0000	5.4200	0.4734002	0.5133195		8.4	30
Allyl chloride	A	5.0000	5.5800	0.9311473	1.038662		11.5	30
t-Amyl Methyl ether	A	5.0000	5.8500	0.5084969	0.5948481		17.0	30
Benzene	A	5.0000	5.4800	2.310203	2.534081		9.7	30
Benzyl chloride	L	5.0000	4.6900	1.21796	1.329562		-6.2	30
Bromodichloromethane	A	5.0000	5.1900	0.7498123	0.7787605		3.9	30
Bromoform	A	5.0000	5.6900	1.29582	1.473501		13.7	30
Bromomethane	A	5.0000	5.0500	0.5721625	0.5779802		1.0	30
1,3-Butadiene	A	5.0000	5.1400	0.4373898	0.4498363		2.8	30
t-Butyl alcohol	A	10.000	11.970	1.144382	1.369723		19.7	30
Carbon disulfide	A	5.0000	5.2900	2.556243	2.704926		5.8	30
Carbon tetrachloride	A	5.0000	5.0600	1.931421	1.952713		1.1	30
Chlorobenzene	A	5.0000	5.1000	0.7977157	0.814334		2.1	30
Chloroethane	A	5.0000	5.0800	0.2597023	0.2638489		1.6	30
Chloroform	A	5.0000	5.0800	1.858315	1.888321		1.6	30
Chloromethane	A	5.0000	4.8900	0.4590853	0.4490719		-2.2	30
Cyclohexane	A	5.0000	4.5900	1.652539	1.51647		-8.2	30
Dibromochloromethane	A	5.0000	5.3600	0.6776753	0.7260836		7.1	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.3400	0.1651741	0.176527		6.9	30
1,2-Dibromoethane	A	5.0000	5.3700	0.4694284	0.5041782		7.4	30
Dibromomethane	A	5.0000	5.1400	0.1316079	0.1351959		2.7	30
1,2-Dichlorobenzene	A	5.0000	5.7800	1.088648	1.258492		15.6	30

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/09/20
Lab Sample ID:	2022116-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.8800	1.261041	1.483273		17.6	30
1,4-Dichlorobenzene	A	5.0000	5.4900	1.150627	1.262439		9.7	30
Dichlorodifluoromethane	A	5.0000	5.0800	2.297283	2.335719		1.7	30
1,1-Dichloroethane	A	5.0000	5.2500	1.501032	1.57578		5.0	30
1,2-Dichloroethane	A	5.0000	5.1100	1.259162	1.285716		2.1	30
1,1-Dichloroethene	A	5.0000	5.4700	1.264693	1.383513		9.4	30
cis-1,2-Dichloroethene	A	5.0000	5.4500	1.054343	1.149185		9.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4800	1.231126	1.348373		9.5	30
1,2-Dichloropropane	A	5.0000	5.3400	0.2973131	0.3175814		6.8	30
cis-1,3-Dichloropropene	A	5.0000	5.7400	0.3819551	0.4388394		14.9	30
trans-1,3-Dichloropropene	A	5.0000	5.7600	0.4130522	0.4761559		15.3	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9900	1.617365	1.614122		-0.2	30
1,1-Difluoroethane	A	5.0000	5.0800	1.308935	1.329945		1.6	30
Diisopropyl ether	A	5.0000	5.5100	0.5202863	0.5737246		10.3	30
1,4-Dioxane	A	5.0000	4.9300	0.1396685	0.1378245		-1.3	30
Ethanol	A	10.000	9.9400	0.143483	0.1426771		-0.6	30
Ethyl acetate	A	5.0000	5.6600	0.2696996	0.3055375		13.3	30
Ethylbenzene	A	5.0000	6.0100	0.6525795	0.7841801		20.2	30
1-Ethyl-4-methylbenzene	A	5.0000	6.4600	2.860951	3.694484		29.1	30
Ethyl t-butyl ether	A	5.0000	5.7300	1.81201	2.076147		14.6	30
n-Heptane	A	5.0000	5.7100	0.2699023	0.3081407		14.2	30
Hexachlorobutadiene	A	5.0000	5.5800	0.6202578	0.6925375		11.7	30
Hexachloroethane	A	5.0000	5.4200	0.2645854	0.2869578		8.5	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/09/20
Lab Sample ID:	2022116-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3400	1.320847	1.411856		6.9	30
2-Hexanone	L	5.0000	5.0500	0.4702171	0.5562207		1.0	30
Isooctane	A	5.0000	5.5500	1.450681	1.60994		11.0	30
Isopropyl alcohol	A	5.0000	5.6700	0.9542893	1.081941		13.4	30
Methylene chloride	A	5.0000	4.7700	0.946655	0.9029366		-4.6	30
Methyl ethyl ketone	A	5.0000	5.4800	1.599616	1.753029		9.6	30
Methyl iodide	A	5.0000	5.4900	0.9312524	1.02321		9.9	30
Methyl isobutyl ketone	A	5.0000	5.9400	0.5962516	0.707767		18.7	30
Methyl t-butyl ether	A	5.0000	5.7000	2.244678	2.559429		14.0	30
Naphthalene	Q	5.0000	4.6100	1.277326	1.456727		-7.8	30
Propylene	A	5.0000	5.2900	0.5884372	0.6221065		5.7	30
Styrene	A	5.0000	6.3000	1.133207	1.428193		26.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2300	0.2449739	0.256182		4.6	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.6000	1.289947	1.445751		12.1	30
Tetrachloroethene	A	5.0000	5.4000	0.487058	0.5262182		8.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.1300	1.142489	1.172281		2.6	30
Tetrahydrofuran	A	5.0000	5.7400	0.8416471	0.9654902		14.7	30
Toluene	A	5.0000	5.8100	0.8694338	1.011034		16.3	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3800	0.2835387	0.3032183		7.6	30
1,1,1-Trichloroethane	A	5.0000	5.1200	1.709834	1.749765		2.3	30
1,1,2-Trichloroethane	A	5.0000	5.1700	0.3422061	0.3537127		3.4	30
Trichloroethene	A	5.0000	5.4500	0.3311466	0.3607688		8.9	30
Trichlorofluoromethane	A	5.0000	4.9700	2.34705	2.332786		-0.6	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/09/20
Lab Sample ID:	2022116-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.5100	0.3545077	0.3908601		10.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0400	1.702496	1.714728		0.7	30
1,2,4-Trimethylbenzene	A	5.0000	6.2500	1.781325	2.228106		25.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.7000	1.930352	2.198911		13.9	30
Vinyl acetate	A	5.0000	5.5900	2.11964	2.368215		11.7	30
Vinyl bromide	A	5.0000	5.3200	0.7824054	0.8318511		6.3	30
Vinyl chloride	A	5.0000	5.0100	0.5526786	0.5542437		0.3	30
p- & m-Xylenes	A	10.000	11.630	1.765584	2.052499		16.3	30
o-Xylene	A	5.0000	5.8900	1.802727	2.123447		17.8	30
Total Xylenes	A	15.000	17.520	1.777965	2.076148		16.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	12DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/12/20
Lab Sample ID:	2022116-CCV1	Injection Time:	17:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.7400	1.385321	1.31371		-5.2	30
Acrylonitrile	A	5.0000	4.9800	0.4734002	0.4715828		-0.4	30
Allyl chloride	A	5.0000	5.0000	0.9311473	0.930761		-0.04	30
t-Amyl Methyl ether	A	5.0000	5.3300	0.5084969	0.5415999		6.5	30
Benzene	A	5.0000	4.9300	2.310203	2.279105		-1.3	30
Benzyl chloride	L	5.0000	4.5700	1.21796	1.288889		-8.6	30
Bromodichloromethane	A	5.0000	4.9900	0.7498123	0.7480713		-0.2	30
Bromoform	A	5.0000	5.4500	1.29582	1.412313		9.0	30
Bromomethane	A	5.0000	4.4300	0.5721625	0.5064019		-11.5	30
1,3-Butadiene	A	5.0000	4.5100	0.4373898	0.3943094		-9.8	30
t-Butyl alcohol	A	10.000	10.480	1.144382	1.198823		4.8	30
Carbon disulfide	A	5.0000	4.6900	2.556243	2.396745		-6.2	30
Carbon tetrachloride	A	5.0000	4.9100	1.931421	1.896894		-1.8	30
Chlorobenzene	A	5.0000	4.7900	0.7977157	0.7637675		-4.3	30
Chloroethane	A	5.0000	4.4300	0.2597023	0.2298961		-11.5	30
Chloroform	A	5.0000	4.6700	1.858315	1.735592		-6.6	30
Chloromethane	A	5.0000	4.4900	0.4590853	0.4121591		-10.2	30
Cyclohexane	A	5.0000	4.2900	1.652539	1.418761		-14.1	30
Dibromochloromethane	A	5.0000	5.1200	0.6776753	0.6936292		2.4	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.1300	0.1651741	0.1695678		2.7	30
1,2-Dibromoethane	A	5.0000	5.0500	0.4694284	0.4745068		1.1	30
Dibromomethane	A	5.0000	4.9100	0.1316079	0.1291201		-1.9	30
1,2-Dichlorobenzene	A	5.0000	5.3300	1.088648	1.159532		6.5	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	12DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/12/20
Lab Sample ID:	2022116-CCV1	Injection Time:	17:24

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.0300	1.261041	1.269261		0.7	30
1,4-Dichlorobenzene	A	5.0000	5.1300	1.150627	1.180543		2.6	30
Dichlorodifluoromethane	A	5.0000	4.7000	2.297283	2.160524		-6.0	30
1,1-Dichloroethane	A	5.0000	4.8300	1.501032	1.449424		-3.4	30
1,2-Dichloroethane	A	5.0000	4.7600	1.259162	1.199959		-4.7	30
1,1-Dichloroethene	A	5.0000	5.0600	1.264693	1.280487		1.2	30
cis-1,2-Dichloroethene	A	5.0000	5.0000	1.054343	1.053375		-0.09	30
trans-1,2-Dichloroethene	A	5.0000	5.0100	1.231126	1.23267		0.1	30
1,2-Dichloropropane	A	5.0000	4.9300	0.2973131	0.2933163		-1.3	30
cis-1,3-Dichloropropene	A	5.0000	5.3500	0.3819551	0.4090206		7.1	30
trans-1,3-Dichloropropene	A	5.0000	5.3300	0.4130522	0.4401674		6.6	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.7700	1.617365	1.543442		-4.6	30
1,1-Difluoroethane	A	5.0000	4.5500	1.308935	1.190461		-9.1	30
Diisopropyl ether	A	5.0000	5.1000	0.5202863	0.5303311		1.9	30
1,4-Dioxane	A	5.0000	4.5800	0.1396685	0.1279062		-8.4	30
Ethanol	A	10.000	9.0700	0.143483	0.1301366		-9.3	30
Ethyl acetate	A	5.0000	5.0600	0.2696996	0.2727598		1.1	30
Ethylbenzene	A	5.0000	5.5500	0.6525795	0.7240798		11.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.7100	2.860951	3.265421		14.1	30
Ethyl t-butyl ether	A	5.0000	5.1800	1.81201	1.879044		3.7	30
n-Heptane	A	5.0000	5.2200	0.2699023	0.2815494		4.3	30
Hexachlorobutadiene	A	5.0000	5.2100	0.6202578	0.6463445		4.2	30
Hexachloroethane	A	5.0000	5.1900	0.2645854	0.2747186		3.8	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	12DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/12/20
Lab Sample ID:	2022116-CCV1	Injection Time:	17:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.8700	1.320847	1.286833		-2.6	30
2-Hexanone	L	5.0000	4.8100	0.4702171	0.526879		-3.8	30
Isooctane	A	5.0000	5.1600	1.450681	1.496886		3.2	30
Isopropyl alcohol	A	5.0000	5.0700	0.9542893	0.967668		1.4	30
Methylene chloride	A	5.0000	4.4700	0.946655	0.8455657		-10.7	30
Methyl ethyl ketone	A	5.0000	5.0400	1.599616	1.611484		0.7	30
Methyl iodide	A	5.0000	5.0000	0.9312524	0.9306586		-0.06	30
Methyl isobutyl ketone	A	5.0000	5.6400	0.5962516	0.6725934		12.8	30
Methyl t-butyl ether	A	5.0000	5.2400	2.244678	2.351159		4.7	30
Naphthalene	Q	5.0000	4.3900	1.277326	1.365403		-12.2	30
Propylene	A	5.0000	4.6600	0.5884372	0.5485492		-6.8	30
Styrene	A	5.0000	5.7200	1.133207	1.295992		14.4	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.0500	0.2449739	0.2475117		1.0	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.0700	1.289947	1.307592		1.4	30
Tetrachloroethene	A	5.0000	5.1300	0.487058	0.4995492		2.6	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.8500	1.142489	1.108889		-2.9	30
Tetrahydrofuran	A	5.0000	5.1800	0.8416471	0.8727291		3.7	30
Toluene	A	5.0000	5.3400	0.8694338	0.9279708		6.7	30
1,2,4-Trichlorobenzene	Q	5.0000	4.9100	0.2835387	0.2701269		-1.8	30
1,1,1-Trichloroethane	A	5.0000	4.8700	1.709834	1.666875		-2.5	30
1,1,2-Trichloroethane	A	5.0000	4.8200	0.3422061	0.3299291		-3.6	30
Trichloroethene	A	5.0000	5.1200	0.3311466	0.3388753		2.3	30
Trichlorofluoromethane	A	5.0000	4.8000	2.34705	2.253948		-4.0	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	12DEC02.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/12/20
Lab Sample ID:	2022116-CCV1	Injection Time:	17:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	4.9600	0.3545077	0.3514067		-0.9	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.6800	1.702496	1.594207		-6.4	30
1,2,4-Trimethylbenzene	A	5.0000	5.7800	1.781325	2.059476		15.6	30
1,3,5-Trimethylbenzene	A	5.0000	5.4400	1.930352	2.101043		8.8	30
Vinyl acetate	A	5.0000	5.2400	2.11964	2.221422		4.8	30
Vinyl bromide	A	5.0000	4.7200	0.7824054	0.7392866		-5.5	30
Vinyl chloride	A	5.0000	4.6000	0.5526786	0.5085922		-8.0	30
p- & m-Xylenes	A	10.000	10.690	1.765584	1.887478		6.9	30
o-Xylene	A	5.0000	5.3400	1.802727	1.923876		6.7	30
Total Xylenes	A	15.000	16.030	1.777965	1.899611		6.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035335
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	12DEC03.D	Calibration Date:	08/15/18 14:58
Sequence:	2022116	Injection Date:	12/12/20
Lab Sample ID:	2022116-CCV2	Injection Time:	17:57

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	510.57	4.288774	4.379428		2.1	30
Total Petroleum Hydrocarbons	A	500.00	510.57	4.288774	4.379428		2.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021783
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021783-ICV1)			Lab File ID: 07DEC09.D		Analyzed: 12/07/20 14:11			
4-Bromofluorobenzene (Surrogate)	10.000	97.6	70 - 130	11.737	11.73817	-0.0012	+/-1.0	
Initial Cal Blank (2021783-ICB1)			Lab File ID: 07DEC11.D		Analyzed: 12/07/20 15:12			
4-Bromofluorobenzene (Surrogate)	10.000	91.0	70 - 130	11.736	11.73817	-0.0022	+/-1.0	
LCS (B094480-BS1)			Lab File ID: 07DEC16.D		Analyzed: 12/07/20 17:40			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.737	11.73817	-0.0012	+/-1.0	
LCS Dup (B094480-BSD1)			Lab File ID: 07DEC17.D		Analyzed: 12/07/20 18:12			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.737	11.73817	-0.0012	+/-1.0	
Blank (B094480-BLK1)			Lab File ID: 07DEC18.D		Analyzed: 12/07/20 18:39			
4-Bromofluorobenzene (Surrogate)	10.000	81.9	70 - 130	11.735	11.73817	-0.0032	+/-1.0	
SG-VW35B-01 (2035335-02RE1)			Lab File ID: 07DEC21.D		Analyzed: 12/07/20 20:07			
4-Bromofluorobenzene (Surrogate)	10.000	82.9	70 - 130	11.737	11.73817	-0.0012	+/-1.0	
SG-VW36A-01 (2035335-03RE1)			Lab File ID: 07DEC22.D		Analyzed: 12/07/20 20:37			
4-Bromofluorobenzene (Surrogate)	10.000	86.7	70 - 130	11.736	11.73817	-0.0022	+/-1.0	
SG-VW37B-01 (2035335-08RE1)			Lab File ID: 07DEC27.D		Analyzed: 12/07/20 23:03			
4-Bromofluorobenzene (Surrogate)	10.000	88.7	70 - 130	11.736	11.73817	-0.0022	+/-1.0	
SG-VW37B-02 (2035335-09RE1)			Lab File ID: 07DEC28.D		Analyzed: 12/07/20 23:33			
4-Bromofluorobenzene (Surrogate)	10.000	88.5	70 - 130	11.737	11.73817	-0.0012	+/-1.0	
SG-VW19A-01 (2035335-12RE1)			Lab File ID: 07DEC30.D		Analyzed: 12/08/20 00:31			
4-Bromofluorobenzene (Surrogate)	10.000	86.6	70 - 130	11.74	11.73817	0.0018	+/-1.0	
SG-VW19B-01 (2035335-13RE1)			Lab File ID: 07DEC31.D		Analyzed: 12/08/20 01:01			
4-Bromofluorobenzene (Surrogate)	10.000	83.5	70 - 130	11.739	11.73817	0.0008	+/-1.0	
SG-VW42A-01 (2035335-10)			Lab File ID: 07DEC33.D		Analyzed: 12/08/20 08:51			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.735	11.73817	-0.0032	+/-1.0	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022116-ICV1)			Lab File ID: 09DEC14.D		Analyzed: 12/09/20 21:28			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.8	11.798	0.0020	+/-1.0	
Initial Cal Blank (2022116-ICB1)			Lab File ID: 09DEC16.D		Analyzed: 12/09/20 22:27			
4-Bromofluorobenzene (Surrogate)	10.000	93.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Check (2022116-CCV1)			Lab File ID: 12DEC02.D		Analyzed: 12/12/20 17:24			
4-Bromofluorobenzene (Surrogate)	10.000	98.0	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Blank (2022116-CCB1)			Lab File ID: 12DEC04.D		Analyzed: 12/12/20 18:25			
4-Bromofluorobenzene (Surrogate)	10.000	95.3	70 - 130	11.799	11.798	0.0010	+/-1.0	
LCS (B094935-BS1)			Lab File ID: 12DEC05.D		Analyzed: 12/12/20 18:57			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.8	11.798	0.0020	+/-1.0	
LCS Dup (B094935-BSD1)			Lab File ID: 12DEC06.D		Analyzed: 12/12/20 19:29			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.8	11.798	0.0020	+/-1.0	
Blank (B094935-BLK1)			Lab File ID: 12DEC07.D		Analyzed: 12/12/20 19:56			
4-Bromofluorobenzene (Surrogate)	10.000	91.2	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW35A-01 (2035335-01)			Lab File ID: 12DEC08.D		Analyzed: 12/12/20 20:32			
4-Bromofluorobenzene (Surrogate)	10.000	93.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW35B-01 (2035335-02)			Lab File ID: 12DEC09.D		Analyzed: 12/12/20 21:08			
4-Bromofluorobenzene (Surrogate)	10.000	91.2	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW36A-01 (2035335-03)			Lab File ID: 12DEC10.D		Analyzed: 12/12/20 21:43			
4-Bromofluorobenzene (Surrogate)	10.000	90.4	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW36B-01 (2035335-04)			Lab File ID: 12DEC11.D		Analyzed: 12/12/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	93.2	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW40A-01 (2035335-05)			Lab File ID: 12DEC12.D		Analyzed: 12/12/20 22:55			
4-Bromofluorobenzene (Surrogate)	10.000	92.2	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW40B-01 (2035335-06)			Lab File ID: 12DEC13.D		Analyzed: 12/12/20 23:31			
4-Bromofluorobenzene (Surrogate)	10.000	91.8	70 - 130	11.795	11.798	-0.0030	+/-1.0	

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW37A-01 (2035335-07)			Lab File ID: 12DEC14.D		Analyzed: 12/13/20 00:08			
4-Bromofluorobenzene (Surrogate)	10.000	91.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW37B-01 (2035335-08)			Lab File ID: 12DEC15.D		Analyzed: 12/13/20 00:44			
4-Bromofluorobenzene (Surrogate)	10.000	93.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW37B-02 (2035335-09)			Lab File ID: 12DEC16.D		Analyzed: 12/13/20 01:21			
4-Bromofluorobenzene (Surrogate)	10.000	90.8	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW42B-01 (2035335-11)			Lab File ID: 12DEC17.D		Analyzed: 12/13/20 01:58			
4-Bromofluorobenzene (Surrogate)	10.000	92.7	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW19A-01 (2035335-12)			Lab File ID: 12DEC18.D		Analyzed: 12/13/20 02:35			
4-Bromofluorobenzene (Surrogate)	10.000	92.8	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW19B-01 (2035335-13)			Lab File ID: 12DEC19.D		Analyzed: 12/13/20 03:12			
4-Bromofluorobenzene (Surrogate)	10.000	91.5	70 - 130	11.795	11.798	-0.0030	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D		Analyzed: 12/09/20 17:51			
4-Bromofluorobenzene (Surrogate)	10.000	98.4		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D		Analyzed: 12/09/20 18:20			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D		Analyzed: 12/09/20 18:51			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D		Analyzed: 12/09/20 19:29			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D		Analyzed: 12/09/20 20:12			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.795	11.798	-0.0030	+/-1.0	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D		Analyzed: 12/09/20 20:57			
4-Bromofluorobenzene (Surrogate)	10.000	103		11.795	11.798	-0.0030	+/-1.0	

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022119
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022119-CAL1)			Lab File ID: 07DEC03.D		Analyzed: 12/07/20 10:34			
4-Bromofluorobenzene (Surrogate)	10.000	99.1		11.738	11.73817	-0.0002	+/-1.0	
Cal Standard (2022119-CAL2)			Lab File ID: 07DEC04.D		Analyzed: 12/07/20 11:02			
4-Bromofluorobenzene (Surrogate)	10.000	99.7		11.737	11.73817	-0.0012	+/-1.0	
Cal Standard (2022119-CAL3)			Lab File ID: 07DEC05.D		Analyzed: 12/07/20 11:34			
4-Bromofluorobenzene (Surrogate)	10.000	108		11.739	11.73817	0.0008	+/-1.0	
Cal Standard (2022119-CAL4)			Lab File ID: 07DEC06.D		Analyzed: 12/07/20 12:13			
4-Bromofluorobenzene (Surrogate)	10.000	111		11.74	11.73817	0.0018	+/-1.0	
Cal Standard (2022119-CAL5)			Lab File ID: 07DEC07.D		Analyzed: 12/07/20 12:55			
4-Bromofluorobenzene (Surrogate)	10.000	109		11.737	11.73817	-0.0012	+/-1.0	
Cal Standard (2022119-CAL6)			Lab File ID: 07DEC08.D		Analyzed: 12/07/20 13:40			
4-Bromofluorobenzene (Surrogate)	10.000	107		11.738	11.73817	-0.0002	+/-1.0	

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021783
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021783-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	83959	11.017	122	50 - 200	0.0030	+/-0.50	
Initial Cal Blank (2021783-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	83959	11.017	116	50 - 200	0.0000	+/-0.50	
Initial Cal Check (2021783-ICV1)			Lab File ID: 07DEC09.D			Analyzed: 12/07/20 14:11			
Bromochloromethane (IS)	108722	7.5	79655	7.502	136	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	112450	11.015	83959	11.017	134	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	206723	8.693	146337	8.695	141	50 - 200	-0.0020	+/-0.50	
Calibration Check (2021783-CCV2)			Lab File ID: 07DEC10.D			Analyzed: 12/07/20 14:44			
Chlorobenzene-d5 (IS)	111705	11.015	83959	11.017	133	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2021783-ICB1)			Lab File ID: 07DEC11.D			Analyzed: 12/07/20 15:12			
Bromochloromethane (IS)	108040	7.494	79655	7.502	136	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	107904	11.015	83959	11.017	129	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	214439	8.687	146337	8.695	147	50 - 200	-0.0080	+/-0.50	
LCS (B094480-BS1)			Lab File ID: 07DEC16.D			Analyzed: 12/07/20 17:40			
Bromochloromethane (IS)	87417	7.5	79655	7.502	110	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	91982	11.016	83959	11.017	110	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	163078	8.693	146337	8.695	111	50 - 200	-0.0020	+/-0.50	
LCS Dup (B094480-BSD1)			Lab File ID: 07DEC17.D			Analyzed: 12/07/20 18:12			
Bromochloromethane (IS)	87731	7.5	79655	7.502	110	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	92052	11.015	83959	11.017	110	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	166016	8.693	146337	8.695	113	50 - 200	-0.0020	+/-0.50	
Blank (B094480-BLK1)			Lab File ID: 07DEC18.D			Analyzed: 12/07/20 18:39			
Bromochloromethane (IS)	83829	7.497	79655	7.502	105	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	80326	11.013	83959	11.017	96	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	156942	8.69	146337	8.695	107	50 - 200	-0.0050	+/-0.50	
SG-VW35B-01 (2035335-02RE1)			Lab File ID: 07DEC21.D			Analyzed: 12/07/20 20:07			
Bromochloromethane (IS)	79895	7.509	79655	7.502	100	50 - 200	0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	76566	11.015	83959	11.017	91	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	146621	8.697	146337	8.695	100	50 - 200	0.0020	+/-0.50	

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2021783
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW36A-01 (2035335-03RE1)			Lab File ID: 07DEC22.D			Analyzed: 12/07/20 20:37			
Bromochloromethane (IS)	77207	7.499	79655	7.502	97	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	76734	11.014	83959	11.017	91	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	142486	8.692	146337	8.695	97	50 - 200	-0.0030	+/-0.50	
SG-VW37B-01 (2035335-08RE1)			Lab File ID: 07DEC27.D			Analyzed: 12/07/20 23:03			
Bromochloromethane (IS)	70352	7.503	79655	7.502	88	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	69183	11.014	83959	11.017	82	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	130838	8.691	146337	8.695	89	50 - 200	-0.0040	+/-0.50	
SG-VW37B-02 (2035335-09RE1)			Lab File ID: 07DEC28.D			Analyzed: 12/07/20 23:33			
Bromochloromethane (IS)	73217	7.5	79655	7.502	92	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	70362	11.015	83959	11.017	84	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	133087	8.693	146337	8.695	91	50 - 200	-0.0020	+/-0.50	
SG-VW19A-01 (2035335-12RE1)			Lab File ID: 07DEC30.D			Analyzed: 12/08/20 00:31			
Bromochloromethane (IS)	73062	7.512	79655	7.502	92	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	70404	11.018	83959	11.017	84	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	131735	8.695	146337	8.695	90	50 - 200	0.0000	+/-0.50	
SG-VW19B-01 (2035335-13RE1)			Lab File ID: 07DEC31.D			Analyzed: 12/08/20 01:01			
Bromochloromethane (IS)	72983	7.506	79655	7.502	92	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	67442	11.017	83959	11.017	80	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	131831	8.694	146337	8.695	90	50 - 200	-0.0010	+/-0.50	
SG-VW42A-01 (2035335-10)			Lab File ID: 07DEC33.D			Analyzed: 12/08/20 08:51			
Bromochloromethane (IS)	67918	7.498	79655	7.502	85	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	70340	11.013	83959	11.017	84	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	121538	8.691	146337	8.695	83	50 - 200	-0.0040	+/-0.50	

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022116-ICV2)			Lab File ID: 15AUG11.D			Analyzed: 08/15/18 18:29			
Chlorobenzene-d5 (IS)	315173	11.463	152269	11.083	207	50 - 200	0.3800	+/-0.50	*
Initial Cal Blank (2022116-ICB2)			Lab File ID: 15AUG13.D			Analyzed: 08/15/18 19:39			
Chlorobenzene-d5 (IS)	238323	11.458	152269	11.083	157	50 - 200	0.3750	+/-0.50	
Initial Cal Check (2022116-ICV1)			Lab File ID: 09DEC14.D			Analyzed: 12/09/20 21:28			
Bromochloromethane (IS)	96813	7.611	99484	7.611	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	147966	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	286843	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2022116-ICB1)			Lab File ID: 09DEC16.D			Analyzed: 12/09/20 22:27			
Bromochloromethane (IS)	102738	7.606	99484	7.611	103	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148227	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	294142	8.79	289206	8.79	102	50 - 200	0.0000	+/-0.50	
Calibration Check (2022116-CCV1)			Lab File ID: 12DEC02.D			Analyzed: 12/12/20 17:24			
Bromochloromethane (IS)	97705	7.611	99484	7.611	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	148967	11.083	152269	11.083	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	285037	8.789	289206	8.79	99	50 - 200	-0.0010	+/-0.50	
Calibration Check (2022116-CCV2)			Lab File ID: 12DEC03.D			Analyzed: 12/12/20 17:57			
Chlorobenzene-d5 (IS)	151165	11.083	152269	11.083	99	50 - 200	0.0000	+/-0.50	
Calibration Blank (2022116-CCB1)			Lab File ID: 12DEC04.D			Analyzed: 12/12/20 18:25			
Bromochloromethane (IS)	101118	7.606	99484	7.611	102	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143755	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	288106	8.789	289206	8.79	100	50 - 200	-0.0010	+/-0.50	
LCS (B094935-BS1)			Lab File ID: 12DEC05.D			Analyzed: 12/12/20 18:57			
Bromochloromethane (IS)	97505	7.606	99484	7.611	98	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147662	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	287597	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	
LCS Dup (B094935-BSD1)			Lab File ID: 12DEC06.D			Analyzed: 12/12/20 19:29			
Bromochloromethane (IS)	95188	7.606	99484	7.611	96	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	142936	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	277691	8.79	289206	8.79	96	50 - 200	0.0000	+/-0.50	

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B094935-BLK1)			Lab File ID: 12DEC07.D			Analyzed: 12/12/20 19:56			
Bromochloromethane (IS)	97001	7.606	99484	7.611	98	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	140280	11.083	152269	11.083	92	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	276801	8.785	289206	8.79	96	50 - 200	-0.0050	+/-0.50	
SG-VW35A-01 (2035335-01)			Lab File ID: 12DEC08.D			Analyzed: 12/12/20 20:32			
Bromochloromethane (IS)	95662	7.611	99484	7.611	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	149275	11.083	152269	11.083	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	276795	8.794	289206	8.79	96	50 - 200	0.0040	+/-0.50	
SG-VW35B-01 (2035335-02)			Lab File ID: 12DEC09.D			Analyzed: 12/12/20 21:08			
Bromochloromethane (IS)	94587	7.621	99484	7.611	95	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	146441	11.082	152269	11.083	96	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	269766	8.794	289206	8.79	93	50 - 200	0.0040	+/-0.50	
SG-VW36A-01 (2035335-03)			Lab File ID: 12DEC10.D			Analyzed: 12/12/20 21:43			
Bromochloromethane (IS)	99932	7.616	99484	7.611	100	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	159354	11.082	152269	11.083	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	285061	8.794	289206	8.79	99	50 - 200	0.0040	+/-0.50	
SG-VW36B-01 (2035335-04)			Lab File ID: 12DEC11.D			Analyzed: 12/12/20 22:19			
Bromochloromethane (IS)	98068	7.616	99484	7.611	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147486	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	280162	8.794	289206	8.79	97	50 - 200	0.0040	+/-0.50	
SG-VW40A-01 (2035335-05)			Lab File ID: 12DEC12.D			Analyzed: 12/12/20 22:55			
Bromochloromethane (IS)	99883	7.606	99484	7.611	100	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	154693	11.083	152269	11.083	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	285381	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	
SG-VW40B-01 (2035335-06)			Lab File ID: 12DEC13.D			Analyzed: 12/12/20 23:31			
Bromochloromethane (IS)	98831	7.616	99484	7.611	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	145659	11.083	152269	11.083	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	278756	8.794	289206	8.79	96	50 - 200	0.0040	+/-0.50	

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022116
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW37A-01 (2035335-07)			Lab File ID: 12DEC14.D			Analyzed: 12/13/20 00:08			
Bromochloromethane (IS)	96657	7.606	99484	7.611	97	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	146962	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	273263	8.79	289206	8.79	94	50 - 200	0.0000	+/-0.50	
SG-VW37B-01 (2035335-08)			Lab File ID: 12DEC15.D			Analyzed: 12/13/20 00:44			
Bromochloromethane (IS)	98377	7.606	99484	7.611	99	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	151976	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	283969	8.79	289206	8.79	98	50 - 200	0.0000	+/-0.50	
SG-VW37B-02 (2035335-09)			Lab File ID: 12DEC16.D			Analyzed: 12/13/20 01:21			
Bromochloromethane (IS)	100721	7.611	99484	7.611	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	156121	11.083	152269	11.083	103	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	288806	8.79	289206	8.79	100	50 - 200	0.0000	+/-0.50	
SG-VW42B-01 (2035335-11)			Lab File ID: 12DEC17.D			Analyzed: 12/13/20 01:58			
Bromochloromethane (IS)	103122	7.611	99484	7.611	104	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	152803	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	290716	8.794	289206	8.79	101	50 - 200	0.0040	+/-0.50	
SG-VW19A-01 (2035335-12)			Lab File ID: 12DEC18.D			Analyzed: 12/13/20 02:35			
Bromochloromethane (IS)	101463	7.621	99484	7.611	102	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	158960	11.083	152269	11.083	104	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295798	8.795	289206	8.79	102	50 - 200	0.0050	+/-0.50	
SG-VW19B-01 (2035335-13)			Lab File ID: 12DEC19.D			Analyzed: 12/13/20 03:12			
Bromochloromethane (IS)	98863	7.616	99484	7.611	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	152514	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	287778	8.794	289206	8.79	100	50 - 200	0.0040	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL7)			Lab File ID: 15AUG05.D			Analyzed: 08/15/18 14:58			
Chlorobenzene-d5 (IS)	100626	11.458	152269	11.083	66	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL8)			Lab File ID: 15AUG06.D			Analyzed: 08/15/18 15:32			
Chlorobenzene-d5 (IS)	111220	11.458	152269	11.083	73	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL9)			Lab File ID: 15AUG07.D			Analyzed: 08/15/18 16:06			
Chlorobenzene-d5 (IS)	126204	11.463	152269	11.083	83	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALA)			Lab File ID: 15AUG08.D			Analyzed: 08/15/18 16:41			
Chlorobenzene-d5 (IS)	161152	11.463	152269	11.083	106	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALB)			Lab File ID: 15AUG09.D			Analyzed: 08/15/18 17:15			
Chlorobenzene-d5 (IS)	216625	11.463	152269	11.083	142	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALC)			Lab File ID: 15AUG10.D			Analyzed: 08/15/18 17:52			
Chlorobenzene-d5 (IS)	281647	11.463	152269	11.083	185	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D			Analyzed: 12/09/20 17:51			
Bromochloromethane (IS)	99799	7.601	99484	7.611	100	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	143805	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	276641	8.785	289206	8.79	96	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D			Analyzed: 12/09/20 18:20			
Bromochloromethane (IS)	98810	7.606	99484	7.611	99	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143300	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	279854	8.79	289206	8.79	97	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D			Analyzed: 12/09/20 18:51			
Bromochloromethane (IS)	99484	7.611	99484	7.611	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	152269	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	289206	8.79	289206	8.79	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D			Analyzed: 12/09/20 19:29			
Bromochloromethane (IS)	97426	7.611	99484	7.611	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	163565	11.083	152269	11.083	107	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295481	8.795	289206	8.79	102	50 - 200	0.0050	+/-0.50	

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D			Analyzed: 12/09/20 20:12			
Bromochloromethane (IS)	95008	7.611	99484	7.611	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	168482	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	302542	8.795	289206	8.79	105	50 - 200	0.0050	+/-0.50	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D			Analyzed: 12/09/20 20:57			
Bromochloromethane (IS)	90786	7.606	99484	7.611	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	168261	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	292768	8.789	289206	8.79	101	50 - 200	-0.0010	+/-0.50	

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022119
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022119-CAL7)			Lab File ID: 16OCT10.D			Analyzed: 10/16/20 14:05			
Chlorobenzene-d5 (IS)	64445	11.017	83959	11.017	77	50 - 200	0.0000	+/-0.50	
Cal Standard (2022119-CAL8)			Lab File ID: 16OCT11.D			Analyzed: 10/16/20 14:34			
Chlorobenzene-d5 (IS)	65904	11.017	83959	11.017	78	50 - 200	0.0000	+/-0.50	
Cal Standard (2022119-CAL9)			Lab File ID: 16OCT12.D			Analyzed: 10/16/20 15:03			
Chlorobenzene-d5 (IS)	71033	11.018	83959	11.017	85	50 - 200	0.0010	+/-0.50	
Cal Standard (2022119-CALA)			Lab File ID: 16OCT13.D			Analyzed: 10/16/20 15:34			
Chlorobenzene-d5 (IS)	75959	11.016	83959	11.017	90	50 - 200	-0.0010	+/-0.50	
Cal Standard (2022119-CALB)			Lab File ID: 16OCT14.D			Analyzed: 10/16/20 16:05			
Chlorobenzene-d5 (IS)	81415	11.016	83959	11.017	97	50 - 200	-0.0010	+/-0.50	
Cal Standard (2022119-CALC)			Lab File ID: 16OCT15.D			Analyzed: 10/16/20 16:41			
Chlorobenzene-d5 (IS)	92664	11.021	83959	11.017	110	50 - 200	0.0040	+/-0.50	
Cal Standard (2022119-CAL1)			Lab File ID: 07DEC03.D			Analyzed: 12/07/20 10:34			
Bromochloromethane (IS)	77064	7.495	79655	7.502	97	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	75580	11.016	83959	11.017	90	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	141121	8.688	146337	8.695	96	50 - 200	-0.0070	+/-0.50	
Cal Standard (2022119-CAL2)			Lab File ID: 07DEC04.D			Analyzed: 12/07/20 11:02			
Bromochloromethane (IS)	76934	7.495	79655	7.502	97	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	77408	11.015	83959	11.017	92	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	142829	8.688	146337	8.695	98	50 - 200	-0.0070	+/-0.50	
Cal Standard (2022119-CAL3)			Lab File ID: 07DEC05.D			Analyzed: 12/07/20 11:34			
Bromochloromethane (IS)	79655	7.502	79655	7.502	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	83959	11.017	83959	11.017	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	146337	8.695	146337	8.695	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022119-CAL4)			Lab File ID: 07DEC06.D			Analyzed: 12/07/20 12:13			
Bromochloromethane (IS)	88468	7.503	79655	7.502	111	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	98554	11.018	83959	11.017	117	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	161655	8.696	146337	8.695	110	50 - 200	0.0010	+/-0.50	

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022119
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012012

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022119-CAL5)			Lab File ID: 07DEC07.D			Analyzed: 12/07/20 12:55			
Bromochloromethane (IS)	94806	7.505	79655	7.502	119	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	109067	11.02	83959	11.017	130	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	177517	8.698	146337	8.695	121	50 - 200	0.0030	+/-0.50	
Cal Standard (2022119-CAL6)			Lab File ID: 07DEC08.D			Analyzed: 12/07/20 13:40			
Bromochloromethane (IS)	104861	7.51	79655	7.502	132	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	118545	11.021	83959	11.017	141	50 - 200	0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	196053	8.698	146337	8.695	134	50 - 200	0.0030	+/-0.50	

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Calibration: 2012010

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
8G16027	TO-3/TO-14A/TO-15 BFB Working Std.	2022117-TUN2	15AUG04.D	08/15/18 14:24
9H08027	TO-14A / TO-15 CAL1 TPH	2022117-CAL7	15AUG05.D	08/15/18 14:58
9H08028	TO-14A / TO-15 CAL2 TPH	2022117-CAL8	15AUG06.D	08/15/18 15:32
9H08029	TO-14A / TO-15 CAL3 TPH	2022117-CAL9	15AUG07.D	08/15/18 16:06
9H08030	TO-14A / TO-15 CAL4 TPH	2022117-CALA	15AUG08.D	08/15/18 16:41
9H08031	TO-14A / TO-15 CAL5 TPH	2022117-CALB	15AUG09.D	08/15/18 17:15
9H08032	TO-14A / TO-15 CAL6 TPH	2022117-CALC	15AUG10.D	08/15/18 17:52
0L01028	TO-14A/TO-15 Working BFB	2022117-TUN1	09DEC07.D	12/09/20 17:22
0L10033	MS-A1 TO-14A /TO-15 CAL1	2022117-CAL1	09DEC08.D	12/09/20 17:51
0L10034	MS-A1 TO-14A /TO-15 CAL2	2022117-CAL2	09DEC09.D	12/09/20 18:20
0L10035	MS-A1 TO-14A /TO-15 CAL3	2022117-CAL3	09DEC10.D	12/09/20 18:51
0L10036	MS-A1 TO-14A /TO-15 CAL4	2022117-CAL4	09DEC11.D	12/09/20 19:29
0L10037	MS-A1 TO-14A /TO-15 CAL5	2022117-CAL5	09DEC12.D	12/09/20 20:12
0L10038	MS-A1 TO-14A /TO-15 CAL6	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022119
Calibration: 2012012

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J07014	TO-14A/TO-15 Working BFB	2022119-TUN2	16OCT09.D	10/16/20 13:36
0L12008	MS-A1 TO-14A / TO-15 CAL1 TPH	2022119-CAL7	16OCT10.D	10/16/20 14:05
0L12009	MS-A1 TO-14A / TO-15 CAL2 TPH	2022119-CAL8	16OCT11.D	10/16/20 14:34
0L12010	MS-A1 TO-14A / TO-15 CAL3 TPH	2022119-CAL9	16OCT12.D	10/16/20 15:03
0L12011	MS-A1 TO-14A / TO-15 CAL4 TPH	2022119-CALA	16OCT13.D	10/16/20 15:34
0L12012	MS-A1 TO-14A / TO-15 CAL5 TPH	2022119-CALB	16OCT14.D	10/16/20 16:05
0L12013	MS-A1 TO-14A / TO-15 CAL6 TPH	2022119-CALC	16OCT15.D	10/16/20 16:41
0L01028	TO-14A/TO-15 Working BFB	2022119-TUN1	07DEC02.D	12/07/20 10:05
0L07006	MS-A1 TO-14A /TO-15 CAL1	2022119-CAL1	07DEC03.D	12/07/20 10:34
0L07007	MS-A1 TO-14A /TO-15 CAL2	2022119-CAL2	07DEC04.D	12/07/20 11:02
0L07009	MS-A1 TO-14A /TO-15 CAL3	2022119-CAL3	07DEC05.D	12/07/20 11:34
0L07010	MS-A1 TO-14A /TO-15 CAL4	2022119-CAL4	07DEC06.D	12/07/20 12:13
0L07011	MS-A1 TO-14A /TO-15 CAL5	2022119-CAL5	07DEC07.D	12/07/20 12:55
0L07012	MS-A1 TO-14A /TO-15 CAL6	2022119-CAL6	07DEC08.D	12/07/20 13:40

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.318049	1	1.330129	5	1.313518	15	1.359268	20	1.463482	25	1.527482
Acrylonitrile	0.5	0.356717	1	0.3906487	5	0.4536408	15	0.504766	20	0.5409071	25	0.5937215
Allyl chloride	0.5	0.7016102	1	0.7586277	5	0.9155241	15	1.008341	20	1.067989	25	1.134792
t-Amyl Methyl ether	0.5	0.359455	1	0.4046753	5	0.4969192	15	0.5688059	20	0.5901445	25	0.6309815
Benzene	0.5	1.773364	1	1.969133	5	2.295726	15	2.462457	20	2.610849	25	2.749688
Benzyl chloride	0.5	0.524043	1	0.6993719	5	1.22193	15	1.598569	20	1.612576	25	1.651268
Bromodichloromethane	0.5	0.7502865	1	0.74253	5	0.7567547	15	0.7550514	20	0.7369688	25	0.7572822
Bromoform	0.5	1.180348	1	1.24843	5	1.363784	15	1.359003	20	1.321459	25	1.301896
Bromomethane	0.5	0.5869798	1	0.5809129	5	0.5200635	15	0.5535757	20	0.5854244	25	0.6060185
1,3-Butadiene	0.5	0.4174391	1	0.4243498	5	0.4105384	15	0.4309733	20	0.4597876	25	0.4812504
t-Butyl alcohol	1	0.8454995	2	0.9820868	10	1.131911	30	1.207857	40	1.298012	50	1.400927
Carbon disulfide	0.5	2.253129	1	2.331748	5	2.437216	15	2.615092	20	2.77184	25	2.928434
Carbon tetrachloride	0.5	1.768354	1	1.832203	5	1.853806	15	1.94391	20	2.051348	25	2.138902
Chlorobenzene	0.5	0.8481028	1	0.8184625	5	0.7857098	15	0.7869406	20	0.7665382	25	0.7805402
Chloroethane	0.5	0.2607241	1	0.2489627	5	0.2465723	15	0.2557633	20	0.2703825	25	0.275809
Chloroform	0.5	1.809437	1	1.834025	5	1.773491	15	1.821868	20	1.90515	25	2.005917
Chloromethane	0.5	0.4585216	1	0.4539014	5	0.4353866	15	0.4497157	20	0.4689816	25	0.4880048
Cyclohexane	0.5	2.306236	1	1.827042	5	1.422902	15	1.403075	20	1.464229	25	1.49175
Dibromochloromethane	0.5	0.6157439	1	0.6439072	5	0.6808987	15	0.7069377	20	0.7015637	25	0.7170005
1,2-Dibromo-3-chloropropane	0.5	0.1045861	1	0.122889	5	0.1614774	15	0.193766	20	0.2021462	25	0.2061797
1,2-Dibromoethane	0.5	0.3900362	1	0.4303673	5	0.4747758	15	0.4992696	20	0.500276	25	0.5218453
Dibromomethane	0.5	0.1341088	1	0.1346774	5	0.1269268	15	0.1307044	20	0.1289887	25	0.1342414
1,2-Dichlorobenzene	0.5	0.8169396	1	0.9780879	5	1.185625	15	1.210524	20	1.180921	25	1.159793
1,3-Dichlorobenzene	0.5	1.045304	1	1.246127	5	1.386375	15	1.318408	20	1.293675	25	1.276358
1,4-Dichlorobenzene	0.5	0.8774382	1	1.097278	5	1.205774	15	1.28349	20	1.224006	25	1.215775

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.32327	1	2.269507	5	2.177556	15	2.240702	20	2.350139	25	2.422523
1,1-Dichloroethane	0.5	1.393401	1	1.421415	5	1.456576	15	1.496924	20	1.577741	25	1.660137
1,2-Dichloroethane	0.5	1.1441	1	1.206659	5	1.205842	15	1.256571	20	1.339798	25	1.402005
1,1-Dichloroethene	0.5	1.026463	1	1.142091	5	1.269149	15	1.331383	20	1.374163	25	1.444906
cis-1,2-Dichloroethene	0.5	0.7966012	1	0.8438417	5	1.017229	15	1.160587	20	1.218129	25	1.28967
trans-1,2-Dichloroethene	0.5	0.9601299	1	1.041899	5	1.194524	15	1.327606	20	1.389662	25	1.472936
1,2-Dichloropropane	0.5	0.2972806	1	0.2886148	5	0.2984032	15	0.298009	20	0.2964613	25	0.3051098
cis-1,3-Dichloropropene	0.5	0.2450107	1	0.2753936	5	0.3843281	15	0.4469977	20	0.459247	25	0.4807534
trans-1,3-Dichloropropene	0.5	0.2774715	1	0.3143067	5	0.4384833	15	0.4738263	20	0.4781601	25	0.4960651
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.662943	1	1.601255	5	1.55611	15	1.575616	20	1.628021	25	1.680246
1,1-Difluoroethane	0.5	1.27837	1	1.272948	5	1.207109	15	1.297313	20	1.370369	25	1.427502
Diisopropyl ether	0.5	0.4176395	1	0.4424653	5	0.5155	15	0.5597684	20	0.5804932	25	0.6058511
1,4-Dioxane	0.5	0.1615813	1	0.1882767	5	0.1291813	15	0.1097893	20	0.1179935	25	0.1311892
Ethanol	1	0.1506027	2	0.1487198	10	0.1344839	30	0.1334038	40	0.1428143	50	0.1508735
Ethyl acetate	0.5	0.2210443	1	0.2506831	5	0.2783362	15	0.279111	20	0.2894704	25	0.2995528
Ethylbenzene	0.5	0.4513056	1	0.588067	5	0.7303916	15	0.7306127	20	0.7133997	25	0.7017003
1-Ethyl-4-methylbenzene	0.5	1.581586	1	2.365038	5	3.404002	15	3.494109	20	3.15999	25	3.160982
Ethyl t-butyl ether	0.5	1.134681	1	1.392369	5	1.833441	15	2.054558	20	2.160839	25	2.296173
n-Heptane	0.5	0.2233219	1	0.2576343	5	0.2869443	15	0.2887969	20	0.2799	25	0.2828164
Hexachlorobutadiene	0.5	0.6017871	1	0.6351012	5	0.6298459	15	0.6231692	20	0.6125432	25	0.6191001
Hexachloroethane	0.5	0.2317027	1	0.24194	5	0.2679731	15	0.2830027	20	0.2801546	25	0.2827393
Hexane	0.5	1.161334	1	1.283069	5	1.32357	15	1.361101	20	1.384347	25	1.411663
2-Hexanone	0.5	0.2064047	1	0.2940462	5	0.5131221	15	0.5994249	20	0.5953157	25	0.6129891
Isooctane	0.5	1.365307	1	1.525724	5	1.547181	15	1.468144	20	1.395833	25	1.401899
Isopropyl alcohol	0.5	0.7957996	1	0.7968829	5	0.9098146	15	0.9920897	20	1.075799	25	1.15535
Methylene chloride	0.5	1.088788	1	1.004554	5	0.853303	15	0.8743388	20	0.9057553	25	0.953191

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.196605	1	1.364336	5	1.580455	15	1.718234	20	1.808342	25	1.929725
Methyl iodide	0.5	0.755719	1	0.7820059	5	0.8648024	15	0.9870329	20	1.065052	25	1.132902
Methyl isobutyl ketone	0.5	0.4311002	1	0.5553253	5	0.6623583	15	0.6631041	20	0.6351184	25	0.6305033
Methyl t-butyl ether	0.5	1.428872	1	1.685356	5	2.217703	15	2.511616	20	2.711382	25	2.913141
Naphthalene	0.5	0.1796878	1	0.3549197	5	1.305965	15	1.845998	20	1.934052	25	2.043333
Propylene	0.5	0.5088227	1	0.4929663	5	0.5529532	15	0.6329317	20	0.6526714	25	0.6902782
Styrene	0.5	0.6311324	1	0.8736218	5	1.291281	15	1.357552	20	1.32437	25	1.321283
1,1,1,2-Tetrachloroethane	0.5	0.2412513	1	0.2410543	5	0.2415164	15	0.2481378	20	0.2449842	25	0.2528992
1,1,2,2-Tetrachloroethane	0.5	1.377838	1	1.46448	5	1.376472	15	1.232578	20	1.164032	25	1.124282
Tetrachloroethene	0.5	0.4413662	1	0.4567382	5	0.49268	15	0.5117757	20	0.5014064	25	0.5183818
1,1,1,2-Tetrafluoroethane	0.5	1.148308	1	1.137233	5	1.083913	15	1.125606	20	1.166865	25	1.193012
Tetrahydrofuran	0.5	0.6264592	1	0.7442567	5	0.8737686	15	0.9055625	20	0.9330477	25	0.9667878
Toluene	0.5	0.5888498	1	0.7035454	5	0.9519789	15	0.9855682	20	0.9742432	25	1.012417
1,2,4-Trichlorobenzene	0.5	9.498974E-02	1	0.1296581	5	0.2424656	15	0.3764701	20	0.4117888	25	0.4458597
1,1,1-Trichloroethane	0.5	1.561539	1	1.589718	5	1.623899	15	1.72999	20	1.8181	25	1.935761
1,1,2-Trichloroethane	0.5	0.3468033	1	0.3409992	5	0.3426001	15	0.3369241	20	0.3374441	25	0.3484657
Trichloroethene	0.5	0.3156437	1	0.3381406	5	0.3468531	15	0.3337496	20	0.3253763	25	0.3271164
Trichlorofluoromethane	0.5	2.365354	1	2.338427	5	2.230188	15	2.279761	20	2.375826	25	2.492746
1,2,3-Trichloropropane	0.5	0.3360106	1	0.3702722	5	0.3735494	15	0.3522677	20	0.3449449	25	0.3500015
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.739697	1	1.693756	5	1.625045	15	1.645912	20	1.704814	25	1.80575
1,2,4-Trimethylbenzene	0.5	0.968951	1	1.42254	5	2.088672	15	2.113806	20	2.047875	25	2.046107
1,3,5-Trimethylbenzene	0.5	1.538333	1	2.030147	5	2.131741	15	1.965979	20	2.076079	25	1.839832
Vinyl acetate	0.5	1.408431	1	1.693958	5	2.080254	15	2.360246	20	2.513252	25	2.661697
Vinyl bromide	0.5	0.7316707	1	0.7136929	5	0.7272526	15	0.7854577	20	0.8474023	25	0.8889564
Vinyl chloride	0.5	0.5364783	1	0.5304119	5	0.5264364	15	0.5428599	20	0.5801932	25	0.5996916
p- & m-Xylenes	1	1.482772	2	1.836741	10	1.945406	30	1.821435	40	1.773589	50	1.733564

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	1.458225	1	1.85157	5	2.029211	15	1.918858	20	1.806383	25	1.752114
Total Xylenes	1.5	1.474589	3	1.841684	15	1.973341	45	1.853909	60	1.78452	75	1.739747
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.299357	10	1.329658	10	1.329844	10	1.342598	10	1.343331	10	1.357944

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air

SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
Total Petroleum Hydrocarbons	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
4-Bromofluorobenzene (Surrogate)	10	~~1.108133~~	10	~~1.123908~~	10	~~1.17696~~	10	~~1.135282~~	10	~~1.101876~~	10	~~1.117431~~

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Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.385321	6.434241	5.375333	7.585906E-02			30	
Acrylonitrile	0.4734002	19.09838	5.724167	4.485642E-02			30	
Allyl chloride	0.9311473	18.52982	6.181167	2.958166E-02			30	
t-Amyl Methyl ether	0.5084969	21.25953	8.938667	5.593406E-02			30	
Benzene	2.310203	16.32816	8.611333	0.0354558			30	
Benzyl chloride	1.21796	40.86811	12.55917	5.166128E-02	0.998788		0.99	
Bromodichloromethane	0.7498123	1.115201	9.1845	2.637263E-02			30	
Bromoform	1.29582	5.444284	11.41583	7.775371E-03			30	
Bromomethane	0.5721625	5.345957	4.797333	5.836302E-02			30	
1,3-Butadiene	0.4373898	6.265987	4.580333	8.255267E-02			30	
t-Butyl alcohol	1.144382	17.87723	6.016667	0.162368			30	
Carbon disulfide	2.556243	10.27469	6.369	4.812452E-02			30	
Carbon tetrachloride	1.931421	7.323825	8.6985	2.799377E-02			30	
Chlorobenzene	0.7977157	3.759311	11.1045	2.403318E-02			30	
Chloroethane	0.2597023	4.483178	4.929167	4.551929E-02			30	
Chloroform	1.858315	4.533156	7.689833	6.832862E-02			30	
Chloromethane	0.4590853	3.909782	4.306333	0.0661716			30	
Cyclohexane	1.652539	21.5489	8.779166	1.958413E-02			30	
Dibromochloromethane	0.6776753	5.887607	10.42417	9.295585E-03			30	
1,2-Dibromo-3-chloropropane	0.1651741	26.16444	13.11533	5.121901E-02			30	
1,2-Dibromoethane	0.4694284	10.6287	10.55367	0.0345858			30	
Dibromomethane	0.1316079	2.455095	9.063667	3.849048E-02			30	
1,2-Dichlorobenzene	1.088648	14.45884	12.831	0.0493743			30	
1,3-Dichlorobenzene	1.261041	9.183964	12.5775	2.968233E-02			30	
1,4-Dichlorobenzene	1.150627	12.76119	12.61567	3.617238E-02			30	
Dichlorodifluoromethane	2.297283	3.767884	4.174833	8.952619E-02			30	

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Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.501032	6.735961	6.933333	4.629958E-02			30	
1,2-Dichloroethane	1.259162	7.596921	8.167667	5.401423E-02			30	
1,1-Dichloroethene	1.264693	12.28587	6.01	5.078188E-02			30	
cis-1,2-Dichloroethene	1.054343	19.23343	7.498833	4.922458E-02			30	
trans-1,2-Dichloroethene	1.231126	16.38681	6.786	6.697634E-02			30	
1,2-Dichloropropane	0.2973131	1.772499	9.082333	0.0332132			30	
cis-1,3-Dichloropropene	0.3819551	26.20214	9.945667	1.908951E-02			30	
trans-1,3-Dichloropropene	0.4130522	22.60837	9.673	1.900437E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.617365	3.016325	4.378333	5.738072E-02			30	
1,1-Difluoroethane	1.308935	5.973258	4.051	0.1098626			30	
Diisopropyl ether	0.5202863	14.66801	7.6135	6.986398E-02			30	
1,4-Dioxane	0.1396685	21.20894	9.206	0.1521462			30	
Ethanol	0.143483	5.538474	4.988167	9.750767E-02			30	
Ethyl acetate	0.2696996	10.7133	7.611	7.224087E-02			30	
Ethylbenzene	0.6525795	17.19123	11.26983	2.214918E-02			30	
1-Ethyl-4-methylbenzene	2.860951	25.95955	12.19117	4.650695E-02			30	
Ethyl t-butyl ether	1.81201	25.29311	7.960667	6.904968E-02			30	
n-Heptane	0.2699023	9.423343	9.353167	1.061473E-02			30	
Hexachlorobutadiene	0.6202578	1.93835	14.451	3.287711E-02			30	
Hexachloroethane	0.2645854	8.479442	13.27683	0.0254833			30	
Hexane	1.320847	6.837258	7.631	0.043305			30	
2-Hexanone	0.4702171	37.46843	10.31583	0.0848794	0.999488		0.99	
Isooctane	1.450681	5.151604	9.228333	2.658184E-02			30	
Isopropyl alcohol	0.9542893	15.43601	5.5465	7.439658E-02			30	
Methylene chloride	0.946655	9.35498	6.082333	4.280757E-02			30	
Methyl ethyl ketone	1.599616	17.34159	7.192333	7.378315E-02			30	

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Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.9312524	16.57855	5.966833	6.516463E-02			30	
Methyl isobutyl ketone	0.5962516	15.08928	9.6905	6.228694E-02			30	
Methyl t-butyl ether	2.244678	26.09128	6.9705	8.879637E-02			30	
Naphthalene	1.277326	64.53852	14.18017	5.710332E-02		0.9995633	0.99	
Propylene	0.5884372	13.84574	4.116667	0.1265706			30	
Styrene	1.133207	26.96022	11.523	2.137161E-02			30	
1,1,1,2-Tetrachloroethane	0.2449739	1.949129	11.09133	1.847227E-02			30	
1,1,2,2-Tetrachloroethane	1.289947	10.53074	11.574	2.054784E-02			30	
Tetrachloroethene	0.487058	6.38568	10.7705	2.452836E-02			30	
1,1,1,2-Tetrafluoroethane	1.142489	3.257289	3.987833	9.401626E-02			30	
Tetrahydrofuran	0.8416471	15.48443	7.960667	5.551932E-02			30	
Toluene	0.8694338	20.44441	10.2015	2.829269E-02			30	
1,2,4-Trichlorobenzene	0.2835387	52.86741	14.063	0.0287038		0.9995862	0.99	
1,1,1-Trichloroethane	1.709834	8.55465	8.333	0.0497117			30	
1,1,2-Trichloroethane	0.3422061	1.38609	10.04983	1.951433E-02			30	
Trichloroethene	0.3311466	3.286654	9.210333	2.207399E-02			30	
Trichlorofluoromethane	2.34705	3.841655	5.5215	5.048852E-02			30	
1,2,3-Trichloropropane	0.3545077	4.126535	11.63517	1.227276E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.702496	3.836183	6.284167	0.0386248			30	
1,2,4-Trimethylbenzene	1.781325	26.74482	12.46217	4.723045E-02			30	
1,3,5-Trimethylbenzene	1.930352	11.22834	12.22533	3.608963E-02			30	
Vinyl acetate	2.11964	23.06626	6.9995	4.111779E-02			30	
Vinyl bromide	0.7824054	9.203146	5.204167	3.659738E-02			30	
Vinyl chloride	0.5526786	5.434517	4.474667	5.633136E-02			30	
p- & m-Xylenes	1.765584	8.832349	11.3505	2.199905E-02			30	
o-Xylene	1.802727	10.76843	11.57717	2.744893E-02			30	

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Calibration: 2012010
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	1.777965	9.463054	11.57717	2.744893E-02			30	
TPH - Gasoline	4.288774	3.545743	11.13	7.349294			30	
Total Petroleum Hydrocarbons	4.288774	3.545743	11.13	7.349294			30	
4-Bromofluorobenzene (Surrogate)	1.333789	1.488289	11.798	2.204781E-02			30	

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INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.296844	1	1.329321	5	1.275651	15	1.186071	20	1.184176	25	1.165776
Acrylonitrile	0.5	0.2657531	1	0.3354824	5	0.3523194	15	0.3484198	20	0.3657416	25	0.3764641
Allyl chloride	0.5	0.7676736	1	0.8897237	5	0.8832088	15	0.8585779	20	0.8728087	25	0.8995756
t-Amyl Methyl ether	0.5	0.5199793	1	0.5876258	5	0.6125177	15	0.6034621	20	0.596126	25	0.6061565
Benzene	0.5	0.9558289	1	1.050771	5	1.050656	15	1.038605	20	1.059121	25	1.113306
Benzyl chloride	0.5	0.3953427	1	0.5327615	5	0.9514882	15	1.376626	20	1.429667	25	1.486868
Bromodichloromethane	0.5	0.7471602	1	0.7722521	5	0.7613796	15	0.7468539	20	0.7206239	25	0.7088655
Bromoform	0.5	1.040222	1	1.126757	5	1.147036	15	1.134329	20	1.107384	25	1.115532
Bromomethane	0.5	0.3228485	1	0.3358723	5	0.3313791	15	0.314155	20	0.3279645	25	0.3309143
1,3-Butadiene	0.5	0.4949133	1	0.5251254	5	0.4795179	15	0.466843	20	0.5019672	25	0.5059422
t-Butyl alcohol	1	1.02642	2	1.162815	10	1.194614	30	1.141671	40	1.145102	50	1.15556
Carbon disulfide	0.5	1.009031	1	1.078977	5	1.057711	15	1.031303	20	1.066673	25	1.105563
Carbon tetrachloride	0.5	1.36458	1	1.47945	5	1.433181	15	1.380718	20	1.356496	25	1.311881
Chlorobenzene	0.5	0.6187598	1	0.6413263	5	0.6695641	15	0.6744693	20	0.6751776	25	0.6774944
Chloroethane	0.5	0.1676529	1	0.217979	5	0.201971	15	0.1980829	20	0.2066483	25	0.2066393
Chloroform	0.5	0.9957957	1	1.082226	5	1.051711	15	1.012871	20	1.002869	25	0.9979001
Chloromethane	0.5	0.5203467	1	0.5526815	5	0.5139665	15	0.4873476	20	0.520985	25	0.5136896
Cyclohexane	0.5	2.130178	1	1.792575	5	1.183278	15	1.077731	20	1.077057	25	1.083343
Dibromochloromethane	0.5	0.6934475	1	0.7479573	5	0.7576894	15	0.7689173	20	0.7466778	25	0.7409996
1,2-Dibromo-3-chloropropane	0.5	7.779836E-02	1	0.1051571	5	0.1434986	15	0.1766003	20	0.1825117	25	0.1829617
1,2-Dibromoethane	0.5	0.3466529	1	0.3896968	5	0.4212468	15	0.4376893	20	0.4335641	25	0.4376082
Dibromomethane	0.5	0.1048745	1	0.1214039	5	0.1192316	15	0.1234605	20	0.1217292	25	0.1212386
1,2-Dichlorobenzene	0.5	0.66552	1	0.8023718	5	1.061447	15	1.173076	20	1.172353	25	1.196639
1,3-Dichlorobenzene	0.5	0.6851019	1	0.8413859	5	1.118451	15	1.236094	20	1.284917	25	1.247256
1,4-Dichlorobenzene	0.5	0.5385022	1	0.6853297	5	0.9383151	15	1.127118	20	1.092549	25	1.204535

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INITIAL CALIBRATION DATA
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Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012012
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	1.393387	1	1.501287	5	1.417111	15	1.330523	20	1.346682	25	1.237844
1,1-Dichloroethane	0.5	0.739645	1	0.8463098	5	0.8483585	15	0.8042531	20	0.8161825	25	0.8232422
1,2-Dichloroethane	0.5	0.9553099	1	1.024515	5	0.9829138	15	0.9416286	20	0.9254319	25	0.9011777
1,1-Dichloroethene	0.5	0.8465691	1	0.9180596	5	0.8683698	15	0.8404018	20	0.8347889	25	0.8335377
cis-1,2-Dichloroethene	0.5	0.639728	1	0.7099592	5	0.7111418	15	0.7002004	20	0.7075871	25	0.7169148
trans-1,2-Dichloroethene	0.5	0.7700093	1	0.7980867	5	0.7950788	15	0.7935449	20	0.8094635	25	0.8141444
1,2-Dichloropropane	0.5	0.2294485	1	0.2547802	5	0.2373836	15	0.2393369	20	0.2369689	25	0.2459049
cis-1,3-Dichloropropene	0.5	0.3051282	1	0.3234637	5	0.3909606	15	0.4037199	20	0.3969676	25	0.396809
trans-1,3-Dichloropropene	0.5	0.3093799	1	0.3420874	5	0.3804096	15	0.3822668	20	0.3778737	25	0.3848959
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.007993	1	1.064939	5	1.026477	15	0.9716432	20	1.018881	25	0.9948255
1,1-Difluoroethane	0.5	0.9955362	1	1.114722	5	1.006164	15	0.9829694	20	1.040731	25	1.028039
Diisopropyl ether	0.5	0.2553722	1	0.3076663	5	0.2981106	15	0.2983527	20	0.3040841	25	0.3090606
1,4-Dioxane	0.5	0.1013315	1	0.1314159	5	0.1677498	15	0.1630427	20	0.1586778	25	0.1566066
Ethanol	1	0.182316	2	0.218109	10	0.1986442	30	0.1870017	40	0.1877149	50	0.188192
Ethyl acetate	0.5	0.1115956	1	0.14103	5	0.1628021	15	0.1494476	20	0.1485138	25	0.1519459
Ethylbenzene	0.5	0.4935168	1	0.6044595	5	0.6109887	15	0.5995968	20	0.5865661	25	0.608326
1-Ethyl-4-methylbenzene	0.5	1.978037	1	2.490957	5	2.916304	15	2.958121	20	3.001293	25	3.040391
Ethyl t-butyl ether	0.5	1.366656	1	1.627629	5	1.706283	15	1.641603	20	1.660101	25	1.648582
n-Heptane	0.5	0.3102302	1	0.3409672	5	0.3387387	15	0.3455548	20	0.3370804	25	0.3389614
Hexachlorobutadiene	0.5	0.5657581	1	0.6268086	5	0.6659203	15	0.6795327	20	0.6683048	25	0.6684719
Hexachloroethane	0.5	0.2863191	1	0.2581129	5	0.2687026	15	0.2710528	20	0.2622654	25	0.2558016
Hexane	0.5	0.8707049	1	0.9731718	5	0.9533614	15	0.9395262	20	0.957682	25	0.973441
2-Hexanone	0.5	0.4825646	1	0.6364254	5	0.8123714	15	0.9085357	20	0.9028882	25	0.910768
Isooctane	0.5	1.602596	1	1.800055	5	1.779728	15	1.743231	20	1.716067	25	1.735086
Isopropyl alcohol	0.5	0.9098931	1	1.045052	5	1.071672	15	0.9973098	20	1.002516	25	0.9997768
Methylene chloride	0.5	0.8696668	1	0.8144643	5	0.7038102	15	0.667586	20	0.659858	25	0.6676496

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Calibration: 2012012
Matrix: Air
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Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.309561	1	1.472951	5	1.485908	15	1.438886	20	1.434023	25	1.456305
Methyl iodide	0.5	0.5058133	1	0.570359	5	0.5410583	15	0.5192687	20	0.5400291	25	0.555894
Methyl isobutyl ketone	0.5	0.8076757	1	0.9537979	5	1.034926	15	1.013529	20	0.9881899	25	0.9746222
Methyl t-butyl ether	0.5	1.294768	1	1.484649	5	1.53286	15	1.504228	20	1.528701	25	1.53722
Naphthalene	0.5	0.1754432	1	0.3606862	5	0.86628	15	1.350373	20	1.476895	25	1.580932
Propylene	0.5	0.5187896	1	0.5265552	5	0.4832339	15	0.4830146	20	0.5396388	25	0.5332011
Styrene	0.5	0.8086795	1	0.9403421	5	1.068688	15	1.082358	20	1.074734	25	1.107293
1,1,1,2-Tetrachloroethane	0.5	0.2831613	1	0.3165324	5	0.305473	15	0.3050777	20	0.2994558	25	0.296024
1,1,2,2-Tetrachloroethane	0.5	0.8909764	1	0.9650165	5	0.9814791	15	0.9646962	20	0.9570539	25	0.9710304
Tetrachloroethene	0.5	0.336874	1	0.4076203	5	0.4066231	15	0.4201252	20	0.4231454	25	0.4276476
1,1,1,2-Tetrafluoroethane	0.5	0.8042666	1	0.8828346	5	0.8213169	15	0.7353092	20	0.7386927	25	0.655874
Tetrahydrofuran	0.5	0.761445	1	0.8357813	5	0.846375	15	0.8001688	20	0.8016107	25	0.8124775
Toluene	0.5	0.6918885	1	0.7581794	5	0.796299	15	0.8210077	20	0.8170936	25	0.831771
1,2,4-Trichlorobenzene	0.5	2.804975E-02	1	8.694192E-02	5	0.1696542	15	0.2921174	20	0.3371001	25	0.37718
1,1,1-Trichloroethane	0.5	1.211201	1	1.361037	5	1.27299	15	1.234186	20	1.200346	25	1.173203
1,1,2-Trichloroethane	0.5	0.261336	1	0.2694831	5	0.2781251	15	0.275756	20	0.2761003	25	0.281024
Trichloroethene	0.5	0.274091	1	0.2967185	5	0.3129762	15	0.3018073	20	0.3027485	25	0.3084656
Trichlorofluoromethane	0.5	1.592443	1	1.657005	5	1.586015	15	1.456323	20	1.42828	25	1.382539
1,2,3-Trichloropropane	0.5	0.2429214	1	0.2971269	5	0.2857585	15	0.2786087	20	0.2684038	25	0.2704796
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.8447524	1	0.8764655	5	0.8446676	15	0.810764	20	0.8152701	25	0.8263701
1,2,4-Trimethylbenzene	0.5	1.483461	1	1.893474	5	2.129039	15	2.141317	20	2.09005	25	2.088766
1,3,5-Trimethylbenzene	0.5	1.693834	1	2.074463	5	2.151217	15	2.122457	20	1.948096	25	1.917341
Vinyl acetate	0.5	1.66485	1	1.941664	5	2.11477	15	2.086238	20	2.118526	25	2.134979
Vinyl bromide	0.5	0.359182	1	0.4254296	5	0.3977403	15	0.3793161	20	0.391779	25	0.3964181
Vinyl chloride	0.5	0.3848749	1	0.4104817	5	0.3960329	15	0.3876581	20	0.4151109	25	0.4149302
p- & m-Xylenes	1	1.541942	2	1.752597	10	1.75382	30	1.690214	40	1.651549	50	1.665422

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Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	1.638793	1	1.844125	5	1.862885	15	1.792236	20	1.743722	25	1.748339
Total Xylenes	1.5	1.574226	3	1.783106	15	1.790175	45	1.724221	60	1.682273	75	1.693061
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.230101	10	1.237895	10	1.338058	10	1.379711	10	1.350271	10	1.328314

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
Total Petroleum Hydrocarbons	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
4-Bromofluorobenzene (Surrogate)	10	~~1.143828~~	10	~~1.190717~~	10	~~1.260907~~	10	~~1.289156~~	10	~~1.306602~~	10	~~1.307584~~

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.23964	5.590454	5.311667	5.607089E-02			30	
Acrylonitrile	0.3406967	11.55202	5.6465	9.943877E-02			30	
Allyl chloride	0.8619281	5.601752	6.092333	8.315539E-02			30	
t-Amyl Methyl ether	0.5876446	5.82674	8.840167	3.210015E-02			30	
Benzene	1.044715	4.866163	8.512	5.382814E-02			30	
Benzyl chloride	1.028792	46.51069	12.4765	2.388355E-02	0.9968633		0.99	
Bromodichloromethane	0.7428559	3.237151	9.090834	5.369478E-02			30	
Bromoform	1.111877	3.396185	11.351	3.273077E-02			30	
Bromomethane	0.3271889	2.352228	4.7755	6.781523E-02			30	
1,3-Butadiene	0.4957182	4.139331	4.569167	2.542283E-02			30	
t-Butyl alcohol	1.137697	5.071069	5.921333	0.1528815			30	
Carbon disulfide	1.05821	3.242874	6.278833	0.0518219			30	
Carbon tetrachloride	1.387718	4.298614	8.605667	5.247716E-02			30	
Chlorobenzene	0.6594653	3.642468	11.03767	2.161239E-02			30	
Chloroethane	0.1998289	8.566658	4.897333	4.982764E-02			30	
Chloroform	1.023895	3.440607	7.584833	7.448607E-02			30	
Chloromethane	0.5181695	4.040247	4.3025	0.0595508			30	
Cyclohexane	1.390694	32.82823	8.687167	1.011777E-02	0.9998058		0.99	
Dibromochloromethane	0.7426148	3.503294	10.3455	2.208017E-02			30	
1,2-Dibromo-3-chloropropane	0.1447546	30.82069	13.0115	0.0171057	0.9990586		0.99	
1,2-Dibromoethane	0.4110764	8.857468	10.477	3.329474E-02			30	
Dibromomethane	0.1186564	5.80239	7.473333	48.98986			30	
1,2-Dichlorobenzene	1.011901	22.19415	12.7415	1.922707E-02			30	
1,3-Dichlorobenzene	1.068868	23.21822	12.49667	1.885191E-02			30	
1,4-Dichlorobenzene	0.9310582	28.57221	12.53383	2.236567E-02			30	
Dichlorodifluoromethane	1.371139	6.487457	4.176667	7.732766E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	0.8129985	4.899165	6.833	6.379817E-02			30	
1,2-Dichloroethane	0.9551628	4.578218	8.061333	6.955131E-02			30	
1,1-Dichloroethene	0.8569545	3.79409	5.931	3.786469E-02			30	
cis-1,2-Dichloroethene	0.6975886	4.13731	7.392833	0.0641779			30	
trans-1,2-Dichloroethene	0.7967213	1.939666	6.687167	5.332831E-02			30	
1,2-Dichloropropane	0.2406372	3.616593	8.990167	2.153465E-02			30	
cis-1,3-Dichloropropene	0.3695082	11.73105	9.864167	2.274321E-02			30	
trans-1,3-Dichloropropene	0.3628189	8.438832	9.588333	3.227712E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.014126	3.109481	4.375333	4.299205E-02			30	
1,1-Difluoroethane	1.028027	4.612318	4.0555	0.1143617			30	
Diisopropyl ether	0.2954411	6.821416	7.508833	6.957672E-02			30	
1,4-Dioxane	0.1464707	17.38853	9.1055	5.045303E-02			30	
Ethanol	0.193663	6.775388	4.948333	0.2124192			30	
Ethyl acetate	0.1442225	12.11034	7.5	8.245386E-02			30	
Ethylbenzene	0.583909	7.725963	11.2095	1.942414E-02			30	
1-Ethyl-4-methylbenzene	2.730851	15.35606	12.12517	1.509997E-02			30	
Ethyl t-butyl ether	1.608476	7.552187	7.855833	3.254606E-02			30	
n-Heptane	0.3352554	3.759147	9.272333	0.0435444			30	
Hexachlorobutadiene	0.6457994	6.689159	14.30283	1.578712E-02			30	
Hexachloroethane	0.2670424	4.167767	13.1735	0.0213773			30	
Hexane	0.9446479	4.067618	7.535833	4.955668E-02			30	
2-Hexanone	0.7755922	22.97308	10.23417	1.637611E-02			30	
Isooctane	1.729461	4.006457	9.144167	6.190214E-02			30	
Isopropyl alcohol	1.00437	5.486874	5.4745	0.1681852			30	
Methylene chloride	0.7305058	12.24828	5.994	6.658381E-02			30	
Methyl ethyl ketone	1.432939	4.436951	7.08	7.370257E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012012
Matrix: Air
SDG: 2035335
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.5387371	4.364503	5.8885	3.709189E-02			30	
Methyl isobutyl ketone	0.9621234	8.405625	9.598833	0.0265281			30	
Methyl t-butyl ether	1.480404	6.290304	6.860833	1.588563E-02			30	
Naphthalene	0.9684349	61.75207	14.03517	2.351307E-03		0.9994883	0.99	
Propylene	0.5140722	4.853935	4.120833	0.0564768			30	
Styrene	1.013682	11.47377	11.46383	0.0335596			30	
1,1,1,2-Tetrachloroethane	0.300954	3.70976	11.026	4.172501E-02			30	
1,1,2,2-Tetrachloroethane	0.9550421	3.39473	11.51133	1.144408E-02			30	
Tetrachloroethene	0.4036726	8.372268	10.7045	0.0187971			30	
1,1,1,2-Tetrafluoroethane	0.773049	10.29868	3.998167	6.981867E-02			30	
Tetrahydrofuran	0.8096431	3.712633	7.849167	3.566703E-02			30	
Toluene	0.7860399	6.737704	10.1245	2.630098E-02			30	
1,2,4-Trichlorobenzene	0.2151739	65.90903	13.92633	2.693209E-02		0.9997875	0.99	
1,1,1-Trichloroethane	1.24216	5.413346	8.233	0.0433539			30	
1,1,2-Trichloroethane	0.2736374	2.603883	9.9665	0.0349093			30	
Trichloroethene	0.2994679	4.557118	9.1185	5.825301E-02			30	
Trichlorofluoromethane	1.517101	7.201884	5.463833	6.198495E-02			30	
1,2,3-Trichloropropane	0.2738831	6.740124	11.57267	2.279377E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.8363816	2.902988	6.201167	3.926035E-02			30	
1,2,4-Trimethylbenzene	1.971018	12.94952	12.387	2.424606E-02			30	
1,3,5-Trimethylbenzene	1.984568	8.588073	12.15717	2.286918E-02			30	
Vinyl acetate	2.010171	9.118367	6.893667	9.832986E-02			30	
Vinyl bromide	0.3916442	5.602442	5.157833	9.853348E-02			30	
Vinyl chloride	0.4015148	3.422465	4.468667	5.459572E-02			30	
p- & m-Xylenes	1.675924	4.683602	11.29033	3.039201E-02			30	
o-Xylene	1.771683	4.583725	11.51867	2.621256E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012012
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	1.707844	4.642906	11.51867	2.621256E-02			30	
TPH - Gasoline	3.784361	4.390169	10.42317	4.413093			30	
Total Petroleum Hydrocarbons	3.784361	4.390169	10.42317	4.413093			30	
4-Bromofluorobenzene (Surrogate)	1.310725	4.725734	11.73817	9.87373E-03			30	

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Project Number: 60632793.06
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HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035335
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW35A-01	12/01/20 16:09	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/12/20 20:32	11.00	30.00	
SG-VW35B-01	12/01/20 15:59	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/12/20 21:08	11.00	30.00	
SG-VW35B-01	12/01/20 15:59	12/03/20 10:00	12/07/20 08:12	6.00	30.00	12/07/20 20:07	6.00	30.00	
SG-VW36A-01	12/02/20 07:50	12/03/20 10:00	12/12/20 13:12	10.00	30.00	12/12/20 21:43	10.00	30.00	
SG-VW36A-01	12/02/20 07:50	12/03/20 10:00	12/07/20 08:12	5.00	30.00	12/07/20 20:37	5.00	30.00	
SG-VW36B-01	12/02/20 07:52	12/03/20 10:00	12/12/20 13:12	10.00	30.00	12/12/20 22:19	10.00	30.00	
SG-VW40A-01	12/02/20 08:55	12/03/20 10:00	12/12/20 13:12	10.00	30.00	12/12/20 22:55	10.00	30.00	
SG-VW40B-01	12/02/20 08:42	12/03/20 10:00	12/12/20 13:12	10.00	30.00	12/12/20 23:31	10.00	30.00	
SG-VW37A-01	12/02/20 09:44	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 00:08	11.00	30.00	
SG-VW37B-01	12/02/20 09:47	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 00:44	11.00	30.00	
SG-VW37B-01	12/02/20 09:47	12/03/20 10:00	12/07/20 08:12	5.00	30.00	12/07/20 23:03	5.00	30.00	
SG-VW37B-02	12/02/20 09:47	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 01:21	11.00	30.00	
SG-VW37B-02	12/02/20 09:47	12/03/20 10:00	12/07/20 08:12	5.00	30.00	12/07/20 23:33	5.00	30.00	
SG-VW42A-01	12/02/20 10:59	12/03/20 10:00	12/07/20 08:12	6.00	30.00	12/08/20 08:51	6.00	30.00	
SG-VW42B-01	12/02/20 10:50	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 01:58	11.00	30.00	
SG-VW19A-01	12/02/20 12:10	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 02:35	11.00	30.00	
SG-VW19A-01	12/02/20 12:10	12/03/20 10:00	12/07/20 08:12	6.00	30.00	12/08/20 00:31	6.00	30.00	
SG-VW19B-01	12/02/20 11:55	12/03/20 10:00	12/12/20 13:12	11.00	30.00	12/13/20 03:12	11.00	30.00	
SG-VW19B-01	12/02/20 11:55	12/03/20 10:00	12/07/20 08:12	6.00	30.00	12/08/20 01:01	6.00	30.00	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:37:52PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2035539

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-TO-15

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Case Narrative

Sample Receipt

Work Order: 2035539
COC Number:
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

LCS / LCSD

The LCS recoveries were within QC limits.

Lab Number	Receipt Pressure	Units
20-35539-01	13.7	PSIA
20-35539-02	13.1	PSIA
20-35539-03	12.7	PSIA
20-35539-04	13.2	PSIA
20-35539-05	12.5	PSIA
20-35539-06	12.4	PSIA
20-35539-07	13.0	PSIA
20-35539-08	13.0	PSIA

Chain of Custody and Cooler Receipt Form for 2035539 Page 1 of 2

AECOM

CHAIN OF CUSTODY

Page 1 of 1

RUSH!

Lab: BC Laboratories

TAT: 6 Day

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No. 60632793.06

CHK BY DISTRIBUTION

SUB OUT

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.200.3843
916.414.5850

WO#: 20-35539

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send invoices to SMUD

Analyses Requested: USEPA Method TO-15

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont.	Sample Condition/Comments Init vac	final vac	Can#	FR#	Preserved	Container Type
1 SG-VW334A-01	12/3/20	1550	AIR	1	x	-36	-5	3030	1322	N	1.4L Canist
2 SG-VW338B-01	12/3/20	1520	AIR	1	x	-28.5	-5	25462	1534	N	
3 SG-VW331A-01	12/3/20	0914	AIR	1	x	-30	-5	10301	1021	N	
4 SG-VW336-01	12/3/20	0901	AIR	1	x	-27.5	-5	1419	1545	N	
5 SG-VW329-01	12/3/20	1035	AIR	1	x	-30	-5	11416	1211	N	
6 SG-VW335B-01	12/3/20	1021	AIR	1	x	-30	-5	10217	1240	N	
7 SG-VW330A-01	12/3/20	1503	AIR	1	x	-30	-5	5189	1257	N	
8 SG-VW328-01	12/3/20	1564	AIR	1	x	-29.5	-5	10833	1324	N	

Collected by: Brian Weeks DateTime 12/3/20 @ 1510
Relinquished by: DateTime 12/3/20@1515 Relinquished by: DateTime 12/3/2020 1530
Relinquished by: DateTime 12/3/20 1535 Relinquished by: DateTime 12-4-20 1000
Relinquished by: DateTime Relinquished by: DateTime
Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2035539 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-35539

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

~~Emissivity~~ Container: Summa Thermometer ID:

Temperature: (A) room °C / (C) temp °C

Date/Time 12-4-20 1000

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
1oz / 16oz / 32oz AMBER										
1oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
KEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER 6L10	A	A	A	A	A	A	A	A		

Comments:

Sample Numbering Completed By: CKL Date/Time: 12/4 1744

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2035539**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW34A-01	2035539-01
SG-VW34A-01	2035539-01RE1
SG-VW34B-01	2035539-02
SG-VW39A-01	2035539-03
SG-VW39A-01	2035539-03RE1
SG-VW39B-01	2035539-04
SG-VW-25A-01	2035539-05
SG-VW25B-01	2035539-06
SG-VW30A-01	2035539-07
SG-VW30A-01	2035539-07RE1
SG-VW30B-01	2035539-08
SG-VW30B-01	2035539-08RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Name: Stuart Buttram

Date: 12-23-2020 Title: Technical Director

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

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METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-01RE1	File ID:	12DEC08.D
Sampled:	12/02/20 15:30	Prepared:	12/12/20 09:22	Analyzed:	12/12/20 20:05
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	14.6	330	D
75-15-0	Carbon disulfide	14.6	300	D
108-88-3	Toluene	14.6	180	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.85	88.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	72606	7.502	88778	7.5	
Chlorobenzene-d5 (IS)	67799	11.013	90541	11.015	
1,4-Difluorobenzene (IS)	140162	8.691	172764	8.698	

* Values outside of QC limits

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Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-01
File ID: 12DEC16.D
Sampled: 12/02/20 15:30
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 11:16
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.46	1.2	UD
107-13-1	Acrylonitrile	1.46	0.39	UD
107-05-1	Allyl chloride	1.46	0.41	UD
994-05-8	t-Amyl Methyl ether	1.46	0.45	UD
71-43-2	Benzene	1.46	19	D
100-44-7	Benzyl chloride	1.46	0.38	UD
75-27-4	Bromodichloromethane	1.46	0.66	UD
75-25-2	Bromoform	1.46	1.3	UD
74-83-9	Bromomethane	1.46	0.69	UD
106-99-0	1,3-Butadiene	1.46	0.32	UD
75-65-0	t-Butyl alcohol	1.46	1.0	UD
56-23-5	Carbon tetrachloride	1.46	0.66	UD
108-90-7	Chlorobenzene	1.46	0.58	UD
75-00-3	Chloroethane	1.46	0.77	UD
67-66-3	Chloroform	1.46	2.8	JD
74-87-3	Chloromethane	1.46	0.71	JD
110-82-7	Cyclohexane	1.46	6.3	D
124-48-1	Dibromochloromethane	1.46	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.46	2.5	UD
106-93-4	1,2-Dibromoethane	1.46	0.85	UD
74-95-3	Dibromomethane	1.46	0.83	UD
95-50-1	1,2-Dichlorobenzene	1.46	0.73	UD
541-73-1	1,3-Dichlorobenzene	1.46	0.45	UD
106-46-7	1,4-Dichlorobenzene	1.46	0.73	UD
75-71-8	Dichlorodifluoromethane	1.46	2.8	JD
75-34-3	1,1-Dichloroethane	1.46	0.34	UD
107-06-2	1,2-Dichloroethane	1.46	0.38	UD
75-35-4	1,1-Dichloroethene	1.46	0.45	UD
156-59-2	cis-1,2-Dichloroethene	1.46	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.46	0.39	UD
78-87-5	1,2-Dichloropropane	1.46	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.46	0.44	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-01
File ID: 12DEC16.D
Sampled: 12/02/20 15:30
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 11:16
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-02-6	trans-1,3-Dichloropropene	1.46	0.58	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.46	1.3	UD
75-37-6	1,1-Difluoroethane	1.46	2.9	UD
108-20-3	Diisopropyl ether	1.46	0.57	UD
123-91-1	1,4-Dioxane	1.46	0.48	UD
64-17-5	Ethanol	1.46	15	D
141-78-6	Ethyl acetate	1.46	0.48	UD
100-41-4	Ethylbenzene	1.46	27	D
622-96-8	1-Ethyl-4-methylbenzene	1.46	22	D
637-92-3	Ethyl t-butyl ether	1.46	0.48	UD
142-82-5	n-Heptane	1.46	10	D
87-68-3	Hexachlorobutadiene	1.46	2.2	UD
67-72-1	Hexachloroethane	1.46	1.1	UD
110-54-3	Hexane	1.46	7.7	D
591-78-6	2-Hexanone	1.46	0.42	UD
540-84-1	Isooctane	1.46	27	D
67-63-0	Isopropyl alcohol	1.46	0.47	UD
75-09-2	Methylene chloride	1.46	0.58	UD
78-93-3	Methyl ethyl ketone	1.46	45	D
74-88-4	Methyl iodide	1.46	0.85	UD
108-10-1	Methyl isobutyl ketone	1.46	21	D
1634-04-4	Methyl t-butyl ether	1.46	0.41	UD
91-20-3	Naphthalene	1.46	2.0	UD
115-07-1	Propylene	1.46	0.36	UD
100-42-5	Styrene	1.46	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.46	0.89	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.46	0.69	UD
127-18-4	Tetrachloroethene	1.46	19	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.46	0.98	UD
109-99-9	Tetrahydrofuran	1.46	15	D
120-82-1	1,2,4-Trichlorobenzene	1.46	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.46	0.57	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-01	File ID:	12DEC16.D
Sampled:	12/02/20 15:30	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 11:16
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
79-00-5	1,1,2-Trichloroethane	1.46	0.89	UD
79-01-6	Trichloroethene	1.46	0.79	UD
75-69-4	Trichlorofluoromethane	1.46	2.8	JD
96-18-4	1,2,3-Trichloropropane	1.46	0.70	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.46	3.1	JD
95-63-6	1,2,4-Trimethylbenzene	1.46	29	D
108-67-8	1,3,5-Trimethylbenzene	1.46	9.3	D
108-05-4	Vinyl acetate	1.46	0.48	UD
593-60-2	Vinyl bromide	1.46	0.47	UD
75-01-4	Vinyl chloride	1.46	0.57	UD
179601-23-1	p- & m-Xylenes	1.46	99	D
95-47-6	o-Xylene	1.46	29	D
1330-20-7	Total Xylenes	1.46	130	D
---	TPH - Gasoline	1.46	3400	D
---	Total Petroleum Hydrocarbons	1.46	3400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.87	98.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73010	7.501	88778	7.5	
Chlorobenzene-d5 (IS)	76822	11.017	90541	11.015	
1,4-Difluorobenzene (IS)	137483	8.694	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-02
File ID: 12DEC17.D
Sampled: 12/02/20 15:20
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 11:51
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.51	1.2	UD
67-64-1	Acetone	1.51	4.7	JD
107-13-1	Acrylonitrile	1.51	0.41	UD
107-05-1	Allyl chloride	1.51	0.42	UD
994-05-8	t-Amyl Methyl ether	1.51	7.9	D
71-43-2	Benzene	1.51	6.2	D
100-44-7	Benzyl chloride	1.51	0.39	UD
75-27-4	Bromodichloromethane	1.51	0.68	UD
75-25-2	Bromoform	1.51	1.3	UD
74-83-9	Bromomethane	1.51	0.71	UD
106-99-0	1,3-Butadiene	1.51	0.33	UD
75-65-0	t-Butyl alcohol	1.51	13	D
75-15-0	Carbon disulfide	1.51	3.6	D
56-23-5	Carbon tetrachloride	1.51	0.68	UD
108-90-7	Chlorobenzene	1.51	0.60	UD
75-00-3	Chloroethane	1.51	0.80	UD
67-66-3	Chloroform	1.51	5.6	JD
74-87-3	Chloromethane	1.51	0.32	UD
110-82-7	Cyclohexane	1.51	0.57	UD
124-48-1	Dibromochloromethane	1.51	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.51	2.6	UD
106-93-4	1,2-Dibromoethane	1.51	19	D
74-95-3	Dibromomethane	1.51	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.51	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.51	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.51	0.76	UD
75-71-8	Dichlorodifluoromethane	1.51	11	D
75-34-3	1,1-Dichloroethane	1.51	0.35	UD
107-06-2	1,2-Dichloroethane	1.51	7.9	D
75-35-4	1,1-Dichloroethene	1.51	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.51	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.51	0.41	UD

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-02
File ID: 12DEC17.D
Sampled: 12/02/20 15:20
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 11:51
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.51	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.51	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.51	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.51	1.4	UD
75-37-6	1,1-Difluoroethane	1.51	3.0	UD
108-20-3	Diisopropyl ether	1.51	0.59	UD
123-91-1	1,4-Dioxane	1.51	0.50	UD
64-17-5	Ethanol	1.51	15	D
141-78-6	Ethyl acetate	1.51	0.50	UD
100-41-4	Ethylbenzene	1.51	14	D
622-96-8	1-Ethyl-4-methylbenzene	1.51	0.45	UD
637-92-3	Ethyl t-butyl ether	1.51	7.3	JD
142-82-5	n-Heptane	1.51	0.51	UD
87-68-3	Hexachlorobutadiene	1.51	2.3	UD
67-72-1	Hexachloroethane	1.51	1.1	UD
110-54-3	Hexane	1.51	0.30	UD
591-78-6	2-Hexanone	1.51	0.44	UD
540-84-1	Isooctane	1.51	0.53	UD
67-63-0	Isopropyl alcohol	1.51	1.5	JD
75-09-2	Methylene chloride	1.51	0.60	UD
78-93-3	Methyl ethyl ketone	1.51	0.29	UD
74-88-4	Methyl iodide	1.51	0.88	UD
108-10-1	Methyl isobutyl ketone	1.51	0.39	UD
1634-04-4	Methyl t-butyl ether	1.51	4.4	D
91-20-3	Naphthalene	1.51	2.1	UD
115-07-1	Propylene	1.51	0.38	UD
100-42-5	Styrene	1.51	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.51	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.51	0.71	UD
127-18-4	Tetrachloroethene	1.51	49	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.51	1.0	UD
109-99-9	Tetrahydrofuran	1.51	0.41	UD

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW34B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-02	File ID:	12DEC17.D
Sampled:	12/02/20 15:20	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 11:51
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.51	10	D
120-82-1	1,2,4-Trichlorobenzene	1.51	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.51	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.51	0.92	UD
79-01-6	Trichloroethene	1.51	11	D
75-69-4	Trichlorofluoromethane	1.51	1.7	JD
96-18-4	1,2,3-Trichloropropane	1.51	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.51	0.83	UD
95-63-6	1,2,4-Trimethylbenzene	1.51	0.60	UD
108-67-8	1,3,5-Trimethylbenzene	1.51	0.60	UD
108-05-4	Vinyl acetate	1.51	0.50	UD
593-60-2	Vinyl bromide	1.51	0.48	UD
75-01-4	Vinyl chloride	1.51	0.59	UD
179601-23-1	p- & m-Xylenes	1.51	31	D
95-47-6	o-Xylene	1.51	17	D
1330-20-7	Total Xylenes	1.51	48	D
---	TPH - Gasoline	1.51	340	D
---	Total Petroleum Hydrocarbons	1.51	340	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.12	91.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92184	7.503	88778	7.5	
Chlorobenzene-d5 (IS)	91304	11.013	90541	11.015	
1,4-Difluorobenzene (IS)	188966	8.691	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-03RE1	File ID:	12DEC10.D
Sampled:	12/03/20 09:14	Prepared:	12/12/20 09:22	Analyzed:	12/12/20 21:02
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.5	570	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.49	84.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	70363	7.504	88778	7.5	
Chlorobenzene-d5 (IS)	66014	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	135430	8.692	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-03
File ID: 12DEC18.D
Sampled: 12/03/20 09:14
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 12:27
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	5.2	JD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	2.2	JD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	3.0	JD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	0.70	UD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-03
File ID: 12DEC18.D
Sampled: 12/03/20 09:14
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 12:27
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	2.0	JD
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	4.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.55	2.7	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	1.3	JD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	30	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	1.4	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-03	File ID:	12DEC18.D
Sampled:	12/03/20 09:14	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 12:27
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	4.0	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	1.8	JD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	15	D
95-47-6	o-Xylene	1.55	7.0	JD
1330-20-7	Total Xylenes	1.55	22	D
---	TPH - Gasoline	1.55	1000	D
---	Total Petroleum Hydrocarbons	1.55	1000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.23	92.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89194	7.505	88778	7.5	
Chlorobenzene-d5 (IS)	87819	11.016	90541	11.015	
1,4-Difluorobenzene (IS)	179763	8.693	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-04
File ID: 12DEC19.D
Sampled: 12/03/20 09:01
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 13:02
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.51	1.2	UD
67-64-1	Acetone	1.51	4.2	JD
107-13-1	Acrylonitrile	1.51	0.41	UD
107-05-1	Allyl chloride	1.51	0.42	UD
994-05-8	t-Amyl Methyl ether	1.51	0.47	UD
71-43-2	Benzene	1.51	0.32	UD
100-44-7	Benzyl chloride	1.51	0.39	UD
75-27-4	Bromodichloromethane	1.51	0.68	UD
75-25-2	Bromoform	1.51	1.3	UD
74-83-9	Bromomethane	1.51	0.71	UD
106-99-0	1,3-Butadiene	1.51	0.33	UD
75-65-0	t-Butyl alcohol	1.51	1.1	UD
75-15-0	Carbon disulfide	1.51	0.29	UD
56-23-5	Carbon tetrachloride	1.51	0.68	UD
108-90-7	Chlorobenzene	1.51	0.60	UD
75-00-3	Chloroethane	1.51	0.80	UD
67-66-3	Chloroform	1.51	8.5	D
74-87-3	Chloromethane	1.51	0.32	UD
110-82-7	Cyclohexane	1.51	0.57	UD
124-48-1	Dibromochloromethane	1.51	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.51	2.6	UD
106-93-4	1,2-Dibromoethane	1.51	0.88	UD
74-95-3	Dibromomethane	1.51	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.51	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.51	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.51	0.76	UD
75-71-8	Dichlorodifluoromethane	1.51	0.68	UD
75-34-3	1,1-Dichloroethane	1.51	0.35	UD
107-06-2	1,2-Dichloroethane	1.51	0.39	UD
75-35-4	1,1-Dichloroethene	1.51	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.51	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.51	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-04
File ID: 12DEC19.D
Sampled: 12/03/20 09:01
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 13:02
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.51	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.51	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.51	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.51	1.4	UD
75-37-6	1,1-Difluoroethane	1.51	3.0	UD
108-20-3	Diisopropyl ether	1.51	0.59	UD
123-91-1	1,4-Dioxane	1.51	0.50	UD
64-17-5	Ethanol	1.51	0.63	UD
141-78-6	Ethyl acetate	1.51	0.50	UD
100-41-4	Ethylbenzene	1.51	0.48	UD
622-96-8	1-Ethyl-4-methylbenzene	1.51	0.45	UD
637-92-3	Ethyl t-butyl ether	1.51	0.50	UD
142-82-5	n-Heptane	1.51	0.51	UD
87-68-3	Hexachlorobutadiene	1.51	2.3	UD
67-72-1	Hexachloroethane	1.51	1.1	UD
110-54-3	Hexane	1.51	0.30	UD
591-78-6	2-Hexanone	1.51	0.44	UD
540-84-1	Isooctane	1.51	0.53	UD
67-63-0	Isopropyl alcohol	1.51	0.48	UD
75-09-2	Methylene chloride	1.51	0.60	UD
78-93-3	Methyl ethyl ketone	1.51	0.29	UD
74-88-4	Methyl iodide	1.51	0.88	UD
108-10-1	Methyl isobutyl ketone	1.51	0.39	UD
1634-04-4	Methyl t-butyl ether	1.51	0.42	UD
91-20-3	Naphthalene	1.51	2.1	UD
115-07-1	Propylene	1.51	0.38	UD
100-42-5	Styrene	1.51	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.51	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.51	0.71	UD
127-18-4	Tetrachloroethene	1.51	22	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.51	1.0	UD
109-99-9	Tetrahydrofuran	1.51	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW39B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-04	File ID:	12DEC19.D
Sampled:	12/03/20 09:01	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 13:02
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.51	2.7	JD
120-82-1	1,2,4-Trichlorobenzene	1.51	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.51	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.51	0.92	UD
79-01-6	Trichloroethene	1.51	0.82	UD
75-69-4	Trichlorofluoromethane	1.51	0.71	UD
96-18-4	1,2,3-Trichloropropane	1.51	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.51	0.83	UD
95-63-6	1,2,4-Trimethylbenzene	1.51	0.60	UD
108-67-8	1,3,5-Trimethylbenzene	1.51	0.60	UD
108-05-4	Vinyl acetate	1.51	0.50	UD
593-60-2	Vinyl bromide	1.51	0.48	UD
75-01-4	Vinyl chloride	1.51	0.59	UD
179601-23-1	p- & m-Xylenes	1.51	0.92	UD
95-47-6	o-Xylene	1.51	0.45	UD
1330-20-7	Total Xylenes	1.51	1.4	UD
---	TPH - Gasoline	1.51	230	JD
---	Total Petroleum Hydrocarbons	1.51	230	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.88	88.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	88026	7.502	88778	7.5	
Chlorobenzene-d5 (IS)	82911	11.012	90541	11.015	
1,4-Difluorobenzene (IS)	175105	8.695	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW-25A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-05
File ID: 12DEC20.D
Sampled: 12/03/20 10:35
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 13:37
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	3.6	JD
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	0.34	UD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	0.72	UD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	2.3	JD
75-15-0	Carbon disulfide	1.6	11	D
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
67-66-3	Chloroform	1.6	5.7	JD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	10	D
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW-25A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-05	File ID:	12DEC20.D
Sampled:	12/03/20 10:35	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 13:37
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.6	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	0.67	UD
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	3.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.6	3.6	JD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	0.51	UD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	0.30	UD
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	96	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	2.5	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW-25A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-05	File ID:	12DEC20.D
Sampled:	12/03/20 10:35	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 13:37
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.6	7.0	D
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	0.86	UD
75-69-4	Trichlorofluoromethane	1.6	1.9	JD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	7.7	JD
108-67-8	1,3,5-Trimethylbenzene	1.6	2.5	JD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	12	D
95-47-6	o-Xylene	1.6	5.2	JD
1330-20-7	Total Xylenes	1.6	17	D
---	TPH - Gasoline	1.6	420	D
---	Total Petroleum Hydrocarbons	1.6	420	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.04	90.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82962	7.504	88778	7.5	
Chlorobenzene-d5 (IS)	79716	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	164501	8.693	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW25B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-06
File ID: 12DEC21.D
Sampled: 12/03/20 10:21
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 14:00
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	2.3	JD
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	0.34	UD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	0.72	UD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.4	JD
75-15-0	Carbon disulfide	1.6	1.7	JD
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
67-66-3	Chloroform	1.6	6.8	JD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	24	D
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW25B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-06	File ID:	12DEC21.D
Sampled:	12/03/20 10:21	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 14:00
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.6	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	3.9	D
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.6	0.48	UD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	1.9	JD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	0.30	UD
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	210	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW25B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-06	File ID:	12DEC21.D
Sampled:	12/03/20 10:21	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 14:00
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.6	1.2	JD
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	0.86	UD
75-69-4	Trichlorofluoromethane	1.6	3.1	JD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	0.64	UD
108-67-8	1,3,5-Trimethylbenzene	1.6	0.64	UD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	4.3	JD
95-47-6	o-Xylene	1.6	0.48	UD
1330-20-7	Total Xylenes	1.6	4.3	JD
---	TPH - Gasoline	1.6	420	D
---	Total Petroleum Hydrocarbons	1.6	420	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.89	88.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	87258	7.499	88778	7.5	
Chlorobenzene-d5 (IS)	84147	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	171726	8.692	172764	8.698	

* Values outside of QC limits

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-07RE1	File ID:	12DEC14.D
Sampled:	12/03/20 15:03	Prepared:	12/12/20 09:22	Analyzed:	12/12/20 22:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	15.4	650	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.56	85.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	66468	7.503	88778	7.5	
Chlorobenzene-d5 (IS)	62404	11.018	90541	11.015	
1,4-Difluorobenzene (IS)	125812	8.696	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-07
File ID: 12DEC22.D
Sampled: 12/03/20 15:03
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 14:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.54	1.3	UD
67-64-1	Acetone	1.54	30	D
107-13-1	Acrylonitrile	1.54	0.42	UD
107-05-1	Allyl chloride	1.54	0.43	UD
994-05-8	t-Amyl Methyl ether	1.54	0.48	UD
71-43-2	Benzene	1.54	3.7	D
100-44-7	Benzyl chloride	1.54	0.40	UD
75-27-4	Bromodichloromethane	1.54	12	D
75-25-2	Bromoform	1.54	1.3	UD
74-83-9	Bromomethane	1.54	0.72	UD
106-99-0	1,3-Butadiene	1.54	0.34	UD
75-65-0	t-Butyl alcohol	1.54	1.2	JD
75-15-0	Carbon disulfide	1.54	15	D
56-23-5	Carbon tetrachloride	1.54	0.69	UD
108-90-7	Chlorobenzene	1.54	0.62	UD
75-00-3	Chloroethane	1.54	0.82	UD
74-87-3	Chloromethane	1.54	0.32	UD
110-82-7	Cyclohexane	1.54	0.59	UD
124-48-1	Dibromochloromethane	1.54	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.54	2.6	UD
106-93-4	1,2-Dibromoethane	1.54	0.89	UD
74-95-3	Dibromomethane	1.54	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.54	0.77	UD
541-73-1	1,3-Dichlorobenzene	1.54	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.54	0.77	UD
75-71-8	Dichlorodifluoromethane	1.54	6.5	JD
75-34-3	1,1-Dichloroethane	1.54	0.35	UD
107-06-2	1,2-Dichloroethane	1.54	0.40	UD
75-35-4	1,1-Dichloroethene	1.54	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.54	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.54	0.42	UD
78-87-5	1,2-Dichloropropane	1.54	0.49	UD

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-07
File ID: 12DEC22.D
Sampled: 12/03/20 15:03
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 14:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.54	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.54	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.54	1.4	UD
75-37-6	1,1-Difluoroethane	1.54	3.1	UD
108-20-3	Diisopropyl ether	1.54	0.60	UD
123-91-1	1,4-Dioxane	1.54	0.51	UD
64-17-5	Ethanol	1.54	4.0	D
141-78-6	Ethyl acetate	1.54	0.51	UD
100-41-4	Ethylbenzene	1.54	20	D
622-96-8	1-Ethyl-4-methylbenzene	1.54	22	D
637-92-3	Ethyl t-butyl ether	1.54	0.51	UD
142-82-5	n-Heptane	1.54	2.1	JD
87-68-3	Hexachlorobutadiene	1.54	2.3	UD
67-72-1	Hexachloroethane	1.54	1.1	UD
110-54-3	Hexane	1.54	0.31	UD
591-78-6	2-Hexanone	1.54	0.45	UD
540-84-1	Isooctane	1.54	3.8	JD
67-63-0	Isopropyl alcohol	1.54	6.5	D
75-09-2	Methylene chloride	1.54	0.62	UD
78-93-3	Methyl ethyl ketone	1.54	18	D
74-88-4	Methyl iodide	1.54	0.89	UD
108-10-1	Methyl isobutyl ketone	1.54	6.0	JD
1634-04-4	Methyl t-butyl ether	1.54	0.43	UD
91-20-3	Naphthalene	1.54	7.5	JD
115-07-1	Propylene	1.54	0.38	UD
100-42-5	Styrene	1.54	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.54	0.94	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.54	0.72	UD
127-18-4	Tetrachloroethene	1.54	99	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.54	1.0	UD
109-99-9	Tetrahydrofuran	1.54	21	D
108-88-3	Toluene	1.54	72	D

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Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-07	File ID:	12DEC22.D
Sampled:	12/03/20 15:03	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 14:35
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.54	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.54	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.54	0.94	UD
79-01-6	Trichloroethene	1.54	2.7	JD
75-69-4	Trichlorofluoromethane	1.54	1.8	JD
96-18-4	1,2,3-Trichloropropane	1.54	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.54	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.54	32	D
108-67-8	1,3,5-Trimethylbenzene	1.54	9.9	D
108-05-4	Vinyl acetate	1.54	0.51	UD
593-60-2	Vinyl bromide	1.54	0.49	UD
75-01-4	Vinyl chloride	1.54	0.60	UD
179601-23-1	p- & m-Xylenes	1.54	75	D
95-47-6	o-Xylene	1.54	29	D
1330-20-7	Total Xylenes	1.54	100	D
---	TPH - Gasoline	1.54	1800	D
---	Total Petroleum Hydrocarbons	1.54	1800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.27	92.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	86941	7.505	88778	7.5	
Chlorobenzene-d5 (IS)	90301	11.016	90541	11.015	
1,4-Difluorobenzene (IS)	176936	8.693	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-08RE1	File ID:	12DEC15.D
Sampled:	12/03/20 15:04	Prepared:	12/12/20 09:22	Analyzed:	12/12/20 23:26
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	15.5	1300	D
127-18-4	Tetrachloroethene	15.5	370	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.40	84.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	65918	7.504	88778	7.5	
Chlorobenzene-d5 (IS)	61440	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	127059	8.697	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-08
File ID: 12DEC23.D
Sampled: 12/03/20 15:04
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 15:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	8.2	D
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	60	D
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	1.9	JD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	15	D
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD
78-87-5	1,2-Dichloropropane	1.55	0.50	UD

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-01

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035539-08
File ID: 12DEC23.D
Sampled: 12/03/20 15:04
Prepared: 12/12/20 09:22
Analyzed: 12/13/20 15:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094934
Sequence: 2022115
Calibration: 2012013
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	5.1	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.55	0.46	UD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	1.2	JD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	0.29	UD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD
108-88-3	Toluene	1.55	4.4	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-01

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035539-08	File ID:	12DEC23.D
Sampled:	12/03/20 15:04	Prepared:	12/12/20 09:22	Analyzed:	12/13/20 15:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094934	Sequence:	2022115	Calibration:	2012013
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	3.6	JD
75-69-4	Trichlorofluoromethane	1.55	2.1	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	0.62	UD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	4.2	JD
95-47-6	o-Xylene	1.55	1.4	JD
1330-20-7	Total Xylenes	1.55	5.6	JD
---	TPH - Gasoline	1.55	1400	D
---	Total Petroleum Hydrocarbons	1.55	1400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.99	89.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97662	7.504	88778	7.5	
Chlorobenzene-d5 (IS)	94409	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	199068	8.692	172764	8.698	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094934 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW34A-01	2035539-01	12DEC16.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW34A-01	2035539-01RE1	12DEC08.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW34B-01	2035539-02	12DEC17.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW39A-01	2035539-03	12DEC18.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW39A-01	2035539-03RE1	12DEC10.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW39B-01	2035539-04	12DEC19.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW-25A-01	2035539-05	12DEC20.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW25B-01	2035539-06	12DEC21.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW30A-01	2035539-07	12DEC22.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW30A-01	2035539-07RE1	12DEC14.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW30B-01	2035539-08	12DEC23.D	12/12/20 09:22	FULL Customized List-All Table 8
SG-VW30B-01	2035539-08RE1	12DEC15.D	12/12/20 09:22	FULL Customized List-All Table 8
Blank	B094934-BLK1	12DEC07.D	12/12/20 09:22	
LCS	B094934-BS1	12DEC05.D	12/12/20 09:22	
LCS Dup	B094934-BSD1	12DEC06.D	12/12/20 09:22	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094934-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 09:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:36	Instrument:	MS-A1		
Batch:	B094934	Sequence:	2022115	Calibration:	2012013

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094934-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 09:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:36	Instrument:	MS-A1		
Batch:	B094934	Sequence:	2022115	Calibration:	2012013

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094934-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 09:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:36	Instrument:	MS-A1		
Batch:	B094934	Sequence:	2022115	Calibration:	2012013

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035539
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094934-BLK1	File ID:	12DEC07.D
Prepared:	12/12/20 09:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/12/20 19:36	Instrument:	MS-A1		
Batch:	B094934	Sequence:	2022115	Calibration:	2012013

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.14	81.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	72316	7.499	88778	7.5	
Chlorobenzene-d5 (IS)	67786	11.015	90541	11.015	
1,4-Difluorobenzene (IS)	139580	8.693	172764	8.698	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094934
Preparation: EPA TO-15

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094934-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	16.252	102	70 - 130
Chloroform	24.413	26.522	109	70 - 130
Ethylbenzene	21.711	22.688	104	70 - 130
Tetrachloroethene	33.913	35.351	104	70 - 130
Toluene	18.842	19.814	105	70 - 130
Trichloroethene	26.869	28.470	106	70 - 130
Trichlorofluoromethane	28.092	32.581	116	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	40.954	107	70 - 130
p- & m-Xylenes	43.421	47.655	110	70 - 130
o-Xylene	21.711	23.903	110	70 - 130
Total Xylenes	65.132	71.558	110	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	16.673	104	2.56	30	70 - 130
Chloroform	24.413	27.581	113	3.92	30	70 - 130
Ethylbenzene	21.711	23.526	108	3.63	30	70 - 130
Tetrachloroethene	33.913	36.151	107	2.24	30	70 - 130
Toluene	18.842	20.274	108	2.29	30	70 - 130
Trichloroethene	26.869	28.932	108	1.61	30	70 - 130
Trichlorofluoromethane	28.092	32.957	117	1.15	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	43.031	112	4.95	30	70 - 130
p- & m-Xylenes	43.421	48.671	112	2.11	30	70 - 130
o-Xylene	21.711	24.789	114	3.64	30	70 - 130

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094934
Preparation: EPA TO-15

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094934-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	73.460	113	2.62	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022115-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2022115-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2022115-ICV1	10DEC08.D	12/10/20 14:10
Initial Cal Blank	2022115-ICB1	10DEC10.D	12/10/20 15:08
MS Tune	2022115-TUN1	12DEC01.D	12/12/20 16:35
Calibration Check	2022115-CCV1	12DEC02.D	12/12/20 17:06
Calibration Check	2022115-CCV2	12DEC03.D	12/12/20 17:37
Calibration Blank	2022115-CCB1	12DEC04.D	12/12/20 18:05
LCS	B094934-BS1	12DEC05.D	12/12/20 18:36
LCS Dup	B094934-BSD1	12DEC06.D	12/12/20 19:08
Blank	B094934-BLK1	12DEC07.D	12/12/20 19:36
SG-VW34A-01	2035539-01RE1	12DEC08.D	12/12/20 20:05
SG-VW39A-01	2035539-03RE1	12DEC10.D	12/12/20 21:02
SG-VW30A-01	2035539-07RE1	12DEC14.D	12/12/20 22:58
SG-VW30B-01	2035539-08RE1	12DEC15.D	12/12/20 23:26
SG-VW34A-01	2035539-01	12DEC16.D	12/13/20 11:16
SG-VW34B-01	2035539-02	12DEC17.D	12/13/20 11:51
SG-VW39A-01	2035539-03	12DEC18.D	12/13/20 12:27
SG-VW39B-01	2035539-04	12DEC19.D	12/13/20 13:02
SG-VW-25A-01	2035539-05	12DEC20.D	12/13/20 13:37
SG-VW25B-01	2035539-06	12DEC21.D	12/13/20 14:00
SG-VW30A-01	2035539-07	12DEC22.D	12/13/20 14:35
SG-VW30B-01	2035539-08	12DEC23.D	12/13/20 15:10

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022134
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022134-TUN2	16OCT09.D	10/16/20 13:36
Cal Standard	2022134-CAL7	16OCT10.D	10/16/20 14:05
Cal Standard	2022134-CAL8	16OCT11.D	10/16/20 14:34
Cal Standard	2022134-CAL9	16OCT12.D	10/16/20 15:03
Cal Standard	2022134-CALA	16OCT13.D	10/16/20 15:34
Cal Standard	2022134-CALB	16OCT14.D	10/16/20 16:05
Cal Standard	2022134-CALC	16OCT15.D	10/16/20 16:41
MS Tune	2022134-TUN1	10DEC01.D	12/10/20 10:08
Cal Standard	2022134-CAL1	10DEC02.D	12/10/20 10:37
Cal Standard	2022134-CAL2	10DEC03.D	12/10/20 11:05
Cal Standard	2022134-CAL3	10DEC04.D	12/10/20 11:35
Cal Standard	2022134-CAL4	10DEC05.D	12/10/20 12:13
Cal Standard	2022134-CAL5	10DEC06.D	12/10/20 12:55
Cal Standard	2022134-CAL6	10DEC07.D	12/10/20 13:39

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	12DEC01.D	Injection Date:	12/12/20
Instrument ID:	MS-A1	Injection Time:	16:35
Sequence:	2022115	Lab Sample ID:	2022115-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	29.4	PASS
Mass 75	30 - 66% of Mass 95	55.8	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.71	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	69.5	PASS
Mass 175	4 - 9% of Mass 174	8.23	PASS
Mass 176	93 - 101% of Mass 174	96.2	PASS
Mass 177	5 - 9% of Mass 176	6.58	PASS

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	10DEC01.D	Injection Date:	12/10/20
Instrument ID:	MS-A1	Injection Time:	10:08
Sequence:	2022134	Lab Sample ID:	2022134-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	26.6	PASS
Mass 75	30 - 66% of Mass 95	51.9	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.55	PASS
Mass 173	Less than 2% of Mass 174	0.42	PASS
Mass 174	50 - 120% of Mass 95	74.3	PASS
Mass 175	4 - 9% of Mass 174	8.22	PASS
Mass 176	93 - 101% of Mass 174	98	PASS
Mass 177	5 - 9% of Mass 176	6.53	PASS

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	16OCT09.D	Injection Date:	10/16/20
Instrument ID:	MS-A1	Injection Time:	13:36
Sequence:	2022134	Lab Sample ID:	2022134-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28	PASS
Mass 75	30 - 66% of Mass 95	54.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.88	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.7	PASS
Mass 175	4 - 9% of Mass 174	7.82	PASS
Mass 176	93 - 101% of Mass 174	97.7	PASS
Mass 177	5 - 9% of Mass 176	6.13	PASS

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	10/16/20
Lab Sample ID:	2022115-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	10DEC08.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/10/20
Lab Sample ID:	2022115-ICV1	Injection Time:	14:10

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.0480	1.345159	1.358038		1.0	30
Acrylonitrile	A	5.0000	5.4920	0.3984067	0.437592		9.8	30
Allyl chloride	A	5.0000	5.4240	1.024592	1.111559		8.5	30
t-Amyl Methyl ether	A	5.0000	5.2180	0.6336337	0.6612564		4.4	30
Benzene	A	5.0000	5.5270	1.306457	1.444078		10.5	30
Benzyl chloride	L	5.0000	4.1460	1.499536	1.407553		-17.1	30
Bromodichloromethane	A	5.0000	4.9430	0.768738	0.7599418		-1.1	30
Bromoform	A	5.0000	5.4300	1.391128	1.510891		8.6	30
Bromomethane	A	5.0000	5.2520	0.3920149	0.4117608		5.0	30
1,3-Butadiene	A	5.0000	5.4430	0.5656472	0.6157703		8.9	30
t-Butyl alcohol	A	10.000	10.715	1.238502	1.327002		7.1	30
Carbon disulfide	A	5.0000	5.4740	1.326018	1.451657		9.5	30
Carbon tetrachloride	A	5.0000	5.0210	1.47859	1.4848		0.4	30
Chlorobenzene	A	5.0000	5.1880	0.7661125	0.7948434		3.8	30
Chloroethane	A	5.0000	5.9850	0.2183664	0.26137		19.7	30
Chloroform	A	5.0000	5.1870	1.161079	1.204608		3.7	30
Chloromethane	A	5.0000	5.5080	0.5899516	0.6498447		10.2	30
Cyclohexane	A	5.0000	4.7260	1.556385	1.47122		-5.5	30
Dibromochloromethane	A	5.0000	4.9900	0.8039684	0.8023984		-0.2	30
1,2-Dibromo-3-chloropropane	A	5.0000	4.6710	0.185962	0.1737364		-6.6	30
1,2-Dibromoethane	A	5.0000	5.2010	0.473425	0.4924568		4.0	30
Dibromomethane	A	5.0000	5.0620	0.1224671	0.1239879		1.2	30
1,2-Dichlorobenzene	A	5.0000	5.5200	1.355419	1.496395		10.4	30

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 10DEC08.D
Sequence: 2022115
Lab Sample ID: 2022115-ICV1

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Calibration Date: 10/16/20 14:05
Injection Date: 12/10/20
Injection Time: 14:10

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.7840	1.371345	1.586382		15.7	30
1,4-Dichlorobenzene	A	5.0000	5.1700	1.209493	1.250601		3.4	30
Dichlorodifluoromethane	A	5.0000	5.1470	1.491489	1.53519		2.9	30
1,1-Dichloroethane	A	5.0000	5.4290	0.9576368	1.039725		8.6	30
1,2-Dichloroethane	A	5.0000	4.9710	1.006257	1.000465		-0.6	30
1,1-Dichloroethene	A	5.0000	5.3870	0.9487548	1.022194		7.7	30
cis-1,2-Dichloroethene	A	5.0000	5.3920	0.8123232	0.8760197		7.8	30
trans-1,2-Dichloroethene	A	5.0000	5.3360	0.9180992	0.9797434		6.7	30
1,2-Dichloropropane	A	5.0000	5.3180	0.2813633	0.2992685		6.4	30
cis-1,3-Dichloropropene	A	5.0000	5.1850	0.414299	0.4296433		3.7	30
trans-1,3-Dichloropropene	A	5.0000	5.2410	0.416804	0.436878		4.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2650	1.138753	1.199024		5.3	30
1,1-Difluoroethane	A	5.0000	5.3060	1.220829	1.295454		6.1	30
Diisopropyl ether	A	5.0000	5.4830	0.3441709	0.3774395		9.7	30
1,4-Dioxane	A	5.0000	5.6610	0.177981	0.2015063		13.2	30
Ethanol	A	10.000	10.983	0.2107479	0.2314552		9.8	30
Ethyl acetate	A	5.0000	6.1160	0.1827086	0.2234969		22.3	30
Ethylbenzene	A	5.0000	5.6760	0.7574651	0.8598894		13.5	30
1-Ethyl-4-methylbenzene	A	5.0000	5.8720	3.398738	3.991589		17.4	30
Ethyl t-butyl ether	A	5.0000	5.3750	1.795394	1.92999		7.5	30
n-Heptane	A	5.0000	5.4490	0.3732952	0.4067995		9.0	30
Hexachlorobutadiene	A	5.0000	4.7830	1.164136	1.113599		-4.3	30
Hexachloroethane	A	5.0000	5.1870	0.3292663	0.3415983		3.7	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 10DEC08.D
Sequence: 2022115
Lab Sample ID: 2022115-ICV1

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Calibration Date: 10/16/20 14:05
Injection Date: 12/10/20
Injection Time: 14:10

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.4820	1.136871	1.246527		9.6	30
2-Hexanone	A	5.0000	5.0200	0.8665017	0.8698843		0.4	30
Isooctane	A	5.0000	5.4110	1.918269	2.075785		8.2	30
Isopropyl alcohol	A	5.0000	5.4660	1.200379	1.312206		9.3	30
Methylene chloride	A	5.0000	5.0450	0.800465	0.807738		0.9	30
Methyl ethyl ketone	A	5.0000	5.3920	1.698591	1.831793		7.8	30
Methyl iodide	A	5.0000	5.4510	0.6318636	0.6888195		9.0	30
Methyl isobutyl ketone	A	5.0000	5.3010	1.059513	1.123333		6.0	30
Methyl t-butyl ether	A	5.0000	5.3830	1.718635	1.85016		7.7	30
Naphthalene	Q	5.0000	4.9590	1.20396	1.224852		-0.8	30
Propylene	A	5.0000	5.2570	0.6563883	0.690168		5.1	30
Styrene	A	5.0000	5.7390	1.316866	1.511539		14.8	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.9900	0.308998	0.3083684		-0.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.5220	1.222612	1.350143		10.4	30
Tetrachloroethene	A	5.0000	5.2610	0.4682856	0.4927394		5.2	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.1180	0.8084125	0.8274153		2.4	30
Tetrahydrofuran	A	5.0000	5.4220	0.9606752	1.041719		8.4	30
Toluene	A	5.0000	5.3760	0.9016158	0.9694269		7.5	30
1,2,4-Trichlorobenzene	Q	5.0000	4.8510	0.4072851	0.3671753		-3.0	30
1,1,1-Trichloroethane	A	5.0000	5.0070	1.331163	1.333023		0.1	30
1,1,2-Trichloroethane	A	5.0000	5.2210	0.3173673	0.3313912		4.4	30
Trichloroethene	A	5.0000	5.1570	0.3486342	0.359548		3.1	30
Trichlorofluoromethane	A	5.0000	4.9890	1.597674	1.594184		-0.2	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	10DEC08.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/10/20
Lab Sample ID:	2022115-ICV1	Injection Time:	14:10

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4610	0.3363309	0.367366		9.2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.4750	0.9569021	1.047816		9.5	30
1,2,4-Trimethylbenzene	A	5.0000	5.4420	2.453382	2.670475		8.8	30
1,3,5-Trimethylbenzene	A	5.0000	5.2060	2.457296	2.558306		4.1	30
Vinyl acetate	A	5.0000	5.3990	2.324685	2.509976		8.0	30
Vinyl bromide	A	5.0000	5.4220	0.4654699	0.5047531		8.4	30
Vinyl chloride	A	5.0000	5.4620	0.4881132	0.5331675		9.2	30
p- & m-Xylenes	A	10.000	10.979	2.031147	2.229992		9.8	30
o-Xylene	A	5.0000	5.4540	2.129005	2.322468		9.1	30
Total Xylenes	A	15.000	16.433	2.063766	2.260818		9.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	12DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/12/20
Lab Sample ID:	2022115-CCV1	Injection Time:	17:06

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.5340	1.345159	1.488955		10.7	30
Acrylonitrile	A	5.0000	5.2480	0.3984067	0.4181636		5.0	30
Allyl chloride	A	5.0000	5.4500	1.024592	1.116893		9.0	30
t-Amyl Methyl ether	A	5.0000	5.5030	0.6336337	0.6973411		10.1	30
Benzene	A	5.0000	5.0540	1.306457	1.320661		1.1	30
Benzyl chloride	L	5.0000	4.5320	1.499536	1.578671		-9.4	30
Bromodichloromethane	A	5.0000	5.7270	0.768738	0.8805419		14.5	30
Bromoform	A	5.0000	5.6200	1.391128	1.563764		12.4	30
Bromomethane	A	5.0000	5.4310	0.3920149	0.4257953		8.6	30
1,3-Butadiene	A	5.0000	5.3900	0.5656472	0.6098054		7.8	30
t-Butyl alcohol	A	10.000	11.117	1.238502	1.376797		11.2	30
Carbon disulfide	A	5.0000	5.0470	1.326018	1.338468		0.9	30
Carbon tetrachloride	A	5.0000	5.8690	1.47859	1.735461		17.4	30
Chlorobenzene	A	5.0000	5.3370	0.7661125	0.8176746		6.7	30
Chloroethane	A	5.0000	5.9170	0.2183664	0.2584055		18.3	30
Chloroform	A	5.0000	5.5890	1.161079	1.297879		11.8	30
Chloromethane	A	5.0000	5.3650	0.5899516	0.6329833		7.3	30
Cyclohexane	A	5.0000	4.5660	1.556385	1.4214		-8.7	30
Dibromochloromethane	A	5.0000	5.7200	0.8039684	0.9198172		14.4	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.6450	0.185962	0.2099689		12.9	30
1,2-Dibromoethane	A	5.0000	5.3870	0.473425	0.5100896		7.7	30
Dibromomethane	A	5.0000	5.5620	0.1224671	0.1362247		11.2	30
1,2-Dichlorobenzene	A	5.0000	5.4940	1.355419	1.489459		9.9	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	12DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/12/20
Lab Sample ID:	2022115-CCV1	Injection Time:	17:06

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.7120	1.371345	1.566604		14.2	30
1,4-Dichlorobenzene	A	5.0000	5.3580	1.209493	1.295987		7.2	30
Dichlorodifluoromethane	A	5.0000	5.6100	1.491489	1.673333		12.2	30
1,1-Dichloroethane	A	5.0000	5.4110	0.9576368	1.036336		8.2	30
1,2-Dichloroethane	A	5.0000	5.8290	1.006257	1.173142		16.6	30
1,1-Dichloroethene	A	5.0000	5.5840	0.9487548	1.059655		11.7	30
cis-1,2-Dichloroethene	A	5.0000	5.3530	0.8123232	0.8696242		7.1	30
trans-1,2-Dichloroethene	A	5.0000	5.4350	0.9180992	0.9980073		8.7	30
1,2-Dichloropropane	A	5.0000	5.2270	0.2813633	0.2941569		4.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7150	0.414299	0.4735296		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3990	0.416804	0.4501009		8.0	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.4810	1.138753	1.248216		9.6	30
1,1-Difluoroethane	A	5.0000	5.0620	1.220829	1.235948		1.2	30
Diisopropyl ether	A	5.0000	5.3970	0.3441709	0.3714968		7.9	30
1,4-Dioxane	A	5.0000	5.9090	0.177981	0.2103389		18.2	30
Ethanol	A	10.000	11.413	0.2107479	0.2405274		14.1	30
Ethyl acetate	A	5.0000	5.4110	0.1827086	0.197719		8.2	30
Ethylbenzene	A	5.0000	5.3670	0.7574651	0.8131007		7.3	30
1-Ethyl-4-methylbenzene	A	5.0000	5.8660	3.398738	3.98728		17.3	30
Ethyl t-butyl ether	A	5.0000	5.5140	1.795394	1.979988		10.3	30
n-Heptane	A	5.0000	5.4210	0.3732952	0.4047421		8.4	30
Hexachlorobutadiene	A	5.0000	5.2790	1.164136	1.229007		5.6	30
Hexachloroethane	A	5.0000	5.5040	0.3292663	0.3624697		10.1	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 12DEC02.D
Sequence: 2022115
Lab Sample ID: 2022115-CCV1

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Calibration Date: 10/16/20 14:05
Injection Date: 12/12/20
Injection Time: 17:06

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3020	1.136871	1.205647		6.0	30
2-Hexanone	A	5.0000	5.6260	0.8665017	0.9749243		12.5	30
Isooctane	A	5.0000	5.5120	1.918269	2.114769		10.2	30
Isopropyl alcohol	A	5.0000	5.4380	1.200379	1.305567		8.8	30
Methylene chloride	A	5.0000	5.1610	0.800465	0.826208		3.2	30
Methyl ethyl ketone	A	5.0000	5.3760	1.698591	1.826194		7.5	30
Methyl iodide	A	5.0000	5.0730	0.6318636	0.641039		1.5	30
Methyl isobutyl ketone	A	5.0000	5.7290	1.059513	1.2139		14.6	30
Methyl t-butyl ether	A	5.0000	5.4890	1.718635	1.886767		9.8	30
Naphthalene	Q	5.0000	4.7730	1.20396	1.167705		-4.5	30
Propylene	A	5.0000	4.7150	0.6563883	0.6189635		-5.7	30
Styrene	A	5.0000	5.5200	1.316866	1.453939		10.4	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.6330	0.308998	0.3481067		12.7	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.3180	1.222612	1.300473		6.4	30
Tetrachloroethene	A	5.0000	5.3060	0.4682856	0.4969583		6.1	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.8510	0.8084125	0.9459417		17.0	30
Tetrahydrofuran	A	5.0000	5.4650	0.9606752	1.050073		9.3	30
Toluene	A	5.0000	5.4420	0.9016158	0.981349		8.8	30
1,2,4-Trichlorobenzene	Q	5.0000	4.5600	0.4072851	0.339471		-8.8	30
1,1,1-Trichloroethane	A	5.0000	5.6980	1.331163	1.517023		14.0	30
1,1,2-Trichloroethane	A	5.0000	5.3010	0.3173673	0.3364443		6.0	30
Trichloroethene	A	5.0000	5.3920	0.3486342	0.3759422		7.8	30
Trichlorofluoromethane	A	5.0000	5.8660	1.597674	1.874302		17.3	30

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	12DEC02.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/12/20
Lab Sample ID:	2022115-CCV1	Injection Time:	17:06

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.5180	0.3363309	0.3711864		10.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3590	0.9569021	1.025595		7.2	30
1,2,4-Trimethylbenzene	A	5.0000	5.7280	2.453382	2.810829		14.6	30
1,3,5-Trimethylbenzene	A	5.0000	5.5540	2.457296	2.729795		11.1	30
Vinyl acetate	A	5.0000	5.5230	2.324685	2.568		10.5	30
Vinyl bromide	A	5.0000	5.1990	0.4654699	0.4839945		4.0	30
Vinyl chloride	A	5.0000	5.2090	0.4881132	0.5085575		4.2	30
p- & m-Xylenes	A	10.000	11.129	2.031147	2.260495		11.3	30
o-Xylene	A	5.0000	5.7200	2.129005	2.435554		14.4	30
Total Xylenes	A	15.000	16.849	2.063766	2.318848		12.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035539
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2012013
Lab File ID:	12DEC03.D	Calibration Date:	10/16/20 14:05
Sequence:	2022115	Injection Date:	12/12/20
Lab Sample ID:	2022115-CCV2	Injection Time:	17:37

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	422.34	3.784361	3.196561		-15.5	30
Total Petroleum Hydrocarbons	A	500.00	422.34	3.784361	3.196561		-15.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Sacramento, CA 95811

Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022115-ICV1)			Lab File ID: 10DEC08.D		Analyzed: 12/10/20 14:10			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
Initial Cal Blank (2022115-ICB1)			Lab File ID: 10DEC10.D		Analyzed: 12/10/20 15:08			
4-Bromofluorobenzene (Surrogate)	10.000	87.7	70 - 130	11.736	11.7385	-0.0025	+/-1.0	
Calibration Check (2022115-CCV1)			Lab File ID: 12DEC02.D		Analyzed: 12/12/20 17:06			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.735	11.7385	-0.0035	+/-1.0	
Calibration Blank (2022115-CCB1)			Lab File ID: 12DEC04.D		Analyzed: 12/12/20 18:05			
4-Bromofluorobenzene (Surrogate)	10.000	89.3	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
LCS (B094934-BS1)			Lab File ID: 12DEC05.D		Analyzed: 12/12/20 18:36			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.739	11.7385	0.0005	+/-1.0	
LCS Dup (B094934-BSD1)			Lab File ID: 12DEC06.D		Analyzed: 12/12/20 19:08			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.739	11.7385	0.0005	+/-1.0	
Blank (B094934-BLK1)			Lab File ID: 12DEC07.D		Analyzed: 12/12/20 19:36			
4-Bromofluorobenzene (Surrogate)	10.000	81.4	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
SG-VW34A-01 (2035539-01RE1)			Lab File ID: 12DEC08.D		Analyzed: 12/12/20 20:05			
4-Bromofluorobenzene (Surrogate)	10.000	88.5	70 - 130	11.735	11.7385	-0.0035	+/-1.0	
SG-VW39A-01 (2035539-03RE1)			Lab File ID: 12DEC10.D		Analyzed: 12/12/20 21:02			
4-Bromofluorobenzene (Surrogate)	10.000	84.9	70 - 130	11.736	11.7385	-0.0025	+/-1.0	
SG-VW30A-01 (2035539-07RE1)			Lab File ID: 12DEC14.D		Analyzed: 12/12/20 22:58			
4-Bromofluorobenzene (Surrogate)	10.000	85.6	70 - 130	11.74	11.7385	0.0015	+/-1.0	
SG-VW30B-01 (2035539-08RE1)			Lab File ID: 12DEC15.D		Analyzed: 12/12/20 23:26			
4-Bromofluorobenzene (Surrogate)	10.000	84.0	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
SG-VW34A-01 (2035539-01)			Lab File ID: 12DEC16.D		Analyzed: 12/13/20 11:16			
4-Bromofluorobenzene (Surrogate)	10.000	98.7	70 - 130	11.739	11.7385	0.0005	+/-1.0	
SG-VW34B-01 (2035539-02)			Lab File ID: 12DEC17.D		Analyzed: 12/13/20 11:51			
4-Bromofluorobenzene (Surrogate)	10.000	91.2	70 - 130	11.735	11.7385	-0.0035	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW39A-01 (2035539-03)			Lab File ID: 12DEC18.D		Analyzed: 12/13/20 12:27			
4-Bromofluorobenzene (Surrogate)	10.000	92.3	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
SG-VW39B-01 (2035539-04)			Lab File ID: 12DEC19.D		Analyzed: 12/13/20 13:02			
4-Bromofluorobenzene (Surrogate)	10.000	88.8	70 - 130	11.739	11.7385	0.0005	+/-1.0	
SG-VW-25A-01 (2035539-05)			Lab File ID: 12DEC20.D		Analyzed: 12/13/20 13:37			
4-Bromofluorobenzene (Surrogate)	10.000	90.4	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
SG-VW25B-01 (2035539-06)			Lab File ID: 12DEC21.D		Analyzed: 12/13/20 14:00			
4-Bromofluorobenzene (Surrogate)	10.000	88.9	70 - 130	11.737	11.7385	-0.0015	+/-1.0	
SG-VW30A-01 (2035539-07)			Lab File ID: 12DEC22.D		Analyzed: 12/13/20 14:35			
4-Bromofluorobenzene (Surrogate)	10.000	92.7	70 - 130	11.738	11.7385	-0.0005	+/-1.0	
SG-VW30B-01 (2035539-08)			Lab File ID: 12DEC23.D		Analyzed: 12/13/20 15:10			
4-Bromofluorobenzene (Surrogate)	10.000	89.9	70 - 130	11.737	11.7385	-0.0015	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022134
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022134-CAL1)			Lab File ID: 10DEC02.D		Analyzed: 12/10/20 10:37			
4-Bromofluorobenzene (Surrogate)	10.000	86.0		11.738	11.7385	-0.0005	+/-1.0	
Cal Standard (2022134-CAL2)			Lab File ID: 10DEC03.D		Analyzed: 12/10/20 11:05			
4-Bromofluorobenzene (Surrogate)	10.000	89.3		11.737	11.7385	-0.0015	+/-1.0	
Cal Standard (2022134-CAL3)			Lab File ID: 10DEC04.D		Analyzed: 12/10/20 11:35			
4-Bromofluorobenzene (Surrogate)	10.000	99.0		11.737	11.7385	-0.0015	+/-1.0	
Cal Standard (2022134-CAL4)			Lab File ID: 10DEC05.D		Analyzed: 12/10/20 12:13			
4-Bromofluorobenzene (Surrogate)	10.000	100		11.742	11.7385	0.0035	+/-1.0	
Cal Standard (2022134-CAL5)			Lab File ID: 10DEC06.D		Analyzed: 12/10/20 12:55			
4-Bromofluorobenzene (Surrogate)	10.000	97.2		11.737	11.7385	-0.0015	+/-1.0	
Cal Standard (2022134-CAL6)			Lab File ID: 10DEC07.D		Analyzed: 12/10/20 13:39			
4-Bromofluorobenzene (Surrogate)	10.000	96.9		11.74	11.7385	0.0015	+/-1.0	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022115-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	90541	11.015	113	50 - 200	0.0050	+/-0.50	
Initial Cal Blank (2022115-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	90541	11.015	108	50 - 200	0.0020	+/-0.50	
Initial Cal Check (2022115-ICV1)			Lab File ID: 10DEC08.D			Analyzed: 12/10/20 14:10			
Bromochloromethane (IS)	105299	7.5	88778	7.5	119	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	104860	11.015	90541	11.015	116	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	212311	8.693	172764	8.698	123	50 - 200	-0.0050	+/-0.50	
Initial Cal Blank (2022115-ICB1)			Lab File ID: 10DEC10.D			Analyzed: 12/10/20 15:08			
Bromochloromethane (IS)	97137	7.494	88778	7.5	109	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	95382	11.015	90541	11.015	105	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	199348	8.692	172764	8.698	115	50 - 200	-0.0060	+/-0.50	
Calibration Check (2022115-CCV1)			Lab File ID: 12DEC02.D			Analyzed: 12/12/20 17:06			
Bromochloromethane (IS)	70757	7.498	88778	7.5	80	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	70439	11.014	90541	11.015	78	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	134792	8.691	172764	8.698	78	50 - 200	-0.0070	+/-0.50	
Calibration Check (2022115-CCV2)			Lab File ID: 12DEC03.D			Analyzed: 12/12/20 17:37			
Chlorobenzene-d5 (IS)	78688	11.016	90541	11.015	87	50 - 200	0.0010	+/-0.50	
Calibration Blank (2022115-CCB1)			Lab File ID: 12DEC04.D			Analyzed: 12/12/20 18:05			
Bromochloromethane (IS)	76416	7.5	88778	7.5	86	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	73429	11.015	90541	11.015	81	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	150069	8.693	172764	8.698	87	50 - 200	-0.0050	+/-0.50	
LCS (B094934-BS1)			Lab File ID: 12DEC05.D			Analyzed: 12/12/20 18:36			
Bromochloromethane (IS)	73199	7.506	88778	7.5	82	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	75142	11.017	90541	11.015	83	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	142059	8.695	172764	8.698	82	50 - 200	-0.0030	+/-0.50	
LCS Dup (B094934-BSD1)			Lab File ID: 12DEC06.D			Analyzed: 12/12/20 19:08			
Bromochloromethane (IS)	72142	7.501	88778	7.5	81	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	73745	11.017	90541	11.015	81	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	141308	8.694	172764	8.698	82	50 - 200	-0.0040	+/-0.50	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B094934-BLK1)			Lab File ID: 12DEC07.D			Analyzed: 12/12/20 19:36			
Bromochloromethane (IS)	72316	7.499	88778	7.5	81	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	67786	11.015	90541	11.015	75	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	139580	8.693	172764	8.698	81	50 - 200	-0.0050	+/-0.50	
SG-VW34A-01 (2035539-01RE1)			Lab File ID: 12DEC08.D			Analyzed: 12/12/20 20:05			
Bromochloromethane (IS)	72606	7.502	88778	7.5	82	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	67799	11.013	90541	11.015	75	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	140162	8.691	172764	8.698	81	50 - 200	-0.0070	+/-0.50	
SG-VW39A-01 (2035539-03RE1)			Lab File ID: 12DEC10.D			Analyzed: 12/12/20 21:02			
Bromochloromethane (IS)	70363	7.504	88778	7.5	79	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	66014	11.015	90541	11.015	73	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	135430	8.692	172764	8.698	78	50 - 200	-0.0060	+/-0.50	
SG-VW30A-01 (2035539-07RE1)			Lab File ID: 12DEC14.D			Analyzed: 12/12/20 22:58			
Bromochloromethane (IS)	66468	7.503	88778	7.5	75	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	62404	11.018	90541	11.015	69	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	125812	8.696	172764	8.698	73	50 - 200	-0.0020	+/-0.50	
SG-VW30B-01 (2035539-08RE1)			Lab File ID: 12DEC15.D			Analyzed: 12/12/20 23:26			
Bromochloromethane (IS)	65918	7.504	88778	7.5	74	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	61440	11.015	90541	11.015	68	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	127059	8.697	172764	8.698	74	50 - 200	-0.0010	+/-0.50	
SG-VW34A-01 (2035539-01)			Lab File ID: 12DEC16.D			Analyzed: 12/13/20 11:16			
Bromochloromethane (IS)	73010	7.501	88778	7.5	82	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	76822	11.017	90541	11.015	85	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	137483	8.694	172764	8.698	80	50 - 200	-0.0040	+/-0.50	
SG-VW34B-01 (2035539-02)			Lab File ID: 12DEC17.D			Analyzed: 12/13/20 11:51			
Bromochloromethane (IS)	92184	7.503	88778	7.5	104	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	91304	11.013	90541	11.015	101	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	188966	8.691	172764	8.698	109	50 - 200	-0.0070	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022115
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW39A-01 (2035539-03)			Lab File ID: 12DEC18.D			Analyzed: 12/13/20 12:27			
Bromochloromethane (IS)	89194	7.505	88778	7.5	100	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	87819	11.016	90541	11.015	97	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	179763	8.693	172764	8.698	104	50 - 200	-0.0050	+/-0.50	
SG-VW39B-01 (2035539-04)			Lab File ID: 12DEC19.D			Analyzed: 12/13/20 13:02			
Bromochloromethane (IS)	88026	7.502	88778	7.5	99	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	82911	11.012	90541	11.015	92	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	175105	8.695	172764	8.698	101	50 - 200	-0.0030	+/-0.50	
SG-VW-25A-01 (2035539-05)			Lab File ID: 12DEC20.D			Analyzed: 12/13/20 13:37			
Bromochloromethane (IS)	82962	7.504	88778	7.5	93	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	79716	11.015	90541	11.015	88	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	164501	8.693	172764	8.698	95	50 - 200	-0.0050	+/-0.50	
SG-VW25B-01 (2035539-06)			Lab File ID: 12DEC21.D			Analyzed: 12/13/20 14:00			
Bromochloromethane (IS)	87258	7.499	88778	7.5	98	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	84147	11.015	90541	11.015	93	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	171726	8.692	172764	8.698	99	50 - 200	-0.0060	+/-0.50	
SG-VW30A-01 (2035539-07)			Lab File ID: 12DEC22.D			Analyzed: 12/13/20 14:35			
Bromochloromethane (IS)	86941	7.505	88778	7.5	98	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	90301	11.016	90541	11.015	100	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	176936	8.693	172764	8.698	102	50 - 200	-0.0050	+/-0.50	
SG-VW30B-01 (2035539-08)			Lab File ID: 12DEC23.D			Analyzed: 12/13/20 15:10			
Bromochloromethane (IS)	97662	7.504	88778	7.5	110	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	94409	11.015	90541	11.015	104	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	199068	8.692	172764	8.698	115	50 - 200	-0.0060	+/-0.50	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022134
Matrix: Air

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022134-CAL7)			Lab File ID: 16OCT10.D			Analyzed: 10/16/20 14:05			
Chlorobenzene-d5 (IS)	64445	11.017	90541	11.015	71	50 - 200	0.0020	+/-0.50	
Cal Standard (2022134-CAL8)			Lab File ID: 16OCT11.D			Analyzed: 10/16/20 14:34			
Chlorobenzene-d5 (IS)	65904	11.017	90541	11.015	73	50 - 200	0.0020	+/-0.50	
Cal Standard (2022134-CAL9)			Lab File ID: 16OCT12.D			Analyzed: 10/16/20 15:03			
Chlorobenzene-d5 (IS)	71033	11.018	90541	11.015	78	50 - 200	0.0030	+/-0.50	
Cal Standard (2022134-CALA)			Lab File ID: 16OCT13.D			Analyzed: 10/16/20 15:34			
Chlorobenzene-d5 (IS)	75959	11.016	90541	11.015	84	50 - 200	0.0010	+/-0.50	
Cal Standard (2022134-CALB)			Lab File ID: 16OCT14.D			Analyzed: 10/16/20 16:05			
Chlorobenzene-d5 (IS)	81415	11.016	90541	11.015	90	50 - 200	0.0010	+/-0.50	
Cal Standard (2022134-CALC)			Lab File ID: 16OCT15.D			Analyzed: 10/16/20 16:41			
Chlorobenzene-d5 (IS)	92664	11.021	90541	11.015	102	50 - 200	0.0060	+/-0.50	
Cal Standard (2022134-CAL1)			Lab File ID: 10DEC02.D			Analyzed: 12/10/20 10:37			
Bromochloromethane (IS)	95524	7.5	88778	7.5	108	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	89669	11.016	90541	11.015	99	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	186271	8.689	172764	8.698	108	50 - 200	-0.0090	+/-0.50	
Cal Standard (2022134-CAL2)			Lab File ID: 10DEC03.D			Analyzed: 12/10/20 11:05			
Bromochloromethane (IS)	89931	7.5	88778	7.5	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	86983	11.015	90541	11.015	96	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	174563	8.693	172764	8.698	101	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022134-CAL3)			Lab File ID: 10DEC04.D			Analyzed: 12/10/20 11:35			
Bromochloromethane (IS)	88778	7.5	88778	7.5	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	90541	11.015	90541	11.015	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	172764	8.698	172764	8.698	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022134-CAL4)			Lab File ID: 10DEC05.D			Analyzed: 12/10/20 12:13			
Bromochloromethane (IS)	92906	7.509	88778	7.5	105	50 - 200	0.0090	+/-0.50	
Chlorobenzene-d5 (IS)	99324	11.02	90541	11.015	110	50 - 200	0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	179369	8.697	172764	8.698	104	50 - 200	-0.0010	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022134
Matrix: Air

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2012013

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022134-CAL5)			Lab File ID: 10DEC06.D			Analyzed: 12/10/20 12:55			
Bromochloromethane (IS)	98289	7.505	88778	7.5	111	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	108969	11.02	90541	11.015	120	50 - 200	0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	195394	8.698	172764	8.698	113	50 - 200	0.0000	+/-0.50	
Cal Standard (2022134-CAL6)			Lab File ID: 10DEC07.D			Analyzed: 12/10/20 13:39			
Bromochloromethane (IS)	105873	7.502	88778	7.5	119	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	115754	11.018	90541	11.015	128	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	213085	8.696	172764	8.698	123	50 - 200	-0.0020	+/-0.50	

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Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022134
Calibration: 2012013

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J07014	TO-14A/TO-15 Working BFB	2022134-TUN2	16OCT09.D	10/16/20 13:36
0L12008	MS-A1 TO-14A / TO-15 CAL1 TPH	2022134-CAL7	16OCT10.D	10/16/20 14:05
0L12009	MS-A1 TO-14A / TO-15 CAL2 TPH	2022134-CAL8	16OCT11.D	10/16/20 14:34
0L12010	MS-A1 TO-14A / TO-15 CAL3 TPH	2022134-CAL9	16OCT12.D	10/16/20 15:03
0L12011	MS-A1 TO-14A / TO-15 CAL4 TPH	2022134-CALA	16OCT13.D	10/16/20 15:34
0L12012	MS-A1 TO-14A / TO-15 CAL5 TPH	2022134-CALB	16OCT14.D	10/16/20 16:05
0L12013	MS-A1 TO-14A / TO-15 CAL6 TPH	2022134-CALC	16OCT15.D	10/16/20 16:41
0L01028	TO-14A/TO-15 Working BFB	2022134-TUN1	10DEC01.D	12/10/20 10:08
0L10033	MS-A1 TO-14A /TO-15 CAL1	2022134-CAL1	10DEC02.D	12/10/20 10:37
0L10034	MS-A1 TO-14A /TO-15 CAL2	2022134-CAL2	10DEC03.D	12/10/20 11:05
0L10035	MS-A1 TO-14A /TO-15 CAL3	2022134-CAL3	10DEC04.D	12/10/20 11:35
0L10036	MS-A1 TO-14A /TO-15 CAL4	2022134-CAL4	10DEC05.D	12/10/20 12:13
0L10037	MS-A1 TO-14A /TO-15 CAL5	2022134-CAL5	10DEC06.D	12/10/20 12:55
0L10038	MS-A1 TO-14A /TO-15 CAL6	2022134-CAL6	10DEC07.D	12/10/20 13:39

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INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.364893	1	1.398294	5	1.374845	15	1.306676	20	1.316566	25	1.309679
Acrylonitrile	0.5	0.3266195	1	0.3887425	5	0.4040415	15	0.4103789	20	0.4193857	25	0.4412721
Allyl chloride	0.5	0.9587119	1	0.9962082	5	1.01435	15	1.030066	20	1.066752	25	1.081466
t-Amyl Methyl ether	0.5	0.6051398	1	0.6086628	5	0.6521845	15	0.6487074	20	0.6473894	25	0.6397184
Benzene	0.5	1.237804	1	1.24173	5	1.29487	15	1.30946	20	1.35858	25	1.396299
Benzyl chloride	0.5	0.5997613	1	0.7104837	5	1.402105	15	2.006457	20	2.10938	25	2.169027
Bromodichloromethane	0.5	0.7466541	1	0.765397	5	0.7869116	15	0.7887874	20	0.7734245	25	0.7512533
Bromoform	0.5	1.3958	1	1.327041	5	1.445665	15	1.409757	20	1.384876	25	1.383627
Bromomethane	0.5	0.3850341	1	0.4093138	5	0.3825272	15	0.3766459	20	0.4002686	25	0.3982998
1,3-Butadiene	0.5	0.5355722	1	0.5673238	5	0.557075	15	0.543065	20	0.589364	25	0.6014829
t-Butyl alcohol	1	1.218437	2	1.207037	10	1.268918	30	1.235894	40	1.264567	50	1.236157
Carbon disulfide	0.5	1.30585	1	1.313007	5	1.289126	15	1.295123	20	1.355477	25	1.397527
Carbon tetrachloride	0.5	1.363218	1	1.504487	5	1.544166	15	1.504381	20	1.496388	25	1.458899
Chlorobenzene	0.5	0.7564248	1	0.7475811	5	0.7728115	15	0.7774439	20	0.7847554	25	0.7576582
Chloroethane	0.5	0.1187136	1	0.2420745	5	0.2342698	15	0.2276351	20	0.2394419	25	0.2480632
Chloroform	0.5	1.144424	1	1.191135	5	1.163486	15	1.145272	20	1.158375	25	1.163779
Chloromethane	0.5	0.5904275	1	0.5642103	5	0.580797	15	0.582144	20	0.6200999	25	0.6020307
Cyclohexane	0.5	2.337842	1	1.792374	5	1.362883	15	1.255132	20	1.289524	25	1.300554
Dibromochloromethane	0.5	0.7344138	1	0.791233	5	0.8346878	15	0.8368224	20	0.8267398	25	0.7999136
1,2-Dibromo-3-chloropropane	0.5	0.1264651	1	0.128071	5	0.1814427	15	0.2240546	20	0.2244308	25	0.2313078
1,2-Dibromoethane	0.5	0.4249722	1	0.4339408	5	0.4873585	15	0.5015471	20	0.5006986	25	0.4920328
Dibromomethane	0.5	0.1248718	1	0.1245396	5	0.1179065	15	0.1238267	20	0.1229004	25	0.1207574
1,2-Dichlorobenzene	0.5	1.061682	1	1.096651	5	1.388432	15	1.53203	20	1.516032	25	1.537685
1,3-Dichlorobenzene	0.5	0.9916471	1	1.014221	5	1.385008	15	1.582095	20	1.632267	25	1.622831
1,4-Dichlorobenzene	0.5	0.7944775	1	0.863617	5	1.213262	15	1.46148	20	1.429411	25	1.494708

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	1.496378	1	1.546185	5	1.535876	15	1.484755	20	1.484429	25	1.401313
1,1-Dichloroethane	0.5	0.8942255	1	0.9605142	5	0.9737998	15	0.953853	20	0.9809796	25	0.9824488
1,2-Dichloroethane	0.5	0.9371467	1	1.049916	5	1.040123	15	1.013246	20	1.009218	25	0.9878893
1,1-Dichloroethene	0.5	0.9394498	1	0.9245977	5	0.9771565	15	0.9432473	20	0.954471	25	0.9536067
cis-1,2-Dichloroethene	0.5	0.7424312	1	0.7872702	5	0.8187839	15	0.8221643	20	0.8507208	25	0.8525686
trans-1,2-Dichloroethene	0.5	0.8286923	1	0.8887925	5	0.9320552	15	0.9341485	20	0.9602753	25	0.9646312
1,2-Dichloropropane	0.5	0.2804516	1	0.283508	5	0.2814359	15	0.2780934	20	0.2816642	25	0.283027
cis-1,3-Dichloropropene	0.5	0.3359621	1	0.3653695	5	0.429013	15	0.4576562	20	0.4515824	25	0.4462107
trans-1,3-Dichloropropene	0.5	0.3742934	1	0.3882839	5	0.436121	15	0.433044	20	0.4392254	25	0.4298566
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.138353	1	1.158888	5	1.129018	15	1.100489	20	1.165171	25	1.140597
1,1-Difluoroethane	0.5	1.248273	1	1.231055	5	1.193854	15	1.174061	20	1.242611	25	1.235118
Diisopropyl ether	0.5	0.3362506	1	0.3288076	5	0.3484422	15	0.3397556	20	0.3518247	25	0.3599445
1,4-Dioxane	0.5	0.1517144	1	0.1751803	5	0.2015003	15	0.1863161	20	0.1806299	25	0.1725452
Ethanol	1	0.225179	2	0.2246167	10	0.2116065	30	0.1954413	40	0.2047915	50	0.2028525
Ethyl acetate	0.5	0.1698003	1	0.1753567	5	0.1905652	15	0.1821698	20	0.1880373	25	0.1903224
Ethylbenzene	0.5	0.786894	1	0.709449	5	0.7696182	15	0.7653404	20	0.7511035	25	0.7623857
1-Ethyl-4-methylbenzene	0.5	2.872565	1	3.053585	5	3.4547	15	3.69575	20	3.697391	25	3.618439
Ethyl t-butyl ether	0.5	1.697374	1	1.731105	5	1.825114	15	1.815075	20	1.852634	25	1.851063
n-Heptane	0.5	0.3377874	1	0.3761966	5	0.3850802	15	0.3791811	20	0.3810148	25	0.3805111
Hexachlorobutadiene	0.5	1.473419	1	1.213341	5	1.109553	15	1.088216	20	1.049023	25	1.051264
Hexachloroethane	0.5	0.3236347	1	0.3247761	5	0.3312312	15	0.3393742	20	0.3298507	25	0.3267308
Hexane	0.5	1.070726	1	1.147658	5	1.155196	15	1.116297	20	1.160913	25	1.170436
2-Hexanone	0.5	0.611582	1	0.68365	5	0.8865273	15	1.00095	20	1.015236	25	1.001065
Isooctane	0.5	1.917744	1	1.924406	5	1.93729	15	1.950976	20	1.932511	25	1.846685
Isopropyl alcohol	0.5	1.290984	1	1.193693	5	1.226498	15	1.164546	20	1.167323	25	1.159227
Methylene chloride	0.5	0.9145346	1	0.8596591	5	0.7624411	15	0.7457215	20	0.7588947	25	0.7615388

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.611323	1	1.707087	5	1.738246	15	1.682338	20	1.720559	25	1.731992
Methyl iodide	0.5	0.6241363	1	0.6182518	5	0.6379508	15	0.6134372	20	0.6345624	25	0.6628432
Methyl isobutyl ketone	0.5	0.9641866	1	1.028282	5	1.120777	15	1.111437	20	1.085599	25	1.046795
Methyl t-butyl ether	0.5	1.53888	1	1.620242	5	1.783595	15	1.759786	20	1.806423	25	1.802885
Naphthalene	0.5	0.3189508	1	0.4577906	5	1.098331	15	1.658344	20	1.771889	25	1.918455
Propylene	0.5	0.7384532	1	0.6497203	5	0.6183739	15	0.610854	20	0.6621087	25	0.6588195
Styrene	0.5	1.16049	1	1.175287	5	1.36685	15	1.407448	20	1.38271	25	1.408411
1,1,1,2-Tetrachloroethane	0.5	0.2828137	1	0.3111771	5	0.3194879	15	0.3187619	20	0.3146514	25	0.3070962
1,1,2,2-Tetrachloroethane	0.5	1.252384	1	1.237943	5	1.231133	15	1.209644	20	1.199649	25	1.204917
Tetrachloroethene	0.5	0.437964	1	0.4511838	5	0.4763492	15	0.4851674	20	0.4795541	25	0.479495
1,1,1,2-Tetrafluoroethane	0.5	0.8178049	1	0.856768	5	0.854108	15	0.8182895	20	0.7816134	25	0.7218913
Tetrahydrofuran	0.5	0.9235375	1	0.9645172	5	0.9969812	15	0.9415251	20	0.972179	25	0.9653113
Toluene	0.5	0.8235313	1	0.8449671	5	0.9280869	15	0.9313575	20	0.9448601	25	0.9368919
1,2,4-Trichlorobenzene	0.5	0.1668358	1	0.1803801	5	0.3344341	15	0.5344663	20	0.5848039	25	0.6427907
1,1,1-Trichloroethane	0.5	1.304803	1	1.310894	5	1.37435	15	1.33766	20	1.340852	25	1.318421
1,1,2-Trichloroethane	0.5	0.3138438	1	0.3096876	5	0.3187701	15	0.3204902	20	0.3224485	25	0.3189638
Trichloroethene	0.5	0.3531414	1	0.3437154	5	0.3523767	15	0.3476966	20	0.3454482	25	0.3494268
Trichlorofluoromethane	0.5	1.607763	1	1.652934	5	1.650589	15	1.571782	20	1.570974	25	1.532002
1,2,3-Trichloropropane	0.5	0.3405859	1	0.3258108	5	0.3398019	15	0.339401	20	0.3369812	25	0.3354044
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.9377748	1	0.9368293	5	0.9673117	15	0.9468926	20	0.9727131	25	0.979891
1,2,4-Trimethylbenzene	0.5	2.165966	1	2.301254	5	2.578169	15	2.590076	20	2.540672	25	2.544154
1,3,5-Trimethylbenzene	0.5	2.402614	1	2.56211	5	2.509559	15	2.505692	20	2.359928	25	2.403874
Vinyl acetate	0.5	1.962648	1	2.205024	5	2.374192	15	2.399587	20	2.499262	25	2.507397
Vinyl bromide	0.5	0.4438675	1	0.4776996	5	0.4663768	15	0.4533112	20	0.4674938	25	0.4840705
Vinyl chloride	0.5	0.4897199	1	0.4908207	5	0.4752078	15	0.4661271	20	0.5040238	25	0.5027797
p- & m-Xylenes	1	2.060467	2	2.051838	10	2.096597	30	2.030681	40	1.97436	50	1.972937

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	2.160167	1	2.128232	5	2.244022	15	2.125998	20	2.066367	25	2.049246
Total Xylenes	1.5	2.0937	3	2.077302	15	2.145739	45	2.062453	60	2.005029	75	1.998374
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.127357	10	1.169964	10	1.297357	10	1.311687	10	1.274537	10	1.269744

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air

SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
Total Petroleum Hydrocarbons	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
4-Bromofluorobenzene (Surrogate)	10	~~1.143828~~	10	~~1.190717~~	10	~~1.260907~~	10	~~1.289156~~	10	~~1.306602~~	10	~~1.307584~~

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012013
Matrix: Air
SDG: 2035539
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.345159	2.908107	5.310333	0.097015			30	
Acrylonitrile	0.3984067	9.849587	5.645	8.860788E-02			30	
Allyl chloride	1.024592	4.428223	6.094	2.132854E-02			30	
t-Amyl Methyl ether	0.6336337	3.335213	8.8415	3.376133E-02			30	
Benzene	1.306457	4.82091	8.513333	3.423956E-02			30	
Benzyl chloride	1.499536	47.33189	12.47817	1.255807E-02	0.997053		0.99	
Bromodichloromethane	0.768738	2.296826	9.090167	4.507951E-02			30	
Bromoform	1.391128	2.792506	11.35133	1.994468E-02			30	
Bromomethane	0.3920149	3.189803	4.777333	6.503424E-02			30	
1,3-Butadiene	0.5656472	4.56748	4.568667	5.296348E-02			30	
t-Butyl alcohol	1.238502	1.980934	5.923167	0.1076774			30	
Carbon disulfide	1.326018	3.176838	6.280167	3.701772E-02			30	
Carbon tetrachloride	1.47859	4.239934	8.606333	2.475432E-02			30	
Chlorobenzene	0.7661125	1.873043	11.03967	2.193739E-02			30	
Chloroethane	0.2183664	22.58157	4.8985	6.713537E-02			30	
Chloroform	1.161079	1.467236	7.583667	5.762719E-02			30	
Chloromethane	0.5899516	3.271443	4.302	3.542253E-02			30	
Cyclohexane	1.556385	27.72845	8.687667	1.313339E-02			30	
Dibromochloromethane	0.8039684	4.835954	10.348	4.274951E-02			30	
1,2-Dibromo-3-chloropropane	0.185962	26.23268	13.0135	0.0102892			30	
1,2-Dibromoethane	0.473425	7.305968	10.4765	3.322065E-02			30	
Dibromomethane	0.1224671	2.186032	8.9685	3.874157E-02			30	
1,2-Dichlorobenzene	1.355419	16.31614	12.7435	8.598519E-03			30	
1,3-Dichlorobenzene	1.371345	21.81879	12.497	2.220853E-02			30	
1,4-Dichlorobenzene	1.209493	25.75273	12.53383	2.039746E-02			30	
Dichlorodifluoromethane	1.491489	3.446587	4.179167	4.429339E-02			30	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	0.9576368	3.452443	6.834167	2.960696E-02			30	
1,2-Dichloroethane	1.006257	4.030451	8.063834	4.723412E-02			30	
1,1-Dichloroethene	0.9487548	1.863749	5.931167	3.371101E-02			30	
cis-1,2-Dichloroethene	0.8123232	5.148398	7.393	2.874818E-02			30	
trans-1,2-Dichloroethene	0.9180992	5.606796	6.689	4.229823E-02			30	
1,2-Dichloropropane	0.2813633	0.6926247	8.987833	4.417993E-02			30	
cis-1,3-Dichloropropene	0.414299	12.32439	9.8625	3.208236E-02			30	
trans-1,3-Dichloropropene	0.416804	6.726798	9.5875	0.0356095			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.138753	2.027753	4.375833	3.422115E-02			30	
1,1-Difluoroethane	1.220829	2.444005	4.0575	8.110902E-02			30	
Diisopropyl ether	0.3441709	3.297223	7.509333	0.0333743			30	
1,4-Dioxane	0.177981	9.256083	9.107333	5.210185E-02			30	
Ethanol	0.2107479	5.746936	4.946	0.1445733			30	
Ethyl acetate	0.1827086	4.702208	7.501167	3.679307E-02			30	
Ethylbenzene	0.7574651	3.465879	11.21067	1.478999E-02			30	
1-Ethyl-4-methylbenzene	3.398738	10.40081	12.12483	8.693674E-03			30	
Ethyl t-butyl ether	1.795394	3.642771	7.856167	0.0304814			30	
n-Heptane	0.3732952	4.723288	9.2735	4.119274E-02			30	
Hexachlorobutadiene	1.164136	14.00002	14.30483	1.370466E-02			30	
Hexachloroethane	0.3292663	1.742946	13.174	1.885414E-02			30	
Hexane	1.136871	3.280641	7.537167	3.558876E-02			30	
2-Hexanone	0.8665017	20.45826	10.23433	1.150616E-02			30	
Isooctane	1.918269	1.92196	9.145167	4.763529E-02			30	
Isopropyl alcohol	1.200379	4.248881	5.471667	0.1303796			30	
Methylene chloride	0.800465	8.691531	5.995167	3.925073E-02			30	
Methyl ethyl ketone	1.698591	2.776751	7.080167	3.739063E-02			30	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.6318636	2.820976	5.888	2.966194E-02			30	
Methyl isobutyl ketone	1.059513	5.560432	9.6	2.674426E-02			30	
Methyl t-butyl ether	1.718635	6.516333	6.860833	4.857393E-02			30	
Naphthalene	1.20396	57.43327	14.039	1.016566E-02		0.9995634	0.99	
Propylene	0.6563883	6.926836	4.120333	4.855798E-02			30	
Styrene	1.316866	8.850429	11.46433	2.456683E-02			30	
1,1,1,2-Tetrachloroethane	0.308998	4.416789	11.02817	2.263848E-02			30	
1,1,2,2-Tetrachloroethane	1.222612	1.71674	11.51167	1.157349E-02			30	
Tetrachloroethene	0.4682856	4.068027	10.705	2.117455E-02			30	
1,1,1,2-Tetrafluoroethane	0.8084125	6.262708	3.9985	1.842222E-02			30	
Tetrahydrofuran	0.9606752	2.646791	7.8495	4.350386E-02			30	
Toluene	0.9016158	5.870169	10.12383	0.0238962			30	
1,2,4-Trichlorobenzene	0.4072851	51.23956	13.92933	2.621312E-02		0.9995888	0.99	
1,1,1-Trichloroethane	1.331163	1.920932	8.234167	2.475833E-02			30	
1,1,2-Trichloroethane	0.3173673	1.48782	9.969667	3.253209E-02			30	
Trichloroethene	0.3486342	1.074544	9.121333	3.729209E-02			30	
Trichlorofluoromethane	1.597674	3.021415	5.465833	2.721887E-02			30	
1,2,3-Trichloropropane	0.3363309	1.6368	11.574	1.648978E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.9569021	1.95831	6.2005	4.334302E-02			30	
1,2,4-Trimethylbenzene	2.453382	7.196597	12.389	2.687166E-02			30	
1,3,5-Trimethylbenzene	2.457296	3.224112	12.15883	1.373998E-02			30	
Vinyl acetate	2.324685	8.967928	6.895333	7.031268E-02			30	
Vinyl bromide	0.4654699	3.208157	5.158833	7.130845E-02			30	
Vinyl chloride	0.4881132	3.077287	4.467333	8.166309E-02			30	
p- & m-Xylenes	2.031147	2.430394	11.2915	2.907082E-02			30	
o-Xylene	2.129005	3.287514	11.51917	2.701531E-02			30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012013
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	2.063766	2.700188	11.51917	2.701531E-02			30	
TPH - Gasoline	3.784361	4.390169	10.42317	4.413093			30	
Total Petroleum Hydrocarbons	3.784361	4.390169	10.42317	4.413093			30	
4-Bromofluorobenzene (Surrogate)	1.241774	6.03502	11.7385	2.366901E-02			30	

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035539
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW34A-01	12/02/20 15:30	12/04/20 10:00	12/12/20 09:22	11.00	30.00	12/13/20 11:16	11.00	30.00	
SG-VW34A-01	12/02/20 15:30	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/12/20 20:05	10.00	30.00	
SG-VW34B-01	12/02/20 15:20	12/04/20 10:00	12/12/20 09:22	11.00	30.00	12/13/20 11:51	11.00	30.00	
SG-VW39A-01	12/03/20 09:14	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 12:27	10.00	30.00	
SG-VW39A-01	12/03/20 09:14	12/04/20 10:00	12/12/20 09:22	9.00	30.00	12/12/20 21:02	9.00	30.00	
SG-VW39B-01	12/03/20 09:01	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 13:02	10.00	30.00	
SG-VW-25A-01	12/03/20 10:35	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 13:37	10.00	30.00	
SG-VW25B-01	12/03/20 10:21	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 14:00	10.00	30.00	
SG-VW30A-01	12/03/20 15:03	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 14:35	10.00	30.00	
SG-VW30A-01	12/03/20 15:03	12/04/20 10:00	12/12/20 09:22	9.00	30.00	12/12/20 22:58	9.00	30.00	
SG-VW30B-01	12/03/20 15:04	12/04/20 10:00	12/12/20 09:22	10.00	30.00	12/13/20 15:10	10.00	30.00	
SG-VW30B-01	12/03/20 15:04	12/04/20 10:00	12/12/20 09:22	9.00	30.00	12/12/20 23:26	9.00	30.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

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Reported: 12/23/2020 12:43:29PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2035587

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

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Case Narrative

Sample Receipt

Work Order: 2035587
COC Number:
Cooler 2 was received at 25 °C
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The internal standard on the Initial Calibration Verification (ICV) was not within the control limits.

Lab Number	Method	Analyte
2022140-ICV2	EPA-TO-15	Chlorobenzene-d5 (IS)

LCS / LCSD

The LCS recoveries were within QC limits.

Discussion

Method TO-15 canister with sample ID 2035587-04 came into the lab at ambient pressure

Lab Number	Receipt Pressure	Units
20-35587-01	13.0	PSIA
20-35587-02	13.2	PSIA
20-35587-03	13.0	PSIA
20-35587-04	14.9	PSIA
20-35587-05	13.3	PSIA
20-35587-06	13.1	PSIA
20-35587-07	13.1	PSIA
20-35587-08	12.7	PSIA
20-35587-09	12.3	PSIA
20-35587-10	12.5	PSIA
20-35587-11	13.3	PSIA

Chain of Custody and Cooler Receipt Form for 2035587 Page 1 of 3

RUSH! **CHAIN OF CUSTODY**

Page 1 of 1

AECOM 20-35587

Lab: BC Laboratories

TAT: 6 Day

Report results to: Keegan George (Keegan.George@smud.org)
Name: Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.298.3043
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No.: 60532793.06

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send Invoices to SMUD

Analyses Requested

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont.	USEPA Method TO-15	Sample Condition/Comments Intl vac	final vac	Can#	FR#	Preservative	Container Type
-1	SG-VW24A-01	12/3/20	1630	AIR	1	x	-30	-5	10408	1197	N	1.4L Canister
-2	SG-VW24B-01	12/3/20	1620	AIR	1	x	-30	-5	10526	XXX6	N	
-3	SG-VW32A-01	12/4/20	0942	AIR	1	x	-30	-5	9468	1544	N	
-4	SG-VW32A-02		0942	AIR	1	x	-30	-5	9462	1XX0	N	
-5	SG-VW32B-01		0930	AIR	1	x	-30	-5	6120	1323	N	
-6	SG-VW41A-01		1110	AIR	1	x	-30	-5	10329	1515	N	
-7	SG-VW41A-02		1110	AIR	1	x	-30	-5	9486	1250	N	
-8	SG-VW41B-01		1100	AIR	1	x	-30	-5	10479	1228	N	
-9	SG-VW38A-01		1345	AIR	1	x	-30	-5	6025	1320	N	
-10	SG-VW38B-01		1330	AIR	1	x	-30	-5	~~4350~~ 10534	1285	N	
-11	SG-VW38B-02		1330	AIR	1	x	-30	-5	10386	1041	N	
				AIR	1	x					N	
				AIR	1	x					N	

DISTRIBUTION: Air / SUB OUT

Collected by: Brian Weeks Date/Time ~~12/4/1430~~ @ 12/4/20 @ 1430
Relinquished by: [signature] Date/Time 12/4/20 @ 1505 **Relinquished by:** [signature] Date/Time 12/4/2020 1505
Relinquished by: Stephen Cole Date/Time 12/4/2020 1530 **Relinquished by:** [signature] Cari Bernard Date/Time 12/7/20 0830
Relinquished by: Date/Time **Relinquished by:** Date/Time
Method of Shipment: BC Lab Courier **Sample Condition on Rcpt:**

Chain of Custody and Cooler Receipt Form for 2035587 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 10-35587

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☐ None ☐ Box ☒	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) CAS	Other ☐ (Specify)	W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Summa can Thermometer ID: —

Temperature: (A) Room °C / (C) Temp °C

Date/Time 12/1/20 0830

Analyst Init CMB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER	A	A	A	A	A	A	A	A	A	A

Comments: Received 2 cans with no sample ID's

Sample Numbering Completed By: CMB Date/Time: 12/1/20 0905

A = Actual / C = Corrected

Rev 21 05/23/2016

Chain of Custody and Cooler Receipt Form for 2035587 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-35587

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) CUS	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Summa can Thermometer ID: — Date/Time 12/1/20 0830

Temperature: (A) Room °C / (C) Temp °C Analyst Init CMB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER	A	~~A~~	~~A~~	CMB 12/1						

Comments: ~~Received 2 cans with no sample~~ CMB 12/1

Sample Numbering Completed By: CMB Date/Time: 12/1/20 0903 Rev 21 05/23/2016

A = Actual / C = Corrected

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2035587**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW24A-01	2035587-01
SG-VW24A-01	2035587-01RE1
SG-VW24B-01	2035587-02
SG-VW24B-01	2035587-02RE1
SG-VW32A-01	2035587-03
SG-VW32A-01	2035587-03RE1
SG-VW32A-02	2035587-04
SG-VW32A-02	2035587-04RE1
SG-VW32B-01	2035587-05
SG-VW41A-01	2035587-06
SG-VW41A-01	2035587-06RE1
SG-VW41A-02	2035587-07
SG-VW41A-02	2035587-07RE1
SG-VW41B-01	2035587-08
SG-VW41B-01	2035587-08RE1
SG-VW38A-01	2035587-09
SG-VW38B-01	2035587-10
SG-VW38B-02	2035587-11

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature:
Name: Stuart Buttram

Date: 12-23-2020
Title: Technical Director

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A2

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-01RE1	File ID:	14DEC12.D
Sampled:	12/03/20 16:30	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 14:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	15.5	650	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.66	86.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	79064	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	115067	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	213837	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-01
File ID: 14DEC25.D
Sampled: 12/03/20 16:30
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 21:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	0.67	UD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	2.5	JD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	9.3	D
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	18	D
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-01
File ID: 14DEC25.D
Sampled: 12/03/20 16:30
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 21:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	0.65	UD
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.55	0.46	UD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	0.29	UD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	9.8	JD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD
108-88-3	Toluene	1.55	1.2	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-01	File ID:	14DEC25.D
Sampled:	12/03/20 16:30	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 21:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.93	JD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	3.4	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	2.0	JD
95-63-6	1,2,4-Trimethylbenzene	1.55	0.84	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	0.95	UD
95-47-6	o-Xylene	1.55	0.46	UD
1330-20-7	Total Xylenes	1.55	1.4	UD
---	TPH - Gasoline	1.55	810	D
---	Total Petroleum Hydrocarbons	1.55	810	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.01	90.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98312	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	151591	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	273449	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-02RE1	File ID:	14DEC13.D
Sampled:	12/03/20 16:20	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 15:25
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.1	190	D
108-88-3	Toluene	15.1	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.10	91.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90093	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	138775	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	248698	8.789	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-02
File ID: 14DEC26.D
Sampled: 12/03/20 16:20
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 22:27
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.51	1.2	UD
107-13-1	Acrylonitrile	1.51	0.41	UD
107-05-1	Allyl chloride	1.51	0.42	UD
994-05-8	t-Amyl Methyl ether	1.51	0.47	UD
71-43-2	Benzene	1.51	16	D
100-44-7	Benzyl chloride	1.51	0.39	UD
75-27-4	Bromodichloromethane	1.51	0.68	UD
75-25-2	Bromoform	1.51	1.3	UD
74-83-9	Bromomethane	1.51	0.71	UD
106-99-0	1,3-Butadiene	1.51	0.33	UD
75-65-0	t-Butyl alcohol	1.51	7.6	D
75-15-0	Carbon disulfide	1.51	32	D
56-23-5	Carbon tetrachloride	1.51	0.68	UD
108-90-7	Chlorobenzene	1.51	0.60	UD
75-00-3	Chloroethane	1.51	0.80	UD
67-66-3	Chloroform	1.51	0.82	UD
74-87-3	Chloromethane	1.51	0.32	UD
110-82-7	Cyclohexane	1.51	0.57	UD
124-48-1	Dibromochloromethane	1.51	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.51	2.6	UD
106-93-4	1,2-Dibromoethane	1.51	24	D
74-95-3	Dibromomethane	1.51	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.51	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.51	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.51	0.76	UD
75-71-8	Dichlorodifluoromethane	1.51	3.7	JD
75-34-3	1,1-Dichloroethane	1.51	0.35	UD
107-06-2	1,2-Dichloroethane	1.51	5.0	JD
75-35-4	1,1-Dichloroethene	1.51	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.51	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.51	0.41	UD
78-87-5	1,2-Dichloropropane	1.51	0.48	UD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-02
File ID: 14DEC26.D
Sampled: 12/03/20 16:20
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 22:27
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.51	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.51	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.51	1.4	UD
75-37-6	1,1-Difluoroethane	1.51	3.0	UD
108-20-3	Diisopropyl ether	1.51	0.59	UD
123-91-1	1,4-Dioxane	1.51	0.50	UD
64-17-5	Ethanol	1.51	13	D
141-78-6	Ethyl acetate	1.51	0.50	UD
100-41-4	Ethylbenzene	1.51	52	D
622-96-8	1-Ethyl-4-methylbenzene	1.51	50	D
637-92-3	Ethyl t-butyl ether	1.51	0.50	UD
142-82-5	n-Heptane	1.51	0.51	UD
87-68-3	Hexachlorobutadiene	1.51	2.3	UD
67-72-1	Hexachloroethane	1.51	1.1	UD
110-54-3	Hexane	1.51	0.30	UD
591-78-6	2-Hexanone	1.51	0.44	UD
540-84-1	Isooctane	1.51	7.4	JD
67-63-0	Isopropyl alcohol	1.51	0.48	UD
75-09-2	Methylene chloride	1.51	0.60	UD
78-93-3	Methyl ethyl ketone	1.51	37	D
74-88-4	Methyl iodide	1.51	0.88	UD
108-10-1	Methyl isobutyl ketone	1.51	47	D
1634-04-4	Methyl t-butyl ether	1.51	1.1	JD
91-20-3	Naphthalene	1.51	14	JD
115-07-1	Propylene	1.51	0.38	UD
100-42-5	Styrene	1.51	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.51	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.51	0.71	UD
127-18-4	Tetrachloroethene	1.51	160	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.51	1.0	UD
109-99-9	Tetrahydrofuran	1.51	24	D
120-82-1	1,2,4-Trichlorobenzene	1.51	1.2	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-02	File ID:	14DEC26.D
Sampled:	12/03/20 16:20	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 22:27
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.51	1.6	JD
79-00-5	1,1,2-Trichloroethane	1.51	0.92	UD
79-01-6	Trichloroethene	1.51	0.82	UD
75-69-4	Trichlorofluoromethane	1.51	1.6	JD
96-18-4	1,2,3-Trichloropropane	1.51	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.51	1.5	JD
95-63-6	1,2,4-Trimethylbenzene	1.51	78	D
108-67-8	1,3,5-Trimethylbenzene	1.51	17	D
108-05-4	Vinyl acetate	1.51	4.8	D
593-60-2	Vinyl bromide	1.51	0.48	UD
75-01-4	Vinyl chloride	1.51	0.59	UD
179601-23-1	p- & m-Xylenes	1.51	170	D
95-47-6	o-Xylene	1.51	59	D
1330-20-7	Total Xylenes	1.51	230	D
---	TPH - Gasoline	1.51	2000	D
---	Total Petroleum Hydrocarbons	1.51	2000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.20	92.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	101943	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	165725	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	289861	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-03RE1	File ID:	14DEC21.D
Sampled:	12/04/20 09:42	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 19:34
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	150	9300	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.28	92.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97090	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	151346	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	271528	8.789	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-03
File ID: 14DEC23.D
Sampled: 12/04/20 09:42
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 20:43
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	30	25	UD
67-64-1	Acetone	30	110	JD
107-13-1	Acrylonitrile	30	8.1	UD
107-05-1	Allyl chloride	30	8.4	UD
994-05-8	t-Amyl Methyl ether	30	9.3	UD
71-43-2	Benzene	30	6.3	UD
100-44-7	Benzyl chloride	30	7.8	UD
75-27-4	Bromodichloromethane	30	14	UD
75-25-2	Bromoform	30	26	UD
74-83-9	Bromomethane	30	14	UD
106-99-0	1,3-Butadiene	30	6.6	UD
75-65-0	t-Butyl alcohol	30	21	UD
75-15-0	Carbon disulfide	30	5.7	UD
56-23-5	Carbon tetrachloride	30	14	UD
108-90-7	Chlorobenzene	30	12	UD
75-00-3	Chloroethane	30	16	UD
67-66-3	Chloroform	30	16	UD
74-87-3	Chloromethane	30	6.3	UD
110-82-7	Cyclohexane	30	11	UD
124-48-1	Dibromochloromethane	30	13	UD
96-12-8	1,2-Dibromo-3-chloropropane	30	51	UD
106-93-4	1,2-Dibromoethane	30	17	UD
74-95-3	Dibromomethane	30	17	UD
95-50-1	1,2-Dichlorobenzene	30	15	UD
541-73-1	1,3-Dichlorobenzene	30	9.3	UD
106-46-7	1,4-Dichlorobenzene	30	15	UD
75-71-8	Dichlorodifluoromethane	30	14	UD
75-34-3	1,1-Dichloroethane	30	6.9	UD
107-06-2	1,2-Dichloroethane	30	7.8	UD
75-35-4	1,1-Dichloroethene	30	9.3	UD
156-59-2	cis-1,2-Dichloroethene	30	9.6	UD
156-60-5	trans-1,2-Dichloroethene	30	8.1	UD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-03
File ID: 14DEC23.D
Sampled: 12/04/20 09:42
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 20:43
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	30	9.6	UD
10061-01-5	cis-1,3-Dichloropropene	30	9.0	UD
10061-02-6	trans-1,3-Dichloropropene	30	12	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	30	27	UD
75-37-6	1,1-Difluoroethane	30	60	UD
108-20-3	Diisopropyl ether	30	12	UD
123-91-1	1,4-Dioxane	30	9.9	UD
64-17-5	Ethanol	30	13	UD
141-78-6	Ethyl acetate	30	9.9	UD
100-41-4	Ethylbenzene	30	23	JD
622-96-8	1-Ethyl-4-methylbenzene	30	9.0	UD
637-92-3	Ethyl t-butyl ether	30	9.9	UD
142-82-5	n-Heptane	30	10	UD
87-68-3	Hexachlorobutadiene	30	45	UD
67-72-1	Hexachloroethane	30	22	UD
110-54-3	Hexane	30	6.0	UD
591-78-6	2-Hexanone	30	8.7	UD
540-84-1	Isooctane	30	10	UD
67-63-0	Isopropyl alcohol	30	9.6	UD
75-09-2	Methylene chloride	30	12	UD
78-93-3	Methyl ethyl ketone	30	26	JD
74-88-4	Methyl iodide	30	17	UD
108-10-1	Methyl isobutyl ketone	30	7.8	UD
1634-04-4	Methyl t-butyl ether	30	8.4	UD
91-20-3	Naphthalene	30	42	UD
115-07-1	Propylene	30	7.5	UD
100-42-5	Styrene	30	7.2	UD
630-20-6	1,1,1,2-Tetrachloroethane	30	18	UD
79-34-5	1,1,2,2-Tetrachloroethane	30	14	UD
127-18-4	Tetrachloroethene	30	83	JD
811-97-2	1,1,1,2-Tetrafluoroethane	30	20	UD
109-99-9	Tetrahydrofuran	30	17	JD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-03	File ID:	14DEC23.D
Sampled:	12/04/20 09:42	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 20:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	30	25	UD
71-55-6	1,1,1-Trichloroethane	30	12	UD
79-00-5	1,1,2-Trichloroethane	30	18	UD
79-01-6	Trichloroethene	30	16	UD
75-69-4	Trichlorofluoromethane	30	14	UD
96-18-4	1,2,3-Trichloropropane	30	14	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	30	16	UD
95-63-6	1,2,4-Trimethylbenzene	30	32	JD
108-67-8	1,3,5-Trimethylbenzene	30	12	UD
108-05-4	Vinyl acetate	30	9.9	UD
593-60-2	Vinyl bromide	30	9.6	UD
75-01-4	Vinyl chloride	30	12	UD
179601-23-1	p- & m-Xylenes	30	110	JD
95-47-6	o-Xylene	30	31	JD
1330-20-7	Total Xylenes	30	140	JD
---	TPH - Gasoline	30	9500	D
---	Total Petroleum Hydrocarbons	30	9500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.66	96.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100927	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	151900	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	278452	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-04RE1	File ID:	14DEC22.D
Sampled:	12/04/20 09:42	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 20:12
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	136	9700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.49	94.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100842	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	155037	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	284371	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-02

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-04
File ID: 14DEC24.D
Sampled: 12/04/20 09:42
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 21:14
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	27.2	22	UD
67-64-1	Acetone	27.2	120	JD
107-13-1	Acrylonitrile	27.2	7.3	UD
107-05-1	Allyl chloride	27.2	7.6	UD
994-05-8	t-Amyl Methyl ether	27.2	8.4	UD
71-43-2	Benzene	27.2	5.7	UD
100-44-7	Benzyl chloride	27.2	7.1	UD
75-27-4	Bromodichloromethane	27.2	12	UD
75-25-2	Bromoform	27.2	23	UD
74-83-9	Bromomethane	27.2	13	UD
106-99-0	1,3-Butadiene	27.2	6.0	UD
75-65-0	t-Butyl alcohol	27.2	19	UD
75-15-0	Carbon disulfide	27.2	5.2	UD
56-23-5	Carbon tetrachloride	27.2	12	UD
108-90-7	Chlorobenzene	27.2	11	UD
75-00-3	Chloroethane	27.2	14	UD
67-66-3	Chloroform	27.2	15	UD
74-87-3	Chloromethane	27.2	5.7	UD
110-82-7	Cyclohexane	27.2	10	UD
124-48-1	Dibromochloromethane	27.2	12	UD
96-12-8	1,2-Dibromo-3-chloropropane	27.2	46	UD
106-93-4	1,2-Dibromoethane	27.2	16	UD
74-95-3	Dibromomethane	27.2	16	UD
95-50-1	1,2-Dichlorobenzene	27.2	14	UD
541-73-1	1,3-Dichlorobenzene	27.2	8.4	UD
106-46-7	1,4-Dichlorobenzene	27.2	14	UD
75-71-8	Dichlorodifluoromethane	27.2	12	UD
75-34-3	1,1-Dichloroethane	27.2	6.3	UD
107-06-2	1,2-Dichloroethane	27.2	7.1	UD
75-35-4	1,1-Dichloroethene	27.2	8.4	UD
156-59-2	cis-1,2-Dichloroethene	27.2	8.7	UD
156-60-5	trans-1,2-Dichloroethene	27.2	7.3	UD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-02

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-04
File ID: 14DEC24.D
Sampled: 12/04/20 09:42
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 21:14
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	27.2	8.7	UD
10061-01-5	cis-1,3-Dichloropropene	27.2	8.2	UD
10061-02-6	trans-1,3-Dichloropropene	27.2	11	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	27.2	25	UD
75-37-6	1,1-Difluoroethane	27.2	54	UD
108-20-3	Diisopropyl ether	27.2	11	UD
123-91-1	1,4-Dioxane	27.2	9.0	UD
64-17-5	Ethanol	27.2	11	UD
141-78-6	Ethyl acetate	27.2	9.0	UD
100-41-4	Ethylbenzene	27.2	26	JD
622-96-8	1-Ethyl-4-methylbenzene	27.2	17	JD
637-92-3	Ethyl t-butyl ether	27.2	9.0	UD
142-82-5	n-Heptane	27.2	9.2	UD
87-68-3	Hexachlorobutadiene	27.2	41	UD
67-72-1	Hexachloroethane	27.2	20	UD
110-54-3	Hexane	27.2	5.4	UD
591-78-6	2-Hexanone	27.2	7.9	UD
540-84-1	Isooctane	27.2	9.5	UD
67-63-0	Isopropyl alcohol	27.2	8.7	UD
75-09-2	Methylene chloride	27.2	11	UD
78-93-3	Methyl ethyl ketone	27.2	28	JD
74-88-4	Methyl iodide	27.2	16	UD
108-10-1	Methyl isobutyl ketone	27.2	14	JD
1634-04-4	Methyl t-butyl ether	27.2	7.6	UD
91-20-3	Naphthalene	27.2	38	UD
115-07-1	Propylene	27.2	6.8	UD
100-42-5	Styrene	27.2	6.5	UD
630-20-6	1,1,1,2-Tetrachloroethane	27.2	17	UD
79-34-5	1,1,2,2-Tetrachloroethane	27.2	13	UD
127-18-4	Tetrachloroethene	27.2	57	JD
811-97-2	1,1,1,2-Tetrafluoroethane	27.2	18	UD
109-99-9	Tetrahydrofuran	27.2	21	JD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32A-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-04	File ID:	14DEC24.D
Sampled:	12/04/20 09:42	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 21:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	27.2	22	UD
71-55-6	1,1,1-Trichloroethane	27.2	11	UD
79-00-5	1,1,2-Trichloroethane	27.2	17	UD
79-01-6	Trichloroethene	27.2	15	UD
75-69-4	Trichlorofluoromethane	27.2	13	UD
96-18-4	1,2,3-Trichloropropane	27.2	13	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	27.2	15	UD
95-63-6	1,2,4-Trimethylbenzene	27.2	32	JD
108-67-8	1,3,5-Trimethylbenzene	27.2	11	UD
108-05-4	Vinyl acetate	27.2	9.0	UD
593-60-2	Vinyl bromide	27.2	8.7	UD
75-01-4	Vinyl chloride	27.2	11	UD
179601-23-1	p- & m-Xylenes	27.2	120	JD
95-47-6	o-Xylene	27.2	34	JD
1330-20-7	Total Xylenes	27.2	160	JD
---	TPH - Gasoline	27.2	10000	D
---	Total Petroleum Hydrocarbons	27.2	10000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.55	95.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99673	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	147972	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	271787	8.795	289206	8.79	

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-05
File ID: 14DEC27.D
Sampled: 12/04/20 09:30
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 23:03
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.54	1.3	UD
67-64-1	Acetone	1.54	5.2	JD
107-13-1	Acrylonitrile	1.54	0.42	UD
107-05-1	Allyl chloride	1.54	0.43	UD
994-05-8	t-Amyl Methyl ether	1.54	0.48	UD
71-43-2	Benzene	1.54	0.64	JD
100-44-7	Benzyl chloride	1.54	6.1	JD
75-27-4	Bromodichloromethane	1.54	0.69	UD
75-25-2	Bromoform	1.54	1.3	UD
74-83-9	Bromomethane	1.54	0.72	UD
106-99-0	1,3-Butadiene	1.54	0.34	UD
75-65-0	t-Butyl alcohol	1.54	1.1	UD
75-15-0	Carbon disulfide	1.54	1.9	JD
56-23-5	Carbon tetrachloride	1.54	0.69	UD
108-90-7	Chlorobenzene	1.54	0.62	UD
75-00-3	Chloroethane	1.54	0.82	UD
67-66-3	Chloroform	1.54	6.2	JD
74-87-3	Chloromethane	1.54	0.32	UD
110-82-7	Cyclohexane	1.54	0.59	UD
124-48-1	Dibromochloromethane	1.54	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.54	2.6	UD
106-93-4	1,2-Dibromoethane	1.54	0.89	UD
74-95-3	Dibromomethane	1.54	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.54	0.77	UD
541-73-1	1,3-Dichlorobenzene	1.54	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.54	0.77	UD
75-71-8	Dichlorodifluoromethane	1.54	2.5	JD
75-34-3	1,1-Dichloroethane	1.54	0.35	UD
107-06-2	1,2-Dichloroethane	1.54	0.40	UD
75-35-4	1,1-Dichloroethene	1.54	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.54	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.54	0.42	UD

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Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-05
File ID: 14DEC27.D
Sampled: 12/04/20 09:30
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 23:03
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.54	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.54	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.54	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.54	1.4	UD
75-37-6	1,1-Difluoroethane	1.54	3.1	UD
108-20-3	Diisopropyl ether	1.54	0.60	UD
123-91-1	1,4-Dioxane	1.54	0.51	UD
64-17-5	Ethanol	1.54	0.65	UD
141-78-6	Ethyl acetate	1.54	0.51	UD
100-41-4	Ethylbenzene	1.54	2.9	JD
622-96-8	1-Ethyl-4-methylbenzene	1.54	2.4	JD
637-92-3	Ethyl t-butyl ether	1.54	0.51	UD
142-82-5	n-Heptane	1.54	0.52	UD
87-68-3	Hexachlorobutadiene	1.54	2.3	UD
67-72-1	Hexachloroethane	1.54	1.1	UD
110-54-3	Hexane	1.54	0.31	UD
591-78-6	2-Hexanone	1.54	0.45	UD
540-84-1	Isooctane	1.54	0.54	UD
67-63-0	Isopropyl alcohol	1.54	0.49	UD
75-09-2	Methylene chloride	1.54	0.62	UD
78-93-3	Methyl ethyl ketone	1.54	0.29	UD
74-88-4	Methyl iodide	1.54	0.89	UD
108-10-1	Methyl isobutyl ketone	1.54	0.40	UD
1634-04-4	Methyl t-butyl ether	1.54	0.43	UD
91-20-3	Naphthalene	1.54	2.2	UD
115-07-1	Propylene	1.54	0.38	UD
100-42-5	Styrene	1.54	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.54	0.94	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.54	0.72	UD
127-18-4	Tetrachloroethene	1.54	120	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.54	1.0	UD
109-99-9	Tetrahydrofuran	1.54	0.42	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW32B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-05	File ID:	14DEC27.D
Sampled:	12/04/20 09:30	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 23:03
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.54	66	D
120-82-1	1,2,4-Trichlorobenzene	1.54	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.54	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.54	0.94	UD
79-01-6	Trichloroethene	1.54	0.83	UD
75-69-4	Trichlorofluoromethane	1.54	1.5	JD
96-18-4	1,2,3-Trichloropropane	1.54	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.54	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.54	4.0	JD
108-67-8	1,3,5-Trimethylbenzene	1.54	1.2	JD
108-05-4	Vinyl acetate	1.54	0.51	UD
593-60-2	Vinyl bromide	1.54	0.49	UD
75-01-4	Vinyl chloride	1.54	0.60	UD
179601-23-1	p- & m-Xylenes	1.54	11	D
95-47-6	o-Xylene	1.54	3.5	JD
1330-20-7	Total Xylenes	1.54	15	D
---	TPH - Gasoline	1.54	570	D
---	Total Petroleum Hydrocarbons	1.54	570	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.32	93.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	106723	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	160693	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	299383	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-06RE1	File ID:	14DEC15.D
Sampled:	12/04/20 11:10	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 16:25
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.5	99	D
108-88-3	Toluene	15.5	710	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.10	91.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99476	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	143700	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	272180	8.789	289206	8.79	

* Values outside of QC limits

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-06
File ID: 14DEC28.D
Sampled: 12/04/20 11:10
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 23:39
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	3.2	D
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	5.5	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	2.6	JD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD
78-87-5	1,2-Dichloropropane	1.55	0.50	UD

AECOM - Sacramento
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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-06
File ID: 14DEC28.D
Sampled: 12/04/20 11:10
Prepared: 12/14/20 09:03
Analyzed: 12/14/20 23:39
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	11	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	8.1	D
622-96-8	1-Ethyl-4-methylbenzene	1.55	7.4	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	99	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	6.7	JD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	9.6	JD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	12	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	5.9	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-06	File ID:	14DEC28.D
Sampled:	12/04/20 11:10	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 23:39
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.92	JD
75-69-4	Trichlorofluoromethane	1.55	1.3	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	12	D
108-67-8	1,3,5-Trimethylbenzene	1.55	2.7	JD
108-05-4	Vinyl acetate	1.55	1.4	JD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	35	D
95-47-6	o-Xylene	1.55	11	D
1330-20-7	Total Xylenes	1.55	47	D
---	TPH - Gasoline	1.55	960	D
---	Total Petroleum Hydrocarbons	1.55	960	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.33	93.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	109724	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	166874	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	310831	8.795	289206	8.79	

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-07RE1	File ID:	14DEC16.D
Sampled:	12/04/20 11:10	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 16:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.5	93	D
108-88-3	Toluene	15.5	720	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.22	92.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99704	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	147454	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	271224	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-02

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-07
File ID: 14DEC29.D
Sampled: 12/04/20 11:10
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 00:16
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	3.4	D
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	5.9	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	2.7	JD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD
78-87-5	1,2-Dichloropropane	1.55	0.50	UD

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Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-02

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-07
File ID: 14DEC29.D
Sampled: 12/04/20 11:10
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 00:16
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	7.4	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	7.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.55	6.7	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	1.1	JD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	100	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	7.4	JD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	9.4	JD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	12	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	6.9	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41A-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-07	File ID:	14DEC29.D
Sampled:	12/04/20 11:10	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 00:16
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.92	JD
75-69-4	Trichlorofluoromethane	1.55	1.4	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	12	D
108-67-8	1,3,5-Trimethylbenzene	1.55	3.1	JD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	29	D
95-47-6	o-Xylene	1.55	9.8	D
1330-20-7	Total Xylenes	1.55	39	D
---	TPH - Gasoline	1.55	990	D
---	Total Petroleum Hydrocarbons	1.55	990	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.25	92.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	106314	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	166051	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	299637	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-08RE1	File ID:	14DEC17.D
Sampled:	12/04/20 11:00	Prepared:	12/14/20 09:03	Analyzed:	12/14/20 17:26
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	16	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.23	92.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97887	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	143601	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	275473	8.794	289206	8.79	

* Values outside of QC limits

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-08
File ID: 14DEC30.D
Sampled: 12/04/20 11:00
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 00:52
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	5.1	JD
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	1.1	JD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	5.3	JD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.1	UD
75-15-0	Carbon disulfide	1.6	1.9	JD
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	2.5	JD
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD
78-87-5	1,2-Dichloropropane	1.6	0.51	UD

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-08
File ID: 14DEC30.D
Sampled: 12/04/20 11:00
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 00:52
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	8.7	D
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	1.9	JD
622-96-8	1-Ethyl-4-methylbenzene	1.6	0.87	JD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	0.51	UD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	2.8	JD
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	16	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	1.6	JD
108-88-3	Toluene	1.6	15	D

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW41B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-08	File ID:	14DEC30.D
Sampled:	12/04/20 11:00	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 00:52
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	1.9	JD
75-69-4	Trichlorofluoromethane	1.6	1.5	JD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	3.1	JD
108-67-8	1,3,5-Trimethylbenzene	1.6	0.79	JD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	9.5	D
95-47-6	o-Xylene	1.6	2.4	JD
1330-20-7	Total Xylenes	1.6	12	JD
---	TPH - Gasoline	1.6	540	D
---	Total Petroleum Hydrocarbons	1.6	540	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.22	92.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	105930	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	159925	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	302265	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-09
File ID: 14DEC31.D
Sampled: 12/04/20 13:45
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 01:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.64	1.3	UD
67-64-1	Acetone	1.64	6.2	JD
107-13-1	Acrylonitrile	1.64	0.44	UD
107-05-1	Allyl chloride	1.64	0.46	UD
994-05-8	t-Amyl Methyl ether	1.64	0.51	UD
71-43-2	Benzene	1.64	0.34	UD
100-44-7	Benzyl chloride	1.64	0.43	UD
75-27-4	Bromodichloromethane	1.64	0.74	UD
75-25-2	Bromoform	1.64	1.4	UD
74-83-9	Bromomethane	1.64	0.77	UD
106-99-0	1,3-Butadiene	1.64	0.36	UD
75-65-0	t-Butyl alcohol	1.64	1.1	UD
75-15-0	Carbon disulfide	1.64	1.6	JD
56-23-5	Carbon tetrachloride	1.64	0.74	UD
108-90-7	Chlorobenzene	1.64	0.66	UD
75-00-3	Chloroethane	1.64	0.87	UD
67-66-3	Chloroform	1.64	0.89	UD
74-87-3	Chloromethane	1.64	0.34	UD
110-82-7	Cyclohexane	1.64	0.62	UD
124-48-1	Dibromochloromethane	1.64	0.71	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.64	2.8	UD
106-93-4	1,2-Dibromoethane	1.64	0.95	UD
74-95-3	Dibromomethane	1.64	0.93	UD
95-50-1	1,2-Dichlorobenzene	1.64	0.82	UD
541-73-1	1,3-Dichlorobenzene	1.64	0.51	UD
106-46-7	1,4-Dichlorobenzene	1.64	0.82	UD
75-71-8	Dichlorodifluoromethane	1.64	2.7	JD
75-34-3	1,1-Dichloroethane	1.64	0.38	UD
107-06-2	1,2-Dichloroethane	1.64	0.43	UD
75-35-4	1,1-Dichloroethene	1.64	0.51	UD
156-59-2	cis-1,2-Dichloroethene	1.64	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.64	0.44	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38A-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-09
File ID: 14DEC31.D
Sampled: 12/04/20 13:45
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 01:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.64	0.52	UD
10061-01-5	cis-1,3-Dichloropropene	1.64	0.49	UD
10061-02-6	trans-1,3-Dichloropropene	1.64	0.66	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.64	1.5	UD
75-37-6	1,1-Difluoroethane	1.64	3.3	UD
108-20-3	Diisopropyl ether	1.64	0.64	UD
123-91-1	1,4-Dioxane	1.64	0.54	UD
64-17-5	Ethanol	1.64	0.69	UD
141-78-6	Ethyl acetate	1.64	0.54	UD
100-41-4	Ethylbenzene	1.64	3.8	JD
622-96-8	1-Ethyl-4-methylbenzene	1.64	3.0	JD
637-92-3	Ethyl t-butyl ether	1.64	0.54	UD
142-82-5	n-Heptane	1.64	0.56	UD
87-68-3	Hexachlorobutadiene	1.64	2.5	UD
67-72-1	Hexachloroethane	1.64	1.2	UD
110-54-3	Hexane	1.64	0.33	UD
591-78-6	2-Hexanone	1.64	0.48	UD
540-84-1	Isooctane	1.64	0.57	UD
67-63-0	Isopropyl alcohol	1.64	0.52	UD
75-09-2	Methylene chloride	1.64	0.66	UD
78-93-3	Methyl ethyl ketone	1.64	2.1	JD
74-88-4	Methyl iodide	1.64	0.95	UD
108-10-1	Methyl isobutyl ketone	1.64	0.43	UD
1634-04-4	Methyl t-butyl ether	1.64	0.46	UD
91-20-3	Naphthalene	1.64	9.7	JD
115-07-1	Propylene	1.64	0.41	UD
100-42-5	Styrene	1.64	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.64	1.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.64	0.77	UD
127-18-4	Tetrachloroethene	1.64	37	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.64	1.1	UD
109-99-9	Tetrahydrofuran	1.64	0.77	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38A-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-09	File ID:	14DEC31.D
Sampled:	12/04/20 13:45	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 01:29
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.64	27	D
120-82-1	1,2,4-Trichlorobenzene	1.64	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.64	0.64	UD
79-00-5	1,1,2-Trichloroethane	1.64	1.0	UD
79-01-6	Trichloroethene	1.64	0.89	UD
75-69-4	Trichlorofluoromethane	1.64	1.4	JD
96-18-4	1,2,3-Trichloropropane	1.64	0.79	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.64	0.90	UD
95-63-6	1,2,4-Trimethylbenzene	1.64	5.6	JD
108-67-8	1,3,5-Trimethylbenzene	1.64	1.6	JD
108-05-4	Vinyl acetate	1.64	0.54	UD
593-60-2	Vinyl bromide	1.64	0.52	UD
75-01-4	Vinyl chloride	1.64	0.64	UD
179601-23-1	p- & m-Xylenes	1.64	17	D
95-47-6	o-Xylene	1.64	7.0	JD
1330-20-7	Total Xylenes	1.64	24	D
---	TPH - Gasoline	1.64	280	JD
---	Total Petroleum Hydrocarbons	1.64	280	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.16	91.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	106895	7.611	99484	7.611	
Chlorobenzene-d5 (IS)	161858	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	298750	8.79	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-10
File ID: 14DEC32.D
Sampled: 12/04/20 13:30
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 02:05
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.61	1.3	UD
67-64-1	Acetone	1.61	6.0	JD
107-13-1	Acrylonitrile	1.61	0.43	UD
107-05-1	Allyl chloride	1.61	0.45	UD
994-05-8	t-Amyl Methyl ether	1.61	0.50	UD
71-43-2	Benzene	1.61	0.34	UD
100-44-7	Benzyl chloride	1.61	0.42	UD
75-27-4	Bromodichloromethane	1.61	0.72	UD
75-25-2	Bromoform	1.61	1.4	UD
74-83-9	Bromomethane	1.61	0.76	UD
106-99-0	1,3-Butadiene	1.61	0.35	UD
75-65-0	t-Butyl alcohol	1.61	1.1	UD
75-15-0	Carbon disulfide	1.61	1.4	JD
56-23-5	Carbon tetrachloride	1.61	0.72	UD
108-90-7	Chlorobenzene	1.61	0.64	UD
75-00-3	Chloroethane	1.61	0.85	UD
67-66-3	Chloroform	1.61	6.3	JD
74-87-3	Chloromethane	1.61	0.34	UD
110-82-7	Cyclohexane	1.61	0.61	UD
124-48-1	Dibromochloromethane	1.61	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.61	2.7	UD
106-93-4	1,2-Dibromoethane	1.61	0.93	UD
74-95-3	Dibromomethane	1.61	0.92	UD
95-50-1	1,2-Dichlorobenzene	1.61	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.61	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.61	0.80	UD
75-71-8	Dichlorodifluoromethane	1.61	2.7	JD
75-34-3	1,1-Dichloroethane	1.61	0.37	UD
107-06-2	1,2-Dichloroethane	1.61	0.42	UD
75-35-4	1,1-Dichloroethene	1.61	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.61	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.61	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-01

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-10
File ID: 14DEC32.D
Sampled: 12/04/20 13:30
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 02:05
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.61	0.52	UD
10061-01-5	cis-1,3-Dichloropropene	1.61	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.61	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.61	1.5	UD
75-37-6	1,1-Difluoroethane	1.61	3.2	UD
108-20-3	Diisopropyl ether	1.61	0.63	UD
123-91-1	1,4-Dioxane	1.61	0.53	UD
64-17-5	Ethanol	1.61	0.68	UD
141-78-6	Ethyl acetate	1.61	0.53	UD
100-41-4	Ethylbenzene	1.61	6.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.61	16	D
637-92-3	Ethyl t-butyl ether	1.61	0.53	UD
142-82-5	n-Heptane	1.61	0.55	UD
87-68-3	Hexachlorobutadiene	1.61	2.4	UD
67-72-1	Hexachloroethane	1.61	1.2	UD
110-54-3	Hexane	1.61	0.32	UD
591-78-6	2-Hexanone	1.61	0.47	UD
540-84-1	Isooctane	1.61	0.56	UD
67-63-0	Isopropyl alcohol	1.61	0.52	UD
75-09-2	Methylene chloride	1.61	0.64	UD
78-93-3	Methyl ethyl ketone	1.61	0.31	UD
74-88-4	Methyl iodide	1.61	0.93	UD
108-10-1	Methyl isobutyl ketone	1.61	0.42	UD
1634-04-4	Methyl t-butyl ether	1.61	0.45	UD
91-20-3	Naphthalene	1.61	12	JD
115-07-1	Propylene	1.61	0.40	UD
100-42-5	Styrene	1.61	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.61	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.61	0.76	UD
127-18-4	Tetrachloroethene	1.61	50	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.61	1.1	UD
109-99-9	Tetrahydrofuran	1.61	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-01

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-10	File ID:	14DEC32.D
Sampled:	12/04/20 13:30	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 02:05
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.61	5.9	D
120-82-1	1,2,4-Trichlorobenzene	1.61	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.61	0.63	UD
79-00-5	1,1,2-Trichloroethane	1.61	0.98	UD
79-01-6	Trichloroethene	1.61	0.95	JD
75-69-4	Trichlorofluoromethane	1.61	1.6	JD
96-18-4	1,2,3-Trichloropropane	1.61	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.61	0.89	UD
95-63-6	1,2,4-Trimethylbenzene	1.61	41	D
108-67-8	1,3,5-Trimethylbenzene	1.61	8.2	D
108-05-4	Vinyl acetate	1.61	0.53	UD
593-60-2	Vinyl bromide	1.61	0.52	UD
75-01-4	Vinyl chloride	1.61	0.63	UD
179601-23-1	p- & m-Xylenes	1.61	20	D
95-47-6	o-Xylene	1.61	10	D
1330-20-7	Total Xylenes	1.61	30	D
---	TPH - Gasoline	1.61	750	D
---	Total Petroleum Hydrocarbons	1.61	750	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.18	91.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	103132	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	160683	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	293872	8.794	289206	8.79	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-02

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2035587-11
File ID: 14DEC33.D
Sampled: 12/04/20 13:30
Prepared: 12/14/20 09:03
Analyzed: 12/15/20 02:43
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B094975
Sequence: 2022140
Calibration: 2012010
Instrument: MS-A2

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.51	1.2	UD
67-64-1	Acetone	1.51	3.7	JD
107-13-1	Acrylonitrile	1.51	0.41	UD
107-05-1	Allyl chloride	1.51	0.42	UD
994-05-8	t-Amyl Methyl ether	1.51	0.47	UD
71-43-2	Benzene	1.51	0.32	UD
100-44-7	Benzyl chloride	1.51	0.39	UD
75-27-4	Bromodichloromethane	1.51	0.68	UD
75-25-2	Bromoform	1.51	1.3	UD
74-83-9	Bromomethane	1.51	0.71	UD
106-99-0	1,3-Butadiene	1.51	0.33	UD
75-65-0	t-Butyl alcohol	1.51	1.1	UD
75-15-0	Carbon disulfide	1.51	1.2	JD
56-23-5	Carbon tetrachloride	1.51	0.68	UD
108-90-7	Chlorobenzene	1.51	0.60	UD
75-00-3	Chloroethane	1.51	0.80	UD
67-66-3	Chloroform	1.51	6.1	JD
74-87-3	Chloromethane	1.51	0.32	UD
110-82-7	Cyclohexane	1.51	0.57	UD
124-48-1	Dibromochloromethane	1.51	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.51	2.6	UD
106-93-4	1,2-Dibromoethane	1.51	0.88	UD
74-95-3	Dibromomethane	1.51	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.51	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.51	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.51	0.76	UD
75-71-8	Dichlorodifluoromethane	1.51	2.6	JD
75-34-3	1,1-Dichloroethane	1.51	0.35	UD
107-06-2	1,2-Dichloroethane	1.51	0.39	UD
75-35-4	1,1-Dichloroethene	1.51	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.51	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.51	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-11	File ID:	14DEC33.D
Sampled:	12/04/20 13:30	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 02:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.51	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.51	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.51	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.51	1.4	UD
75-37-6	1,1-Difluoroethane	1.51	3.0	UD
108-20-3	Diisopropyl ether	1.51	0.59	UD
123-91-1	1,4-Dioxane	1.51	0.50	UD
64-17-5	Ethanol	1.51	10	D
141-78-6	Ethyl acetate	1.51	0.50	UD
100-41-4	Ethylbenzene	1.51	0.92	JD
622-96-8	1-Ethyl-4-methylbenzene	1.51	1.4	JD
637-92-3	Ethyl t-butyl ether	1.51	0.50	UD
142-82-5	n-Heptane	1.51	0.51	UD
87-68-3	Hexachlorobutadiene	1.51	2.3	UD
67-72-1	Hexachloroethane	1.51	1.1	UD
110-54-3	Hexane	1.51	0.30	UD
591-78-6	2-Hexanone	1.51	0.44	UD
540-84-1	Isooctane	1.51	0.53	UD
67-63-0	Isopropyl alcohol	1.51	0.48	UD
75-09-2	Methylene chloride	1.51	0.60	UD
78-93-3	Methyl ethyl ketone	1.51	0.80	JD
74-88-4	Methyl iodide	1.51	0.88	UD
108-10-1	Methyl isobutyl ketone	1.51	0.39	UD
1634-04-4	Methyl t-butyl ether	1.51	0.42	UD
91-20-3	Naphthalene	1.51	9.3	JD
115-07-1	Propylene	1.51	0.38	UD
100-42-5	Styrene	1.51	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.51	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.51	0.71	UD
127-18-4	Tetrachloroethene	1.51	46	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.51	1.0	UD
109-99-9	Tetrahydrofuran	1.51	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW38B-02

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2035587-11	File ID:	14DEC33.D
Sampled:	12/04/20 13:30	Prepared:	12/14/20 09:03	Analyzed:	12/15/20 02:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B094975	Sequence:	2022140	Calibration:	2012010
Instrument:	MS-A2				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.51	3.7	D
120-82-1	1,2,4-Trichlorobenzene	1.51	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.51	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.51	0.92	UD
79-01-6	Trichloroethene	1.51	0.82	UD
75-69-4	Trichlorofluoromethane	1.51	1.5	JD
96-18-4	1,2,3-Trichloropropane	1.51	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.51	0.83	UD
95-63-6	1,2,4-Trimethylbenzene	1.51	3.3	JD
108-67-8	1,3,5-Trimethylbenzene	1.51	0.60	UD
108-05-4	Vinyl acetate	1.51	0.50	UD
593-60-2	Vinyl bromide	1.51	0.48	UD
75-01-4	Vinyl chloride	1.51	0.59	UD
179601-23-1	p- & m-Xylenes	1.51	3.7	JD
95-47-6	o-Xylene	1.51	1.1	JD
1330-20-7	Total Xylenes	1.51	4.8	JD
---	TPH - Gasoline	1.51	200	JD
---	Total Petroleum Hydrocarbons	1.51	200	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.29	92.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	106058	7.616	99484	7.611	
Chlorobenzene-d5 (IS)	158682	11.078	152269	11.083	
1,4-Difluorobenzene (IS)	299216	8.795	289206	8.79	

* Values outside of QC limits

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094975 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW24A-01	2035587-01	14DEC25.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW24A-01	2035587-01RE1	14DEC12.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW24B-01	2035587-02	14DEC26.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW24B-01	2035587-02RE1	14DEC13.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW32A-01	2035587-03	14DEC23.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW32A-01	2035587-03RE1	14DEC21.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW32A-02	2035587-04	14DEC24.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW32A-02	2035587-04RE1	14DEC22.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW32B-01	2035587-05	14DEC27.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41A-01	2035587-06	14DEC28.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41A-01	2035587-06RE1	14DEC15.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41A-02	2035587-07	14DEC29.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41A-02	2035587-07RE1	14DEC16.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41B-01	2035587-08	14DEC30.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW41B-01	2035587-08RE1	14DEC17.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW38A-01	2035587-09	14DEC31.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW38B-01	2035587-10	14DEC32.D	12/14/20 09:03	FULL Customized List-All Table 8
SG-VW38B-02	2035587-11	14DEC33.D	12/14/20 09:03	FULL Customized List-All Table 8
Blank	B094975-BLK1	14DEC11.D	12/14/20 09:03	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B094975 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	B094975-BS1	14DEC09.D	12/14/20 09:03	
LCS Dup	B094975-BSD1	14DEC10.D	12/14/20 09:03	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094975-BLK1	File ID:	14DEC11.D
Prepared:	12/14/20 09:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/14/20 14:25	Instrument:	MS-A2		
Batch:	B094975	Sequence:	2022140	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094975-BLK1	File ID:	14DEC11.D
Prepared:	12/14/20 09:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/14/20 14:25	Instrument:	MS-A2		
Batch:	B094975	Sequence:	2022140	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094975-BLK1	File ID:	14DEC11.D
Prepared:	12/14/20 09:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/14/20 14:25	Instrument:	MS-A2		
Batch:	B094975	Sequence:	2022140	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2035587
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B094975-BLK1	File ID:	14DEC11.D
Prepared:	12/14/20 09:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	12/14/20 14:25	Instrument:	MS-A2		
Batch:	B094975	Sequence:	2022140	Calibration:	2012010

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.91	89.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83859	7.606	99484	7.611	
Chlorobenzene-d5 (IS)	119394	11.083	152269	11.083	
1,4-Difluorobenzene (IS)	231895	8.785	289206	8.79	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B094975
Preparation: EPA TO-15

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B094975-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	15.111	94.6	70 - 130
Chloroform	24.413	23.924	98.0	70 - 130
Ethylbenzene	21.711	24.316	112	70 - 130
Tetrachloroethene	33.913	35.337	104	70 - 130
Toluene	18.842	20.086	107	70 - 130
Trichloroethene	26.869	28.212	105	70 - 130
Trichlorofluoromethane	28.092	28.373	101	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	36.939	96.4	70 - 130
p- & m-Xylenes	43.421	47.677	110	70 - 130
o-Xylene	21.711	24.837	114	70 - 130
Total Xylenes	65.132	72.514	111	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	15.558	97.4	2.92	30	70 - 130
Chloroform	24.413	24.071	98.6	0.610	30	70 - 130
Ethylbenzene	21.711	25.011	115	2.82	30	70 - 130
Tetrachloroethene	33.913	36.219	107	2.46	30	70 - 130
Toluene	18.842	20.990	111	4.40	30	70 - 130
Trichloroethene	26.869	29.126	108	3.19	30	70 - 130
Trichlorofluoromethane	28.092	28.653	102	0.985	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	37.628	98.2	1.85	30	70 - 130
p- & m-Xylenes	43.421	49.587	114	3.93	30	70 - 130
o-Xylene	21.711	25.228	116	1.56	30	70 - 130

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Batch: B094975
Laboratory ID: B094975-BSD1
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	74.815	115	3.12	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2022117	Instrument:	MS-A2
Matrix:	Air	Calibration:	2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2022117-TUN2	15AUG04.D	08/15/18 14:24
Cal Standard	2022117-CAL7	15AUG05.D	08/15/18 14:58
Cal Standard	2022117-CAL8	15AUG06.D	08/15/18 15:32
Cal Standard	2022117-CAL9	15AUG07.D	08/15/18 16:06
Cal Standard	2022117-CALA	15AUG08.D	08/15/18 16:41
Cal Standard	2022117-CALB	15AUG09.D	08/15/18 17:15
Cal Standard	2022117-CALC	15AUG10.D	08/15/18 17:52
MS Tune	2022117-TUN1	09DEC07.D	12/09/20 17:22
Cal Standard	2022117-CAL1	09DEC08.D	12/09/20 17:51
Cal Standard	2022117-CAL2	09DEC09.D	12/09/20 18:20
Cal Standard	2022117-CAL3	09DEC10.D	12/09/20 18:51
Cal Standard	2022117-CAL4	09DEC11.D	12/09/20 19:29
Cal Standard	2022117-CAL5	09DEC12.D	12/09/20 20:12
Cal Standard	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022140-ICV2	15AUG11.D	08/15/18 18:29
Initial Cal Blank	2022140-ICB2	15AUG13.D	08/15/18 19:39
Initial Cal Check	2022140-ICV1	09DEC14.D	12/09/20 21:28
Initial Cal Blank	2022140-ICB1	09DEC16.D	12/09/20 22:27
MS Tune	2022140-TUN1	14DEC05.D	12/14/20 11:19
Calibration Check	2022140-CCV1	14DEC06.D	12/14/20 11:52
Calibration Check	2022140-CCV2	14DEC07.D	12/14/20 12:24
Calibration Blank	2022140-CCB1	14DEC08.D	12/14/20 12:53
LCS	B094975-BS1	14DEC09.D	12/14/20 13:25
LCS Dup	B094975-BSD1	14DEC10.D	12/14/20 13:57
Blank	B094975-BLK1	14DEC11.D	12/14/20 14:25
SG-VW24A-01	2035587-01RE1	14DEC12.D	12/14/20 14:55
SG-VW24B-01	2035587-02RE1	14DEC13.D	12/14/20 15:25
SG-VW41A-01	2035587-06RE1	14DEC15.D	12/14/20 16:25
SG-VW41A-02	2035587-07RE1	14DEC16.D	12/14/20 16:55
SG-VW41B-01	2035587-08RE1	14DEC17.D	12/14/20 17:26
SG-VW32A-01	2035587-03RE1	14DEC21.D	12/14/20 19:34
SG-VW32A-02	2035587-04RE1	14DEC22.D	12/14/20 20:12
SG-VW32A-01	2035587-03	14DEC23.D	12/14/20 20:43
SG-VW32A-02	2035587-04	14DEC24.D	12/14/20 21:14
SG-VW24A-01	2035587-01	14DEC25.D	12/14/20 21:50
SG-VW24B-01	2035587-02	14DEC26.D	12/14/20 22:27
SG-VW32B-01	2035587-05	14DEC27.D	12/14/20 23:03
SG-VW41A-01	2035587-06	14DEC28.D	12/14/20 23:39
SG-VW41A-02	2035587-07	14DEC29.D	12/15/20 00:16
SG-VW41B-01	2035587-08	14DEC30.D	12/15/20 00:52

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2022140	Instrument:	MS-A2
Matrix:	Air	Calibration:	2012010

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
SG-VW38A-01	2035587-09	14DEC31.D	12/15/20 01:29
SG-VW38B-01	2035587-10	14DEC32.D	12/15/20 02:05
SG-VW38B-02	2035587-11	14DEC33.D	12/15/20 02:43

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	09DEC07.D	Injection Date:	12/09/20
Instrument ID:	MS-A2	Injection Time:	17:22
Sequence:	2022117	Lab Sample ID:	2022117-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.3	PASS
Mass 75	30 - 66% of Mass 95	51.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.59	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	94.2	PASS
Mass 175	4 - 9% of Mass 174	8.08	PASS
Mass 176	93 - 101% of Mass 174	97.1	PASS
Mass 177	5 - 9% of Mass 176	6.51	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	15AUG04.D	Injection Date:	08/15/18
Instrument ID:	MS-A2	Injection Time:	14:24
Sequence:	2022117	Lab Sample ID:	2022117-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	26.2	PASS
Mass 75	30 - 66% of Mass 95	53.7	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.38	PASS
Mass 173	Less than 2% of Mass 174	0.697	PASS
Mass 174	50 - 120% of Mass 95	94.3	PASS
Mass 175	4 - 9% of Mass 174	7.46	PASS
Mass 176	93 - 101% of Mass 174	96.3	PASS
Mass 177	5 - 9% of Mass 176	6.33	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	14DEC05.D	Injection Date:	12/14/20
Instrument ID:	MS-A2	Injection Time:	11:19
Sequence:	2022140	Lab Sample ID:	2022140-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	20.1	PASS
Mass 75	30 - 66% of Mass 95	56	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.79	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	89.7	PASS
Mass 175	4 - 9% of Mass 174	8.59	PASS
Mass 176	93 - 101% of Mass 174	96.1	PASS
Mass 177	5 - 9% of Mass 176	6.59	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	15AUG11.D	Calibration Date:	08/15/18 14:58
Sequence:	2022140	Injection Date:	08/15/18
Lab Sample ID:	2022140-ICV2	Injection Time:	18:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	490.55	4.288774	4.207688		-1.9	30
Total Petroleum Hydrocarbons	A	500.00	490.55	4.288774	4.207688		-1.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 09DEC14.D
Sequence: 2022140
Lab Sample ID: 2022140-ICV1

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/09/20
Injection Time: 21:28

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.0300	1.385321	1.39285		0.5	30
Acrylonitrile	A	5.0000	5.4200	0.4734002	0.5133195		8.4	30
Allyl chloride	A	5.0000	5.5800	0.9311473	1.038662		11.5	30
t-Amyl Methyl ether	A	5.0000	5.8500	0.5084969	0.5948481		17.0	30
Benzene	A	5.0000	5.4800	2.310203	2.534081		9.7	30
Benzyl chloride	L	5.0000	4.6900	1.21796	1.329562		-6.2	30
Bromodichloromethane	A	5.0000	5.1900	0.7498123	0.7787605		3.9	30
Bromoform	A	5.0000	5.6900	1.29582	1.473501		13.7	30
Bromomethane	A	5.0000	5.0500	0.5721625	0.5779802		1.0	30
1,3-Butadiene	A	5.0000	5.1400	0.4373898	0.4498363		2.8	30
t-Butyl alcohol	A	10.000	11.970	1.144382	1.369723		19.7	30
Carbon disulfide	A	5.0000	5.2900	2.556243	2.704926		5.8	30
Carbon tetrachloride	A	5.0000	5.0600	1.931421	1.952713		1.1	30
Chlorobenzene	A	5.0000	5.1000	0.7977157	0.814334		2.1	30
Chloroethane	A	5.0000	5.0800	0.2597023	0.2638489		1.6	30
Chloroform	A	5.0000	5.0800	1.858315	1.888321		1.6	30
Chloromethane	A	5.0000	4.8900	0.4590853	0.4490719		-2.2	30
Cyclohexane	A	5.0000	4.5900	1.652539	1.51647		-8.2	30
Dibromochloromethane	A	5.0000	5.3600	0.6776753	0.7260836		7.1	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.3400	0.1651741	0.176527		6.9	30
1,2-Dibromoethane	A	5.0000	5.3700	0.4694284	0.5041782		7.4	30
Dibromomethane	A	5.0000	5.1400	0.1316079	0.1351959		2.7	30
1,2-Dichlorobenzene	A	5.0000	5.7800	1.088648	1.258492		15.6	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022140	Injection Date:	12/09/20
Lab Sample ID:	2022140-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.8800	1.261041	1.483273		17.6	30
1,4-Dichlorobenzene	A	5.0000	5.4900	1.150627	1.262439		9.7	30
Dichlorodifluoromethane	A	5.0000	5.0800	2.297283	2.335719		1.7	30
1,1-Dichloroethane	A	5.0000	5.2500	1.501032	1.57578		5.0	30
1,2-Dichloroethane	A	5.0000	5.1100	1.259162	1.285716		2.1	30
1,1-Dichloroethene	A	5.0000	5.4700	1.264693	1.383513		9.4	30
cis-1,2-Dichloroethene	A	5.0000	5.4500	1.054343	1.149185		9.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4800	1.231126	1.348373		9.5	30
1,2-Dichloropropane	A	5.0000	5.3400	0.2973131	0.3175814		6.8	30
cis-1,3-Dichloropropene	A	5.0000	5.7400	0.3819551	0.4388394		14.9	30
trans-1,3-Dichloropropene	A	5.0000	5.7600	0.4130522	0.4761559		15.3	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9900	1.617365	1.614122		-0.2	30
1,1-Difluoroethane	A	5.0000	5.0800	1.308935	1.329945		1.6	30
Diisopropyl ether	A	5.0000	5.5100	0.5202863	0.5737246		10.3	30
1,4-Dioxane	A	5.0000	4.9300	0.1396685	0.1378245		-1.3	30
Ethanol	A	10.000	9.9400	0.143483	0.1426771		-0.6	30
Ethyl acetate	A	5.0000	5.6600	0.2696996	0.3055375		13.3	30
Ethylbenzene	A	5.0000	6.0100	0.6525795	0.7841801		20.2	30
1-Ethyl-4-methylbenzene	A	5.0000	6.4600	2.860951	3.694484		29.1	30
Ethyl t-butyl ether	A	5.0000	5.7300	1.81201	2.076147		14.6	30
n-Heptane	A	5.0000	5.7100	0.2699023	0.3081407		14.2	30
Hexachlorobutadiene	A	5.0000	5.5800	0.6202578	0.6925375		11.7	30
Hexachloroethane	A	5.0000	5.4200	0.2645854	0.2869578		8.5	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 09DEC14.D
Sequence: 2022140
Lab Sample ID: 2022140-ICV1

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/09/20
Injection Time: 21:28

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3400	1.320847	1.411856		6.9	30
2-Hexanone	L	5.0000	5.0500	0.4702171	0.5562207		1.0	30
Isooctane	A	5.0000	5.5500	1.450681	1.60994		11.0	30
Isopropyl alcohol	A	5.0000	5.6700	0.9542893	1.081941		13.4	30
Methylene chloride	A	5.0000	4.7700	0.946655	0.9029366		-4.6	30
Methyl ethyl ketone	A	5.0000	5.4800	1.599616	1.753029		9.6	30
Methyl iodide	A	5.0000	5.4900	0.9312524	1.02321		9.9	30
Methyl isobutyl ketone	A	5.0000	5.9400	0.5962516	0.707767		18.7	30
Methyl t-butyl ether	A	5.0000	5.7000	2.244678	2.559429		14.0	30
Naphthalene	Q	5.0000	4.6100	1.277326	1.456727		-7.8	30
Propylene	A	5.0000	5.2900	0.5884372	0.6221065		5.7	30
Styrene	A	5.0000	6.3000	1.133207	1.428193		26.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2300	0.2449739	0.256182		4.6	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.6000	1.289947	1.445751		12.1	30
Tetrachloroethene	A	5.0000	5.4000	0.487058	0.5262182		8.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.1300	1.142489	1.172281		2.6	30
Tetrahydrofuran	A	5.0000	5.7400	0.8416471	0.9654902		14.7	30
Toluene	A	5.0000	5.8100	0.8694338	1.011034		16.3	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3800	0.2835387	0.3032183		7.6	30
1,1,1-Trichloroethane	A	5.0000	5.1200	1.709834	1.749765		2.3	30
1,1,2-Trichloroethane	A	5.0000	5.1700	0.3422061	0.3537127		3.4	30
Trichloroethene	A	5.0000	5.4500	0.3311466	0.3607688		8.9	30
Trichlorofluoromethane	A	5.0000	4.9700	2.34705	2.332786		-0.6	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	09DEC14.D	Calibration Date:	08/15/18 14:58
Sequence:	2022140	Injection Date:	12/09/20
Lab Sample ID:	2022140-ICV1	Injection Time:	21:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.5100	0.3545077	0.3908601		10.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0400	1.702496	1.714728		0.7	30
1,2,4-Trimethylbenzene	A	5.0000	6.2500	1.781325	2.228106		25.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.7000	1.930352	2.198911		13.9	30
Vinyl acetate	A	5.0000	5.5900	2.11964	2.368215		11.7	30
Vinyl bromide	A	5.0000	5.3200	0.7824054	0.8318511		6.3	30
Vinyl chloride	A	5.0000	5.0100	0.5526786	0.5542437		0.3	30
p- & m-Xylenes	A	10.000	11.630	1.765584	2.052499		16.3	30
o-Xylene	A	5.0000	5.8900	1.802727	2.123447		17.8	30
Total Xylenes	A	15.000	17.520	1.777965	2.076148		16.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 14DEC06.D
Sequence: 2022140
Lab Sample ID: 2022140-CCV1

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/14/20
Injection Time: 11:52

COMPOUND	(1) CAL TYPE	CONC. (ppbv) STD	CONC. (ppbv) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acetone	A	5.0000	4.6800	1.385321	1.29551		-6.5	30
Acrylonitrile	A	5.0000	4.4800	0.4734002	0.4240779		-10.4	30
Allyl chloride	A	5.0000	4.8000	0.9311473	0.8943125		-4.0	30
t-Amyl Methyl ether	A	5.0000	4.9700	0.5084969	0.5057774		-0.5	30
Benzene	A	5.0000	4.5500	2.310203	2.102239		-9.0	30
Benzyl chloride	L	5.0000	4.5200	1.21796	1.272188		-9.6	30
Bromodichloromethane	A	5.0000	5.1500	0.7498123	0.7722997		3.0	30
Bromoform	A	5.0000	5.5600	1.29582	1.441297		11.2	30
Bromomethane	A	5.0000	4.8700	0.5721625	0.5576085		-2.5	30
1,3-Butadiene	A	5.0000	4.8600	0.4373898	0.4253128		-2.8	30
t-Butyl alcohol	A	10.000	9.3100	1.144382	1.065577		-6.9	30
Carbon disulfide	A	5.0000	4.5100	2.556243	2.306857		-9.8	30
Carbon tetrachloride	A	5.0000	5.0800	1.931421	1.961392		1.6	30
Chlorobenzene	A	5.0000	4.8200	0.7977157	0.7686279		-3.6	30
Chloroethane	A	5.0000	4.8500	0.2597023	0.2521494		-2.9	30
Chloroform	A	5.0000	4.6900	1.858315	1.742352		-6.2	30
Chloromethane	A	5.0000	4.6500	0.4590853	0.4265477		-7.1	30
Cyclohexane	A	5.0000	4.0300	1.652539	1.332137		-19.4	30
Dibromochloromethane	A	5.0000	5.3000	0.6776753	0.7182181		6.0	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.0500	0.1651741	0.1667805		1.0	30
1,2-Dibromoethane	A	5.0000	5.0500	0.4694284	0.4741056		1.0	30
Dibromomethane	A	5.0000	4.8900	0.1316079	0.1286219		-2.3	30
1,2-Dichlorobenzene	A	5.0000	5.4800	1.088648	1.192484		9.5	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 14DEC06.D
Sequence: 2022140
Lab Sample ID: 2022140-CCV1

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/14/20
Injection Time: 11:52

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.2500	1.261041	1.324884		5.1	30
1,4-Dichlorobenzene	A	5.0000	5.2600	1.150627	1.211607		5.3	30
Dichlorodifluoromethane	A	5.0000	4.8500	2.297283	2.226962		-3.1	30
1,1-Dichloroethane	A	5.0000	4.6100	1.501032	1.383001		-7.9	30
1,2-Dichloroethane	A	5.0000	4.8700	1.259162	1.226566		-2.6	30
1,1-Dichloroethene	A	5.0000	5.0100	1.264693	1.266479		0.1	30
cis-1,2-Dichloroethene	A	5.0000	4.6100	1.054343	0.972483		-7.8	30
trans-1,2-Dichloroethene	A	5.0000	4.6100	1.231126	1.135534		-7.8	30
1,2-Dichloropropane	A	5.0000	4.6900	0.2973131	0.2789128		-6.2	30
cis-1,3-Dichloropropene	A	5.0000	5.0900	0.3819551	0.3891343		1.9	30
trans-1,3-Dichloropropene	A	5.0000	5.1500	0.4130522	0.425647		3.0	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9600	1.617365	1.605443		-0.7	30
1,1-Difluoroethane	A	5.0000	4.4500	1.308935	1.16431		-11.0	30
Diisopropyl ether	A	5.0000	4.6500	0.5202863	0.4840048		-7.0	30
1,4-Dioxane	A	5.0000	6.3700	0.1396685	0.1779615		27.4	30
Ethanol	A	10.000	8.7900	0.143483	0.1261562		-12.1	30
Ethyl acetate	A	5.0000	4.6300	0.2696996	0.2499825		-7.3	30
Ethylbenzene	A	5.0000	5.3900	0.6525795	0.7037531		7.8	30
1-Ethyl-4-methylbenzene	A	5.0000	5.6700	2.860951	3.241797		13.3	30
Ethyl t-butyl ether	A	5.0000	4.8600	1.81201	1.760083		-2.9	30
n-Heptane	A	5.0000	5.1000	0.2699023	0.2753479		2.0	30
Hexachlorobutadiene	A	5.0000	5.4400	0.6202578	0.6748983		8.8	30
Hexachloroethane	A	5.0000	5.3100	0.2645854	0.2808804		6.2	30

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2020 L St, Suite 400
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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A2
Lab File ID: 14DEC06.D
Sequence: 2022140
Lab Sample ID: 2022140-CCV1

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Calibration Date: 08/15/18 14:58
Injection Date: 12/14/20
Injection Time: 11:52

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.7400	1.320847	1.251614		-5.2	30
2-Hexanone	L	5.0000	4.7700	0.4702171	0.5216257		-4.6	30
Isooctane	A	5.0000	5.0800	1.450681	1.473286		1.6	30
Isopropyl alcohol	A	5.0000	4.4000	0.9542893	0.8395815		-12.0	30
Methylene chloride	A	5.0000	4.4200	0.946655	0.8374147		-11.5	30
Methyl ethyl ketone	A	5.0000	4.8000	1.599616	1.535054		-4.0	30
Methyl iodide	A	5.0000	4.6700	0.9312524	0.8706167		-6.5	30
Methyl isobutyl ketone	A	5.0000	5.5600	0.5962516	0.6628192		11.2	30
Methyl t-butyl ether	A	5.0000	4.8100	2.244678	2.15937		-3.8	30
Naphthalene	Q	5.0000	4.1800	1.277326	1.281175		-16.4	30
Propylene	A	5.0000	4.3500	0.5884372	0.5117081		-13.0	30
Styrene	A	5.0000	5.4300	1.133207	1.231351		8.7	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.1800	0.2449739	0.2540166		3.7	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.0000	1.289947	1.288781		-0.09	30
Tetrachloroethene	A	5.0000	5.0600	0.487058	0.4926954		1.2	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.8700	1.142489	1.111862		-2.7	30
Tetrahydrofuran	A	5.0000	4.9300	0.8416471	0.8306578		-1.3	30
Toluene	A	5.0000	5.2300	0.8694338	0.9102742		4.7	30
1,2,4-Trichlorobenzene	Q	5.0000	4.5100	0.2835387	0.2427126		-9.8	30
1,1,1-Trichloroethane	A	5.0000	4.8800	1.709834	1.670123		-2.3	30
1,1,2-Trichloroethane	A	5.0000	4.9100	0.3422061	0.3358265		-1.9	30
Trichloroethene	A	5.0000	5.1500	0.3311466	0.3411367		3.0	30
Trichlorofluoromethane	A	5.0000	4.9800	2.34705	2.335586		-0.5	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	14DEC06.D	Calibration Date:	08/15/18 14:58
Sequence:	2022140	Injection Date:	12/14/20
Lab Sample ID:	2022140-CCV1	Injection Time:	11:52

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	4.9900	0.3545077	0.3534753		-0.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.7000	1.702496	1.600154		-6.0	30
1,2,4-Trimethylbenzene	A	5.0000	5.7600	1.781325	2.05251		15.2	30
1,3,5-Trimethylbenzene	A	5.0000	5.5000	1.930352	2.121597		9.9	30
Vinyl acetate	A	5.0000	4.8700	2.11964	2.064097		-2.6	30
Vinyl bromide	A	5.0000	4.6600	0.7824054	0.7289312		-6.8	30
Vinyl chloride	A	5.0000	4.8000	0.5526786	0.5303246		-4.0	30
p- & m-Xylenes	A	10.000	10.750	1.765584	1.897378		7.5	30
o-Xylene	A	5.0000	5.3800	1.802727	1.940971		7.7	30
Total Xylenes	A	15.000	16.130	1.777965	1.911909		7.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2035587
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A2	Calibration:	2012010
Lab File ID:	14DEC07.D	Calibration Date:	08/15/18 14:58
Sequence:	2022140	Injection Date:	12/14/20
Lab Sample ID:	2022140-CCV2	Injection Time:	12:24

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	500.24	4.288774	4.290845		0.05	30
Total Petroleum Hydrocarbons	A	500.00	500.24	4.288774	4.290845		0.05	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D		Analyzed: 12/09/20 17:51			
4-Bromofluorobenzene (Surrogate)	10.000	98.4		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D		Analyzed: 12/09/20 18:20			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D		Analyzed: 12/09/20 18:51			
4-Bromofluorobenzene (Surrogate)	10.000	101		11.799	11.798	0.0010	+/-1.0	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D		Analyzed: 12/09/20 19:29			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.8	11.798	0.0020	+/-1.0	
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D		Analyzed: 12/09/20 20:12			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.795	11.798	-0.0030	+/-1.0	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D		Analyzed: 12/09/20 20:57			
4-Bromofluorobenzene (Surrogate)	10.000	103		11.795	11.798	-0.0030	+/-1.0	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022140-ICV1)			Lab File ID: 09DEC14.D		Analyzed: 12/09/20 21:28			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.8	11.798	0.0020	+/-1.0	
Initial Cal Blank (2022140-ICB1)			Lab File ID: 09DEC16.D		Analyzed: 12/09/20 22:27			
4-Bromofluorobenzene (Surrogate)	10.000	93.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Check (2022140-CCV1)			Lab File ID: 14DEC06.D		Analyzed: 12/14/20 11:52			
4-Bromofluorobenzene (Surrogate)	10.000	98.5	70 - 130	11.795	11.798	-0.0030	+/-1.0	
Calibration Blank (2022140-CCB1)			Lab File ID: 14DEC08.D		Analyzed: 12/14/20 12:53			
4-Bromofluorobenzene (Surrogate)	10.000	97.0	70 - 130	11.805	11.798	0.0070	+/-1.0	
LCS (B094975-BS1)			Lab File ID: 14DEC09.D		Analyzed: 12/14/20 13:25			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.804	11.798	0.0060	+/-1.0	
LCS Dup (B094975-BSD1)			Lab File ID: 14DEC10.D		Analyzed: 12/14/20 13:57			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.8	11.798	0.0020	+/-1.0	
Blank (B094975-BLK1)			Lab File ID: 14DEC11.D		Analyzed: 12/14/20 14:25			
4-Bromofluorobenzene (Surrogate)	10.000	89.1	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW24A-01 (2035587-01RE1)			Lab File ID: 14DEC12.D		Analyzed: 12/14/20 14:55			
4-Bromofluorobenzene (Surrogate)	10.000	86.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW24B-01 (2035587-02RE1)			Lab File ID: 14DEC13.D		Analyzed: 12/14/20 15:25			
4-Bromofluorobenzene (Surrogate)	10.000	91.0	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW41A-01 (2035587-06RE1)			Lab File ID: 14DEC15.D		Analyzed: 12/14/20 16:25			
4-Bromofluorobenzene (Surrogate)	10.000	91.0	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW41A-02 (2035587-07RE1)			Lab File ID: 14DEC16.D		Analyzed: 12/14/20 16:55			
4-Bromofluorobenzene (Surrogate)	10.000	92.2	70 - 130	11.79	11.798	-0.0080	+/-1.0	
SG-VW41B-01 (2035587-08RE1)			Lab File ID: 14DEC17.D		Analyzed: 12/14/20 17:26			
4-Bromofluorobenzene (Surrogate)	10.000	92.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW32A-01 (2035587-03RE1)			Lab File ID: 14DEC21.D		Analyzed: 12/14/20 19:34			
4-Bromofluorobenzene (Surrogate)	10.000	92.8	70 - 130	11.794	11.798	-0.0040	+/-1.0	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW32A-02 (2035587-04RE1)			Lab File ID: 14DEC22.D		Analyzed: 12/14/20 20:12			
4-Bromofluorobenzene (Surrogate)	10.000	94.9	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW32A-01 (2035587-03)			Lab File ID: 14DEC23.D		Analyzed: 12/14/20 20:43			
4-Bromofluorobenzene (Surrogate)	10.000	96.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW32A-02 (2035587-04)			Lab File ID: 14DEC24.D		Analyzed: 12/14/20 21:14			
4-Bromofluorobenzene (Surrogate)	10.000	95.5	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW24A-01 (2035587-01)			Lab File ID: 14DEC25.D		Analyzed: 12/14/20 21:50			
4-Bromofluorobenzene (Surrogate)	10.000	90.1	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW24B-01 (2035587-02)			Lab File ID: 14DEC26.D		Analyzed: 12/14/20 22:27			
4-Bromofluorobenzene (Surrogate)	10.000	92.0	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW32B-01 (2035587-05)			Lab File ID: 14DEC27.D		Analyzed: 12/14/20 23:03			
4-Bromofluorobenzene (Surrogate)	10.000	93.2	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW41A-01 (2035587-06)			Lab File ID: 14DEC28.D		Analyzed: 12/14/20 23:39			
4-Bromofluorobenzene (Surrogate)	10.000	93.3	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW41A-02 (2035587-07)			Lab File ID: 14DEC29.D		Analyzed: 12/15/20 00:16			
4-Bromofluorobenzene (Surrogate)	10.000	92.5	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW41B-01 (2035587-08)			Lab File ID: 14DEC30.D		Analyzed: 12/15/20 00:52			
4-Bromofluorobenzene (Surrogate)	10.000	92.2	70 - 130	11.794	11.798	-0.0040	+/-1.0	
SG-VW38A-01 (2035587-09)			Lab File ID: 14DEC31.D		Analyzed: 12/15/20 01:29			
4-Bromofluorobenzene (Surrogate)	10.000	91.6	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW38B-01 (2035587-10)			Lab File ID: 14DEC32.D		Analyzed: 12/15/20 02:05			
4-Bromofluorobenzene (Surrogate)	10.000	91.8	70 - 130	11.795	11.798	-0.0030	+/-1.0	
SG-VW38B-02 (2035587-11)			Lab File ID: 14DEC33.D		Analyzed: 12/15/20 02:43			
4-Bromofluorobenzene (Surrogate)	10.000	92.9	70 - 130	11.795	11.798	-0.0030	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL7)			Lab File ID: 15AUG05.D			Analyzed: 08/15/18 14:58			
Chlorobenzene-d5 (IS)	100626	11.458	152269	11.083	66	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL8)			Lab File ID: 15AUG06.D			Analyzed: 08/15/18 15:32			
Chlorobenzene-d5 (IS)	111220	11.458	152269	11.083	73	50 - 200	0.3750	+/-0.50	
Cal Standard (2022117-CAL9)			Lab File ID: 15AUG07.D			Analyzed: 08/15/18 16:06			
Chlorobenzene-d5 (IS)	126204	11.463	152269	11.083	83	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALA)			Lab File ID: 15AUG08.D			Analyzed: 08/15/18 16:41			
Chlorobenzene-d5 (IS)	161152	11.463	152269	11.083	106	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALB)			Lab File ID: 15AUG09.D			Analyzed: 08/15/18 17:15			
Chlorobenzene-d5 (IS)	216625	11.463	152269	11.083	142	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CALC)			Lab File ID: 15AUG10.D			Analyzed: 08/15/18 17:52			
Chlorobenzene-d5 (IS)	281647	11.463	152269	11.083	185	50 - 200	0.3800	+/-0.50	
Cal Standard (2022117-CAL1)			Lab File ID: 09DEC08.D			Analyzed: 12/09/20 17:51			
Bromochloromethane (IS)	99799	7.601	99484	7.611	100	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	143805	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	276641	8.785	289206	8.79	96	50 - 200	-0.0050	+/-0.50	
Cal Standard (2022117-CAL2)			Lab File ID: 09DEC09.D			Analyzed: 12/09/20 18:20			
Bromochloromethane (IS)	98810	7.606	99484	7.611	99	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143300	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	279854	8.79	289206	8.79	97	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL3)			Lab File ID: 09DEC10.D			Analyzed: 12/09/20 18:51			
Bromochloromethane (IS)	99484	7.611	99484	7.611	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	152269	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	289206	8.79	289206	8.79	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2022117-CAL4)			Lab File ID: 09DEC11.D			Analyzed: 12/09/20 19:29			
Bromochloromethane (IS)	97426	7.611	99484	7.611	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	163565	11.083	152269	11.083	107	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295481	8.795	289206	8.79	102	50 - 200	0.0050	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2022117-CAL5)			Lab File ID: 09DEC12.D			Analyzed: 12/09/20 20:12			
Bromochloromethane (IS)	95008	7.611	99484	7.611	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	168482	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	302542	8.795	289206	8.79	105	50 - 200	0.0050	+/-0.50	
Cal Standard (2022117-CAL6)			Lab File ID: 09DEC13.D			Analyzed: 12/09/20 20:57			
Bromochloromethane (IS)	90786	7.606	99484	7.611	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	168261	11.083	152269	11.083	111	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	292768	8.789	289206	8.79	101	50 - 200	-0.0010	+/-0.50	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2022140-ICV2)			Lab File ID: 15AUG11.D			Analyzed: 08/15/18 18:29			
Chlorobenzene-d5 (IS)	315173	11.463	152269	11.083	207	50 - 200	0.3800	+/-0.50	*
Initial Cal Blank (2022140-ICB2)			Lab File ID: 15AUG13.D			Analyzed: 08/15/18 19:39			
Chlorobenzene-d5 (IS)	238323	11.458	152269	11.083	157	50 - 200	0.3750	+/-0.50	
Initial Cal Check (2022140-ICV1)			Lab File ID: 09DEC14.D			Analyzed: 12/09/20 21:28			
Bromochloromethane (IS)	96813	7.611	99484	7.611	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	147966	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	286843	8.79	289206	8.79	99	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2022140-ICB1)			Lab File ID: 09DEC16.D			Analyzed: 12/09/20 22:27			
Bromochloromethane (IS)	102738	7.606	99484	7.611	103	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	148227	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	294142	8.79	289206	8.79	102	50 - 200	0.0000	+/-0.50	
Calibration Check (2022140-CCV1)			Lab File ID: 14DEC06.D			Analyzed: 12/14/20 11:52			
Bromochloromethane (IS)	85838	7.606	99484	7.611	86	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	128852	11.083	152269	11.083	85	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	242929	8.79	289206	8.79	84	50 - 200	0.0000	+/-0.50	
Calibration Check (2022140-CCV2)			Lab File ID: 14DEC07.D			Analyzed: 12/14/20 12:24			
Chlorobenzene-d5 (IS)	135944	11.083	152269	11.083	89	50 - 200	0.0000	+/-0.50	
Calibration Blank (2022140-CCB1)			Lab File ID: 14DEC08.D			Analyzed: 12/14/20 12:53			
Bromochloromethane (IS)	87623	7.606	99484	7.611	88	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	122773	11.083	152269	11.083	81	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	240849	8.79	289206	8.79	83	50 - 200	0.0000	+/-0.50	
LCS (B094975-BS1)			Lab File ID: 14DEC09.D			Analyzed: 12/14/20 13:25			
Bromochloromethane (IS)	85427	7.606	99484	7.611	86	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	128159	11.078	152269	11.083	84	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	246074	8.789	289206	8.79	85	50 - 200	-0.0010	+/-0.50	
LCS Dup (B094975-BSD1)			Lab File ID: 14DEC10.D			Analyzed: 12/14/20 13:57			
Bromochloromethane (IS)	84845	7.606	99484	7.611	85	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	125136	11.083	152269	11.083	82	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	241133	8.79	289206	8.79	83	50 - 200	0.0000	+/-0.50	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B094975-BLK1)			Lab File ID: 14DEC11.D			Analyzed: 12/14/20 14:25			
Bromochloromethane (IS)	83859	7.606	99484	7.611	84	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	119394	11.083	152269	11.083	78	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	231895	8.785	289206	8.79	80	50 - 200	-0.0050	+/-0.50	
SG-VW24A-01 (2035587-01RE1)			Lab File ID: 14DEC12.D			Analyzed: 12/14/20 14:55			
Bromochloromethane (IS)	79064	7.616	99484	7.611	79	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	115067	11.083	152269	11.083	76	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	213837	8.794	289206	8.79	74	50 - 200	0.0040	+/-0.50	
SG-VW24B-01 (2035587-02RE1)			Lab File ID: 14DEC13.D			Analyzed: 12/14/20 15:25			
Bromochloromethane (IS)	90093	7.606	99484	7.611	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	138775	11.083	152269	11.083	91	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	248698	8.789	289206	8.79	86	50 - 200	-0.0010	+/-0.50	
SG-VW41A-01 (2035587-06RE1)			Lab File ID: 14DEC15.D			Analyzed: 12/14/20 16:25			
Bromochloromethane (IS)	99476	7.606	99484	7.611	100	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143700	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	272180	8.789	289206	8.79	94	50 - 200	-0.0010	+/-0.50	
SG-VW41A-02 (2035587-07RE1)			Lab File ID: 14DEC16.D			Analyzed: 12/14/20 16:55			
Bromochloromethane (IS)	99704	7.606	99484	7.611	100	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147454	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	271224	8.79	289206	8.79	94	50 - 200	0.0000	+/-0.50	
SG-VW41B-01 (2035587-08RE1)			Lab File ID: 14DEC17.D			Analyzed: 12/14/20 17:26			
Bromochloromethane (IS)	97887	7.616	99484	7.611	98	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	143601	11.083	152269	11.083	94	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	275473	8.794	289206	8.79	95	50 - 200	0.0040	+/-0.50	
SG-VW32A-01 (2035587-03RE1)			Lab File ID: 14DEC21.D			Analyzed: 12/14/20 19:34			
Bromochloromethane (IS)	97090	7.606	99484	7.611	98	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	151346	11.083	152269	11.083	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	271528	8.789	289206	8.79	94	50 - 200	-0.0010	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW32A-02 (2035587-04RE1)			Lab File ID: 14DEC22.D			Analyzed: 12/14/20 20:12			
Bromochloromethane (IS)	100842	7.606	99484	7.611	101	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	155037	11.083	152269	11.083	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	284371	8.79	289206	8.79	98	50 - 200	0.0000	+/-0.50	
SG-VW32A-01 (2035587-03)			Lab File ID: 14DEC23.D			Analyzed: 12/14/20 20:43			
Bromochloromethane (IS)	100927	7.611	99484	7.611	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	151900	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	278452	8.79	289206	8.79	96	50 - 200	0.0000	+/-0.50	
SG-VW32A-02 (2035587-04)			Lab File ID: 14DEC24.D			Analyzed: 12/14/20 21:14			
Bromochloromethane (IS)	99673	7.611	99484	7.611	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	147972	11.083	152269	11.083	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	271787	8.795	289206	8.79	94	50 - 200	0.0050	+/-0.50	
SG-VW24A-01 (2035587-01)			Lab File ID: 14DEC25.D			Analyzed: 12/14/20 21:50			
Bromochloromethane (IS)	98312	7.616	99484	7.611	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	151591	11.083	152269	11.083	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	273449	8.794	289206	8.79	95	50 - 200	0.0040	+/-0.50	
SG-VW24B-01 (2035587-02)			Lab File ID: 14DEC26.D			Analyzed: 12/14/20 22:27			
Bromochloromethane (IS)	101943	7.606	99484	7.611	102	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	165725	11.083	152269	11.083	109	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	289861	8.79	289206	8.79	100	50 - 200	0.0000	+/-0.50	
SG-VW32B-01 (2035587-05)			Lab File ID: 14DEC27.D			Analyzed: 12/14/20 23:03			
Bromochloromethane (IS)	106723	7.616	99484	7.611	107	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	160693	11.083	152269	11.083	106	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	299383	8.794	289206	8.79	104	50 - 200	0.0040	+/-0.50	
SG-VW41A-01 (2035587-06)			Lab File ID: 14DEC28.D			Analyzed: 12/14/20 23:39			
Bromochloromethane (IS)	109724	7.611	99484	7.611	110	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	166874	11.083	152269	11.083	110	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	310831	8.795	289206	8.79	107	50 - 200	0.0050	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022140
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration: 2012010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW41A-02 (2035587-07)			Lab File ID: 14DEC29.D			Analyzed: 12/15/20 00:16			
Bromochloromethane (IS)	106314	7.611	99484	7.611	107	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	166051	11.083	152269	11.083	109	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	299637	8.79	289206	8.79	104	50 - 200	0.0000	+/-0.50	
SG-VW41B-01 (2035587-08)			Lab File ID: 14DEC30.D			Analyzed: 12/15/20 00:52			
Bromochloromethane (IS)	105930	7.616	99484	7.611	106	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	159925	11.083	152269	11.083	105	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	302265	8.794	289206	8.79	105	50 - 200	0.0040	+/-0.50	
SG-VW38A-01 (2035587-09)			Lab File ID: 14DEC31.D			Analyzed: 12/15/20 01:29			
Bromochloromethane (IS)	106895	7.611	99484	7.611	107	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	161858	11.083	152269	11.083	106	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	298750	8.79	289206	8.79	103	50 - 200	0.0000	+/-0.50	
SG-VW38B-01 (2035587-10)			Lab File ID: 14DEC32.D			Analyzed: 12/15/20 02:05			
Bromochloromethane (IS)	103132	7.616	99484	7.611	104	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	160683	11.083	152269	11.083	106	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	293872	8.794	289206	8.79	102	50 - 200	0.0040	+/-0.50	
SG-VW38B-02 (2035587-11)			Lab File ID: 14DEC33.D			Analyzed: 12/15/20 02:43			
Bromochloromethane (IS)	106058	7.616	99484	7.611	107	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	158682	11.078	152269	11.083	104	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	299216	8.795	289206	8.79	103	50 - 200	0.0050	+/-0.50	

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Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2022117
Calibration: 2012010

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
8G16027	TO-3/TO-14A/TO-15 BFB Working Std.	2022117-TUN2	15AUG04.D	08/15/18 14:24
9H08027	TO-14A / TO-15 CAL1 TPH	2022117-CAL7	15AUG05.D	08/15/18 14:58
9H08028	TO-14A / TO-15 CAL2 TPH	2022117-CAL8	15AUG06.D	08/15/18 15:32
9H08029	TO-14A / TO-15 CAL3 TPH	2022117-CAL9	15AUG07.D	08/15/18 16:06
9H08030	TO-14A / TO-15 CAL4 TPH	2022117-CALA	15AUG08.D	08/15/18 16:41
9H08031	TO-14A / TO-15 CAL5 TPH	2022117-CALB	15AUG09.D	08/15/18 17:15
9H08032	TO-14A / TO-15 CAL6 TPH	2022117-CALC	15AUG10.D	08/15/18 17:52
0L01028	TO-14A/TO-15 Working BFB	2022117-TUN1	09DEC07.D	12/09/20 17:22
0L10033	MS-A1 TO-14A /TO-15 CAL1	2022117-CAL1	09DEC08.D	12/09/20 17:51
0L10034	MS-A1 TO-14A /TO-15 CAL2	2022117-CAL2	09DEC09.D	12/09/20 18:20
0L10035	MS-A1 TO-14A /TO-15 CAL3	2022117-CAL3	09DEC10.D	12/09/20 18:51
0L10036	MS-A1 TO-14A /TO-15 CAL4	2022117-CAL4	09DEC11.D	12/09/20 19:29
0L10037	MS-A1 TO-14A /TO-15 CAL5	2022117-CAL5	09DEC12.D	12/09/20 20:12
0L10038	MS-A1 TO-14A /TO-15 CAL6	2022117-CAL6	09DEC13.D	12/09/20 20:57

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.318049	1	1.330129	5	1.313518	15	1.359268	20	1.463482	25	1.527482
Acrylonitrile	0.5	0.356717	1	0.3906487	5	0.4536408	15	0.504766	20	0.5409071	25	0.5937215
Allyl chloride	0.5	0.7016102	1	0.7586277	5	0.9155241	15	1.008341	20	1.067989	25	1.134792
t-Amyl Methyl ether	0.5	0.359455	1	0.4046753	5	0.4969192	15	0.5688059	20	0.5901445	25	0.6309815
Benzene	0.5	1.773364	1	1.969133	5	2.295726	15	2.462457	20	2.610849	25	2.749688
Benzyl chloride	0.5	0.524043	1	0.6993719	5	1.22193	15	1.598569	20	1.612576	25	1.651268
Bromodichloromethane	0.5	0.7502865	1	0.74253	5	0.7567547	15	0.7550514	20	0.7369688	25	0.7572822
Bromoform	0.5	1.180348	1	1.24843	5	1.363784	15	1.359003	20	1.321459	25	1.301896
Bromomethane	0.5	0.5869798	1	0.5809129	5	0.5200635	15	0.5535757	20	0.5854244	25	0.6060185
1,3-Butadiene	0.5	0.4174391	1	0.4243498	5	0.4105384	15	0.4309733	20	0.4597876	25	0.4812504
t-Butyl alcohol	1	0.8454995	2	0.9820868	10	1.131911	30	1.207857	40	1.298012	50	1.400927
Carbon disulfide	0.5	2.253129	1	2.331748	5	2.437216	15	2.615092	20	2.77184	25	2.928434
Carbon tetrachloride	0.5	1.768354	1	1.832203	5	1.853806	15	1.94391	20	2.051348	25	2.138902
Chlorobenzene	0.5	0.8481028	1	0.8184625	5	0.7857098	15	0.7869406	20	0.7665382	25	0.7805402
Chloroethane	0.5	0.2607241	1	0.2489627	5	0.2465723	15	0.2557633	20	0.2703825	25	0.275809
Chloroform	0.5	1.809437	1	1.834025	5	1.773491	15	1.821868	20	1.90515	25	2.005917
Chloromethane	0.5	0.4585216	1	0.4539014	5	0.4353866	15	0.4497157	20	0.4689816	25	0.4880048
Cyclohexane	0.5	2.306236	1	1.827042	5	1.422902	15	1.403075	20	1.464229	25	1.49175
Dibromochloromethane	0.5	0.6157439	1	0.6439072	5	0.6808987	15	0.7069377	20	0.7015637	25	0.7170005
1,2-Dibromo-3-chloropropane	0.5	0.1045861	1	0.122889	5	0.1614774	15	0.193766	20	0.2021462	25	0.2061797
1,2-Dibromoethane	0.5	0.3900362	1	0.4303673	5	0.4747758	15	0.4992696	20	0.500276	25	0.5218453
Dibromomethane	0.5	0.1341088	1	0.1346774	5	0.1269268	15	0.1307044	20	0.1289887	25	0.1342414
1,2-Dichlorobenzene	0.5	0.8169396	1	0.9780879	5	1.185625	15	1.210524	20	1.180921	25	1.159793
1,3-Dichlorobenzene	0.5	1.045304	1	1.246127	5	1.386375	15	1.318408	20	1.293675	25	1.276358
1,4-Dichlorobenzene	0.5	0.8774382	1	1.097278	5	1.205774	15	1.28349	20	1.224006	25	1.215775

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.32327	1	2.269507	5	2.177556	15	2.240702	20	2.350139	25	2.422523
1,1-Dichloroethane	0.5	1.393401	1	1.421415	5	1.456576	15	1.496924	20	1.577741	25	1.660137
1,2-Dichloroethane	0.5	1.1441	1	1.206659	5	1.205842	15	1.256571	20	1.339798	25	1.402005
1,1-Dichloroethene	0.5	1.026463	1	1.142091	5	1.269149	15	1.331383	20	1.374163	25	1.444906
cis-1,2-Dichloroethene	0.5	0.7966012	1	0.8438417	5	1.017229	15	1.160587	20	1.218129	25	1.28967
trans-1,2-Dichloroethene	0.5	0.9601299	1	1.041899	5	1.194524	15	1.327606	20	1.389662	25	1.472936
1,2-Dichloropropane	0.5	0.2972806	1	0.2886148	5	0.2984032	15	0.298009	20	0.2964613	25	0.3051098
cis-1,3-Dichloropropene	0.5	0.2450107	1	0.2753936	5	0.3843281	15	0.4469977	20	0.459247	25	0.4807534
trans-1,3-Dichloropropene	0.5	0.2774715	1	0.3143067	5	0.4384833	15	0.4738263	20	0.4781601	25	0.4960651
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	1.662943	1	1.601255	5	1.55611	15	1.575616	20	1.628021	25	1.680246
1,1-Difluoroethane	0.5	1.27837	1	1.272948	5	1.207109	15	1.297313	20	1.370369	25	1.427502
Diisopropyl ether	0.5	0.4176395	1	0.4424653	5	0.5155	15	0.5597684	20	0.5804932	25	0.6058511
1,4-Dioxane	0.5	0.1615813	1	0.1882767	5	0.1291813	15	0.1097893	20	0.1179935	25	0.1311892
Ethanol	1	0.1506027	2	0.1487198	10	0.1344839	30	0.1334038	40	0.1428143	50	0.1508735
Ethyl acetate	0.5	0.2210443	1	0.2506831	5	0.2783362	15	0.279111	20	0.2894704	25	0.2995528
Ethylbenzene	0.5	0.4513056	1	0.588067	5	0.7303916	15	0.7306127	20	0.7133997	25	0.7017003
1-Ethyl-4-methylbenzene	0.5	1.581586	1	2.365038	5	3.404002	15	3.494109	20	3.15999	25	3.160982
Ethyl t-butyl ether	0.5	1.134681	1	1.392369	5	1.833441	15	2.054558	20	2.160839	25	2.296173
n-Heptane	0.5	0.2233219	1	0.2576343	5	0.2869443	15	0.2887969	20	0.2799	25	0.2828164
Hexachlorobutadiene	0.5	0.6017871	1	0.6351012	5	0.6298459	15	0.6231692	20	0.6125432	25	0.6191001
Hexachloroethane	0.5	0.2317027	1	0.24194	5	0.2679731	15	0.2830027	20	0.2801546	25	0.2827393
Hexane	0.5	1.161334	1	1.283069	5	1.32357	15	1.361101	20	1.384347	25	1.411663
2-Hexanone	0.5	0.2064047	1	0.2940462	5	0.5131221	15	0.5994249	20	0.5953157	25	0.6129891
Isooctane	0.5	1.365307	1	1.525724	5	1.547181	15	1.468144	20	1.395833	25	1.401899
Isopropyl alcohol	0.5	0.7957996	1	0.7968829	5	0.9098146	15	0.9920897	20	1.075799	25	1.15535
Methylene chloride	0.5	1.088788	1	1.004554	5	0.853303	15	0.8743388	20	0.9057553	25	0.953191

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.196605	1	1.364336	5	1.580455	15	1.718234	20	1.808342	25	1.929725
Methyl iodide	0.5	0.755719	1	0.7820059	5	0.8648024	15	0.9870329	20	1.065052	25	1.132902
Methyl isobutyl ketone	0.5	0.4311002	1	0.5553253	5	0.6623583	15	0.6631041	20	0.6351184	25	0.6305033
Methyl t-butyl ether	0.5	1.428872	1	1.685356	5	2.217703	15	2.511616	20	2.711382	25	2.913141
Naphthalene	0.5	0.1796878	1	0.3549197	5	1.305965	15	1.845998	20	1.934052	25	2.043333
Propylene	0.5	0.5088227	1	0.4929663	5	0.5529532	15	0.6329317	20	0.6526714	25	0.6902782
Styrene	0.5	0.6311324	1	0.8736218	5	1.291281	15	1.357552	20	1.32437	25	1.321283
1,1,1,2-Tetrachloroethane	0.5	0.2412513	1	0.2410543	5	0.2415164	15	0.2481378	20	0.2449842	25	0.2528992
1,1,2,2-Tetrachloroethane	0.5	1.377838	1	1.46448	5	1.376472	15	1.232578	20	1.164032	25	1.124282
Tetrachloroethene	0.5	0.4413662	1	0.4567382	5	0.49268	15	0.5117757	20	0.5014064	25	0.5183818
1,1,1,2-Tetrafluoroethane	0.5	1.148308	1	1.137233	5	1.083913	15	1.125606	20	1.166865	25	1.193012
Tetrahydrofuran	0.5	0.6264592	1	0.7442567	5	0.8737686	15	0.9055625	20	0.9330477	25	0.9667878
Toluene	0.5	0.5888498	1	0.7035454	5	0.9519789	15	0.9855682	20	0.9742432	25	1.012417
1,2,4-Trichlorobenzene	0.5	9.498974E-02	1	0.1296581	5	0.2424656	15	0.3764701	20	0.4117888	25	0.4458597
1,1,1-Trichloroethane	0.5	1.561539	1	1.589718	5	1.623899	15	1.72999	20	1.8181	25	1.935761
1,1,2-Trichloroethane	0.5	0.3468033	1	0.3409992	5	0.3426001	15	0.3369241	20	0.3374441	25	0.3484657
Trichloroethene	0.5	0.3156437	1	0.3381406	5	0.3468531	15	0.3337496	20	0.3253763	25	0.3271164
Trichlorofluoromethane	0.5	2.365354	1	2.338427	5	2.230188	15	2.279761	20	2.375826	25	2.492746
1,2,3-Trichloropropane	0.5	0.3360106	1	0.3702722	5	0.3735494	15	0.3522677	20	0.3449449	25	0.3500015
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.739697	1	1.693756	5	1.625045	15	1.645912	20	1.704814	25	1.80575
1,2,4-Trimethylbenzene	0.5	0.968951	1	1.42254	5	2.088672	15	2.113806	20	2.047875	25	2.046107
1,3,5-Trimethylbenzene	0.5	1.538333	1	2.030147	5	2.131741	15	1.965979	20	2.076079	25	1.839832
Vinyl acetate	0.5	1.408431	1	1.693958	5	2.080254	15	2.360246	20	2.513252	25	2.661697
Vinyl bromide	0.5	0.7316707	1	0.7136929	5	0.7272526	15	0.7854577	20	0.8474023	25	0.8889564
Vinyl chloride	0.5	0.5364783	1	0.5304119	5	0.5264364	15	0.5428599	20	0.5801932	25	0.5996916
p- & m-Xylenes	1	1.482772	2	1.836741	10	1.945406	30	1.821435	40	1.773589	50	1.733564

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	1.458225	1	1.85157	5	2.029211	15	1.918858	20	1.806383	25	1.752114
Total Xylenes	1.5	1.474589	3	1.841684	15	1.973341	45	1.853909	60	1.78452	75	1.739747
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.299357	10	1.329658	10	1.329844	10	1.342598	10	1.343331	10	1.357944

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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Laboratory: BC Laboratories
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Calibration: 2012010
Matrix: Air
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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Calibration: 2012010
Matrix: Air

SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
Total Petroleum Hydrocarbons	50	4.473297	100	4.028587	200	4.258106	300	4.259579	500	4.318438	1000	4.394639
4-Bromofluorobenzene (Surrogate)	10	~~1.108133~~	10	~~1.123908~~	10	~~1.17696~~	10	~~1.135282~~	10	~~1.101876~~	10	~~1.117431~~

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Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.385321	6.434241	5.375333	7.585906E-02			30	
Acrylonitrile	0.4734002	19.09838	5.724167	4.485642E-02			30	
Allyl chloride	0.9311473	18.52982	6.181167	2.958166E-02			30	
t-Amyl Methyl ether	0.5084969	21.25953	8.938667	5.593406E-02			30	
Benzene	2.310203	16.32816	8.611333	0.0354558			30	
Benzyl chloride	1.21796	40.86811	12.55917	5.166128E-02	0.998788		0.99	
Bromodichloromethane	0.7498123	1.115201	9.1845	2.637263E-02			30	
Bromoform	1.29582	5.444284	11.41583	7.775371E-03			30	
Bromomethane	0.5721625	5.345957	4.797333	5.836302E-02			30	
1,3-Butadiene	0.4373898	6.265987	4.580333	8.255267E-02			30	
t-Butyl alcohol	1.144382	17.87723	6.016667	0.162368			30	
Carbon disulfide	2.556243	10.27469	6.369	4.812452E-02			30	
Carbon tetrachloride	1.931421	7.323825	8.6985	2.799377E-02			30	
Chlorobenzene	0.7977157	3.759311	11.1045	2.403318E-02			30	
Chloroethane	0.2597023	4.483178	4.929167	4.551929E-02			30	
Chloroform	1.858315	4.533156	7.689833	6.832862E-02			30	
Chloromethane	0.4590853	3.909782	4.306333	0.0661716			30	
Cyclohexane	1.652539	21.5489	8.779166	1.958413E-02			30	
Dibromochloromethane	0.6776753	5.887607	10.42417	9.295585E-03			30	
1,2-Dibromo-3-chloropropane	0.1651741	26.16444	13.11533	5.121901E-02			30	
1,2-Dibromoethane	0.4694284	10.6287	10.55367	0.0345858			30	
Dibromomethane	0.1316079	2.455095	9.063667	3.849048E-02			30	
1,2-Dichlorobenzene	1.088648	14.45884	12.831	0.0493743			30	
1,3-Dichlorobenzene	1.261041	9.183964	12.5775	2.968233E-02			30	
1,4-Dichlorobenzene	1.150627	12.76119	12.61567	3.617238E-02			30	
Dichlorodifluoromethane	2.297283	3.767884	4.174833	8.952619E-02			30	

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EPA-TO-15

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SDG: 2035587
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Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Instrument: MS-A2
Matrix: Air
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.501032	6.735961	6.933333	4.629958E-02			30	
1,2-Dichloroethane	1.259162	7.596921	8.167667	5.401423E-02			30	
1,1-Dichloroethene	1.264693	12.28587	6.01	5.078188E-02			30	
cis-1,2-Dichloroethene	1.054343	19.23343	7.498833	4.922458E-02			30	
trans-1,2-Dichloroethene	1.231126	16.38681	6.786	6.697634E-02			30	
1,2-Dichloropropane	0.2973131	1.772499	9.082333	0.0332132			30	
cis-1,3-Dichloropropene	0.3819551	26.20214	9.945667	1.908951E-02			30	
trans-1,3-Dichloropropene	0.4130522	22.60837	9.673	1.900437E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.617365	3.016325	4.378333	5.738072E-02			30	
1,1-Difluoroethane	1.308935	5.973258	4.051	0.1098626			30	
Diisopropyl ether	0.5202863	14.66801	7.6135	6.986398E-02			30	
1,4-Dioxane	0.1396685	21.20894	9.206	0.1521462			30	
Ethanol	0.143483	5.538474	4.988167	9.750767E-02			30	
Ethyl acetate	0.2696996	10.7133	7.611	7.224087E-02			30	
Ethylbenzene	0.6525795	17.19123	11.26983	2.214918E-02			30	
1-Ethyl-4-methylbenzene	2.860951	25.95955	12.19117	4.650695E-02			30	
Ethyl t-butyl ether	1.81201	25.29311	7.960667	6.904968E-02			30	
n-Heptane	0.2699023	9.423343	9.353167	1.061473E-02			30	
Hexachlorobutadiene	0.6202578	1.93835	14.451	3.287711E-02			30	
Hexachloroethane	0.2645854	8.479442	13.27683	0.0254833			30	
Hexane	1.320847	6.837258	7.631	0.043305			30	
2-Hexanone	0.4702171	37.46843	10.31583	0.0848794	0.999488		0.99	
Isooctane	1.450681	5.151604	9.228333	2.658184E-02			30	
Isopropyl alcohol	0.9542893	15.43601	5.5465	7.439658E-02			30	
Methylene chloride	0.946655	9.35498	6.082333	4.280757E-02			30	
Methyl ethyl ketone	1.599616	17.34159	7.192333	7.378315E-02			30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2012010
Matrix: Air
SDG: 2035587
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A2
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.9312524	16.57855	5.966833	6.516463E-02			30	
Methyl isobutyl ketone	0.5962516	15.08928	9.6905	6.228694E-02			30	
Methyl t-butyl ether	2.244678	26.09128	6.9705	8.879637E-02			30	
Naphthalene	1.277326	64.53852	14.18017	5.710332E-02		0.9995633	0.99	
Propylene	0.5884372	13.84574	4.116667	0.1265706			30	
Styrene	1.133207	26.96022	11.523	2.137161E-02			30	
1,1,1,2-Tetrachloroethane	0.2449739	1.949129	11.09133	1.847227E-02			30	
1,1,2,2-Tetrachloroethane	1.289947	10.53074	11.574	2.054784E-02			30	
Tetrachloroethene	0.487058	6.38568	10.7705	2.452836E-02			30	
1,1,1,2-Tetrafluoroethane	1.142489	3.257289	3.987833	9.401626E-02			30	
Tetrahydrofuran	0.8416471	15.48443	7.960667	5.551932E-02			30	
Toluene	0.8694338	20.44441	10.2015	2.829269E-02			30	
1,2,4-Trichlorobenzene	0.2835387	52.86741	14.063	0.0287038		0.9995862	0.99	
1,1,1-Trichloroethane	1.709834	8.55465	8.333	0.0497117			30	
1,1,2-Trichloroethane	0.3422061	1.38609	10.04983	1.951433E-02			30	
Trichloroethene	0.3311466	3.286654	9.210333	2.207399E-02			30	
Trichlorofluoromethane	2.34705	3.841655	5.5215	5.048852E-02			30	
1,2,3-Trichloropropane	0.3545077	4.126535	11.63517	1.227276E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.702496	3.836183	6.284167	0.0386248			30	
1,2,4-Trimethylbenzene	1.781325	26.74482	12.46217	4.723045E-02			30	
1,3,5-Trimethylbenzene	1.930352	11.22834	12.22533	3.608963E-02			30	
Vinyl acetate	2.11964	23.06626	6.9995	4.111779E-02			30	
Vinyl bromide	0.7824054	9.203146	5.204167	3.659738E-02			30	
Vinyl chloride	0.5526786	5.434517	4.474667	5.633136E-02			30	
p- & m-Xylenes	1.765584	8.832349	11.3505	2.199905E-02			30	
o-Xylene	1.802727	10.76843	11.57717	2.744893E-02			30	

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2012010
Instrument: MS-A2
Matrix: Air
Calibration Date: 08/15/18 14:58

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	1.777965	9.463054	11.57717	2.744893E-02			30	
TPH - Gasoline	4.288774	3.545743	11.13	7.349294			30	
Total Petroleum Hydrocarbons	4.288774	3.545743	11.13	7.349294			30	
4-Bromofluorobenzene (Surrogate)	1.333789	1.488289	11.798	2.204781E-02			30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2035587
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW24A-01	12/03/20 16:30	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/14/20 21:50	11.00	30.00	
SG-VW24A-01	12/03/20 16:30	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/14/20 14:55	11.00	30.00	
SG-VW24B-01	12/03/20 16:20	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/14/20 22:27	11.00	30.00	
SG-VW24B-01	12/03/20 16:20	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/14/20 15:25	11.00	30.00	
SG-VW32A-01	12/04/20 09:42	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 20:43	10.00	30.00	
SG-VW32A-01	12/04/20 09:42	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 19:34	10.00	30.00	
SG-VW32A-02	12/04/20 09:42	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 21:14	10.00	30.00	
SG-VW32A-02	12/04/20 09:42	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 20:12	10.00	30.00	
SG-VW32B-01	12/04/20 09:30	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 23:03	10.00	30.00	
SG-VW41A-01	12/04/20 11:10	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 23:39	10.00	30.00	
SG-VW41A-01	12/04/20 11:10	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 16:25	10.00	30.00	
SG-VW41A-02	12/04/20 11:10	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/15/20 00:16	11.00	30.00	
SG-VW41A-02	12/04/20 11:10	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 16:55	10.00	30.00	
SG-VW41B-01	12/04/20 11:00	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/15/20 00:52	11.00	30.00	
SG-VW41B-01	12/04/20 11:00	12/07/20 08:30	12/14/20 09:03	10.00	30.00	12/14/20 17:26	10.00	30.00	
SG-VW38A-01	12/04/20 13:45	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/15/20 01:29	11.00	30.00	
SG-VW38B-01	12/04/20 13:30	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/15/20 02:05	11.00	30.00	
SG-VW38B-02	12/04/20 13:30	12/07/20 08:30	12/14/20 09:03	11.00	30.00	12/15/20 02:43	11.00	30.00	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/23/2020 12:48:54PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2037849

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By
BC Laboratories

For AECOM - Sacramento

60632793.06

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2037849
COC Number:
Cooler 2 was received at 25 °C
Cooler 3 was received at 25 °C
Cooler 4 was received at 25 °C
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The internal standard on the sample was not within the control limits.

Lab Number	Method	Analyte
2100148-CAL7	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CAL8	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CAL9	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CALA	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CALB	EPA-TO-15	Chlorobenzene-d5 (IS)

The Continuing Calibration Verification (CCV) recovery was not within established control limits.

Lab Number	Method	Analyte
2100086-CCV1	EPA-TO-15	t-Amyl Methyl ether
2100086-CCV1	EPA-TO-15	Ethyl t-butyl ether
2100086-CCV3	EPA-TO-15	Ethyl t-butyl ether
2100182-CCV1	EPA-TO-15	t-Amyl Methyl ether
2100182-CCV1	EPA-TO-15	Ethyl t-butyl ether
2100182-CCV3	EPA-TO-15	t-Amyl Methyl ether
2100182-CCV3	EPA-TO-15	Ethyl t-butyl ether

LCS / LCSD

The LCS recoveries were within QC limits.

Discussion

Method TO-15 canister with sample ID 2037849-01 came into the lab at ambient pressure.

Lab Number	Receipt Pressure	Units
20-37849-01	14.6	PSIA
20-37849-02	13.8	PSIA
20-37849-03	13.9	PSIA
20-37849-04	13.6	PSIA
20-37849-05	13.6	PSIA
20-37849-06	13.0	PSIA
20-37849-07	13.3	PSIA
20-37849-08	13.4	PSIA
20-37849-09	13.5	PSIA
20-37849-10	13.0	PSIA
20-37849-11	13.2	PSIA
20-37849-12	12.7	PSIA
20-37849-13	12.9	PSIA
20-37849-14	12.7	PSIA
20-37849-15	12.9	PSIA
20-37849-16	12.8	PSIA
20-37849-17	12.9	PSIA
20-37849-18	13.6	PSIA
20-37849-19	13.3	PSIA
20-37849-20	13.2	PSIA
20-37849-21	13.3	PSIA
20-37849-22	13.3	PSIA
20-37849-23	13.1	PSIA
20-37849-24	13.3	PSIA
20-37849-25	12.9	PSIA
20-37849-26	12.9	PSIA
20-37849-27	13.2	PSIA
20-37849-28	13.3	PSIA
20-37849-29	13.7	PSIA
20-37849-30	12.3	PSIA
20-37849-31	12.6	PSIA

RUSH!

AECOM

CHAIN OF CUSTODY

20-37849

Page 1 of 3

Lab: BC Laboratories

TAT: 6 Day

Report results to: Keegan George (Keegan.George@smud.org)
Name: Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No.: 60632793.06

AIR

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send Invoices to SMUD

NO DILUTIONS

CHK BY: [signature]
DISTRIBUTION: Air
SUB OUT

Analyses Requested

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont.	USEPA Method TO-15	Sample Condition/Comments intl vac	final vac	Can#	FR#	Preservative	Container Type
-1	SG-VW17A-01	12/22/20	0907	AIR	1	x	-30	-5	5186	1540	N	1.4 L Canister
-2	SG-VW17B-01		0856	AIR	1	x	-30	-5	9471	1203	N	
-3	SG-VW17B-02		0856	AIR	1	x	-30	-5	10391	1203	N	
-4	SG-VW18A-01		1009	AIR	1	x	-30	-5	2642	1243	N	
-5	SG-VW18B-01		0958	AIR	1	x	-30	-5	10393	1288	N	
-6	SG-VW52A-01		1113	AIR	1	x	-30	-5	6124	1319	N	
-7	SG-VW52B-01		1102	AIR	1	x	-30	-5	6437	1245	N	
-8	SG-VW44A-01		1208	AIR	1	x	-30	-5	10390	1073	N	
-9	SG-VW44B-01		1157	AIR	1	x	-30	-5	2975	1510	N	
-10	SG-VW43A-01		1308	AIR	1	x	-30	-5	9463	1287	N	
-11	SG-VW43B-01		1256	AIR	1	x	-30	-5	5175	1154	N	
-12	SG-VW21A-01		1417	AIR	1	x	-30	-5	6021	1195	N	
-13	SG-VW21A-02		1417	AIR	1	x	-30	-5	2846	1195	N	

Collected by: Brian Weeks Date/Time 12/23/20 @ 1515
Relinquished by: [signature] Date/Time 12/23/20 @ 1545
Relinquished by: [signature] Date/Time 12/23/2020 1615
Relinquished by: Date/Time
Method of Shipment:

Relinquished by: [signature] Date/Time 12/23/2020 1545
Relinquished by: [signature] Date/Time 12-28-20 1050
Relinquished by: Date/Time
Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2037849 Page 2 of 7

AECOM

CHAIN OF CUSTODY
20-37849

FUSH

Page 2 of 3

Lab: BC Laboratories

TAT: 6 Day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.286.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No.: 60632793.06

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send Invoices to SMUD

NO DILUTIONS

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of cont.	Analyses Requested: USEPA Method TO-15	Sample Condition/Comments: Intl vac	final vac	Can#	FR#	Preservative	Container Type
-13	SG-VW21B-01	12/22/20	1404	AIR	1	x	-30	-5	2890	1220	N	1.4L Cans
-15	SG-VW22A-01	12/22/20	1525	AIR	1	x	-30	-4	2649	1263	N	
-16	SG-VW22B-01	12/22/20	1515	AIR	1	x	-30	-5	10514	1237	N	
-17	SG-VW45A-01	12/23/20	0854	AIR	1	x	-30	-5	6050	1290	N	
-18	SG-VW45B-01		0813	AIR	1	x	-29.5	-5	2899	1197	N	
-19	SG-VW46A-01		0959	AIR	1	x	-30	-5	1490	1257	N	
-20	SG-VW46B-01		0947	AIR	1	x	-30	-5	6014	1513	N	
-21	SG-VW47A-01		1049	AIR	1	x	-30	-5	6028	1155	N	
-23	SG-VW47B-01		1038	AIR	1	x	-30	-5	0942	1382	N	
-24	SG-VW48A-01		1207	AIR	1	x	-30	-5	2888	1240	N	
-25	SG-VW48B-01		1156	AIR	1	x	-30	-5	10476	1021	N	
-26	SG-VW49A-01		1259	AIR	1	x	-30	-5	11009	1317	N	
-27	SG-VW49B-01	↓	1249	AIR	1	x	-30	-5	6016	1211	N	↓

Collected by: Brian Weeks
Relinquished by: _____ Date/Time 12/23/20 @ 1515
Relinquished by: _____ Date/Time 12/23/20 @ 1545
Relinquished by: _____ Date/Time 12/23/2020 1615
Method of Shipment: _____

Relinquished by: _____ Date/Time 12/23/20 @ 1545
Relinquished by: _____ Date/Time 12/23/2020 1615
Relinquished by: _____ Date/Time 12-23-20 1930

Sample Condition on Rcpt: _____

Chain of Custody and Cooler Receipt Form for 2037849 Page 3 of 7

AECOM

CHAIN OF CUSTODY

20-37849

Page 3 of 3

Lab: BC Laboratories

TAT: 6 Day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.286.3843
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No.: 60632793.06

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send invoices to SMUD

NO DILUTIONS

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont.	Analyses Requested: USEPA Method TO-15	Sample Condition/Comments: Intl vac	final vac	Can#	FR#	Preservative	Container Type
-27 SG-VWSCA-01	12/23/20	1355	AIR	1	x	-30	-5	10385	12027	N	1.4L Canister
-28 SG-VWSDA-02		1355	AIR	1	x	-30	-5	1941	12023	N	
-29 SG-VWSBB-01		1343	AIR	1	x	-29	-5	10981	12028	N	
-30 SG-VWSIA-01		1507	AIR	1	x	-28.5	-5	1939	12036	N	
-31 SG-VWSIB-01	↓	1455	AIR	1	x	-29	-5	2858	12029	N	↓
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	
			AIR	1	x					N	

Collected by: Brian Weeks Date/Time 12/23/20 @ 1510
Relinquished by: [signature] DateTime 12/23/20 @ 1545
Relinquished by: [signature] DateTime 12/23/2020 1605
Method of Shipment: _____ DateTime _____

Relinquished by: [signature] DateTime 12/23/2020 1545
Relinquished by: [signature] DateTime 12/23/2020 1605
Relinquished by: _____ DateTime _____

Sample Condition on Rcpt: _____

Chain of Custody and Cooler Receipt Form for 2037849 Page 4 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 4

Submission #: 20-37849

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: Container: SUMMA Thermometer ID:

Temperature: (A) room °C / (C) Temp °C

Date/Time 12-28-20 1050

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
8oz. NITRATE/NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL										
QT EPA 1664										
T ODOR										
ADIOLOGICAL										
BACTERIOLOGICAL										
0 ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
z EPA 548										
T EPA 549										
T EPA 8015M										
T EPA 8270										
z / 16oz / 32oz AMBER										
z / 16oz / 32oz JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
DLAR BAG										
RROUS IRON										
CORE										
ART KIT										
MMA CANISTER 1.4L	A	A	A	A	A	A	A	A	A	A

Comments:

Sample Numbering Completed By: CAB Date/Time: 12/28/20 1115

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2037849 Page 5 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 4

Submission #: W-37849

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: Container: SUMMA Thermometer ID:

Temperature: (A) Room °C / (C) Temp °C

Date/Time 12-28-20 1050

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PR UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
0z EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
oz / 16oz / 32oz AMBER										
oz / 16oz / 32oz JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
ERROUS IRON										
NCORR										
dART KIT										
MMA CANISTER 1.4L	A	A	A	A	A	A	A	A	A	A

Comments:

Sample Numbering Completed By: CAS Date/Time: 12/28/20 1049

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2037849 Page 6 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 4

Submission #: 20-37849

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: Container: SUMMA Thermometer ID:

Temperature: (A) ROOM °C / (C) TEMP °C

Date/Time 12-28-20 1050

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									30
	21	22	23	24	25	26	27	28	29	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
4oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
4oz / 16oz / 32oz AMBER										
4oz / 16oz / 32oz JAR										
FOIL SLEEVE										
VOB VIAL										
PLASTIC BAG										
KEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER 1.4L	A	A	A	A	A	A	A	A	A	A

Comments:

Sample Numbering Completed By: CAB Date/Time: 12/28/20 1015

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2037849 Page 7 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 of 4

Submission #: 20-37849

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received
☑ YES ☐ NO

Emissivity: Container: SUMMA Thermometer ID:

Temperature: (A) room °C / (C) temp °C

Date/Time 12-28-20 1050

Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
?IA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL										
)T EPA 1664										
T ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
z EPA 548										
T EPA 549										
T EPA 8015M										
T EPA 8270										
z / 16oz / 32oz AMBER										
z / 16oz / 32oz JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
DLAR BAG										
RROUS IRON										
CORE										
ART KIT										
MMA CANISTER 1.4L	A									

Comments:

Sample Numbering Completed By: CAB Date/Time: 12/28/20 1015

A = Actual / C = Corrected

Rev 21 05/23/2016

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2037849**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW17A-01	2037849-01
SG-VW17A-01	2037849-01RE1
SG-VW17B-01	2037849-02
SG-VW17B-01	2037849-02RE1
SG-VW17B-02	2037849-03
SG-VW17B-02	2037849-03RE1
SG-VW18A-01	2037849-04
SG-VW18B-01	2037849-05
SG-VW18B-01	2037849-05RE1
SG-VW52A-01	2037849-06
SG-VW52B-01	2037849-07
SG-VW44A-01	2037849-08
SG-VW44A-01	2037849-08RE1
SG-VW44B-01	2037849-09
SG-VW43A-01	2037849-10
SG-VW43B-01	2037849-11
SG-VW21A-01	2037849-12
SG-VW21A-01	2037849-12RE1
SG-VW21A-02	2037849-13
SG-VW21A-02	2037849-13RE1
SG-VW21B-01	2037849-14
SG-VW21B-01	2037849-14RE1
SG-VW22A-01	2037849-15
SG-VW22A-01	2037849-15RE1
SG-VW22B-01	2037849-16
SG-VW22B-01	2037849-16RE1
SG-VW45A-01	2037849-17
SG-VW45A-01	2037849-17RE1
SG-VW45B-01	2037849-18
SG-VW46A-01	2037849-19
SG-VW46B-01	2037849-20
SG-VW47A-01	2037849-21
SG-VW47B-01	2037849-22
SG-VW48A-01	2037849-23

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SG-VW48B-01	2037849-24
SG-VW49A-01	2037849-25
SG-VW49B-01	2037849-26
SG-VW50A-01	2037849-27
SG-VW50A-01	2037849-27RE1
SG-VW50A-02	2037849-28
SG-VW50A-02	2037849-28RE1
SG-VW50B-01	2037849-29
SG-VW50B-01	2037849-29RE1
SG-VW51A-01	2037849-30
SG-VW51A-01	2037849-30RE1
SG-VW51B-01	2037849-31

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron Name: Sara Guron

Date: 01-20-2021 Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-01RE1	File ID:	04JAN08.D
Sampled:	12/22/20 09:07	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 13:28
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	14.3	98	D
---	TPH - Gasoline	14.3	5700	D
---	Total Petroleum Hydrocarbons	14.3	5700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	84483	7.498	96371	7.503	
Chlorobenzene-d5 (IS)	147927	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	252592	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-01
File ID: 04JAN17.D
Sampled: 12/22/20 09:07
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 17:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.43	1.2	UD
107-13-1	Acrylonitrile	1.43	0.39	UD
107-05-1	Allyl chloride	1.43	0.40	UD
994-05-8	t-Amyl Methyl ether	1.43	0.44	UD
71-43-2	Benzene	1.43	12	D
100-44-7	Benzyl chloride	1.43	0.37	UD
75-27-4	Bromodichloromethane	1.43	0.64	UD
75-25-2	Bromoform	1.43	1.2	UD
74-83-9	Bromomethane	1.43	0.67	UD
106-99-0	1,3-Butadiene	1.43	0.31	UD
75-65-0	t-Butyl alcohol	1.43	1.0	UD
75-15-0	Carbon disulfide	1.43	26	D
56-23-5	Carbon tetrachloride	1.43	2.5	JD
108-90-7	Chlorobenzene	1.43	0.57	UD
75-00-3	Chloroethane	1.43	0.76	UD
67-66-3	Chloroform	1.43	89	D
74-87-3	Chloromethane	1.43	0.30	UD
110-82-7	Cyclohexane	1.43	0.54	UD
124-48-1	Dibromochloromethane	1.43	0.61	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.43	2.4	UD
106-93-4	1,2-Dibromoethane	1.43	0.83	UD
74-95-3	Dibromomethane	1.43	0.82	UD
95-50-1	1,2-Dichlorobenzene	1.43	0.72	UD
541-73-1	1,3-Dichlorobenzene	1.43	0.44	UD
106-46-7	1,4-Dichlorobenzene	1.43	0.72	UD
75-71-8	Dichlorodifluoromethane	1.43	7.3	D
75-34-3	1,1-Dichloroethane	1.43	0.33	UD
107-06-2	1,2-Dichloroethane	1.43	0.37	UD
75-35-4	1,1-Dichloroethene	1.43	0.44	UD
156-59-2	cis-1,2-Dichloroethene	1.43	0.46	UD
156-60-5	trans-1,2-Dichloroethene	1.43	0.39	UD
78-87-5	1,2-Dichloropropane	1.43	0.46	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-01	File ID:	04JAN17.D
Sampled:	12/22/20 09:07	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 17:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.43	0.43	UD
10061-02-6	trans-1,3-Dichloropropene	1.43	0.57	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.43	1.3	UD
75-37-6	1,1-Difluoroethane	1.43	2.9	UD
108-20-3	Diisopropyl ether	1.43	0.56	UD
123-91-1	1,4-Dioxane	1.43	0.47	UD
64-17-5	Ethanol	1.43	7.1	D
141-78-6	Ethyl acetate	1.43	0.47	UD
100-41-4	Ethylbenzene	1.43	15	D
622-96-8	1-Ethyl-4-methylbenzene	1.43	17	D
637-92-3	Ethyl t-butyl ether	1.43	0.47	UD
142-82-5	n-Heptane	1.43	3.9	D
87-68-3	Hexachlorobutadiene	1.43	2.1	UD
67-72-1	Hexachloroethane	1.43	1.0	UD
110-54-3	Hexane	1.43	0.29	UD
591-78-6	2-Hexanone	1.43	0.41	UD
540-84-1	Isooctane	1.43	4.4	JD
67-63-0	Isopropyl alcohol	1.43	0.46	UD
75-09-2	Methylene chloride	1.43	0.57	UD
78-93-3	Methyl ethyl ketone	1.43	67	D
74-88-4	Methyl iodide	1.43	0.83	UD
108-10-1	Methyl isobutyl ketone	1.43	6.6	JD
1634-04-4	Methyl t-butyl ether	1.43	0.40	UD
91-20-3	Naphthalene	1.43	2.0	UD
115-07-1	Propylene	1.43	0.36	UD
100-42-5	Styrene	1.43	0.34	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.43	0.87	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.43	0.67	UD
127-18-4	Tetrachloroethene	1.43	61	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.43	23	D
109-99-9	Tetrahydrofuran	1.43	8.2	D
108-88-3	Toluene	1.43	130	D

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-01	File ID:	04JAN17.D
Sampled:	12/22/20 09:07	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 17:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.43	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.43	0.56	UD
79-00-5	1,1,2-Trichloroethane	1.43	0.87	UD
79-01-6	Trichloroethene	1.43	0.77	UD
75-69-4	Trichlorofluoromethane	1.43	2.6	JD
96-18-4	1,2,3-Trichloropropane	1.43	0.69	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.43	0.79	UD
95-63-6	1,2,4-Trimethylbenzene	1.43	28	D
108-67-8	1,3,5-Trimethylbenzene	1.43	7.0	JD
108-05-4	Vinyl acetate	1.43	0.47	UD
593-60-2	Vinyl bromide	1.43	0.46	UD
75-01-4	Vinyl chloride	1.43	0.56	UD
179601-23-1	p- & m-Xylenes	1.43	57	D
95-47-6	o-Xylene	1.43	19	D
1330-20-7	Total Xylenes	1.43	76	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.9	119	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	85051	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	160185	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	251322	8.692	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-02RE1	File ID:	04JAN09.D
Sampled:	12/22/20 08:56	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 13:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	14.4	610	D
127-18-4	Tetrachloroethene	14.4	220	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.47	94.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	85128	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	143552	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	256457	8.692	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-02
File ID: 04JAN18.D
Sampled: 12/22/20 08:56
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 18:34
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.44	1.2	UD
67-64-1	Acetone	1.44	6.6	JD
107-13-1	Acrylonitrile	1.44	0.39	UD
107-05-1	Allyl chloride	1.44	0.40	UD
994-05-8	t-Amyl Methyl ether	1.44	0.45	UD
71-43-2	Benzene	1.44	0.30	UD
100-44-7	Benzyl chloride	1.44	0.37	UD
75-27-4	Bromodichloromethane	1.44	3.5	JD
75-25-2	Bromoform	1.44	1.2	UD
74-83-9	Bromomethane	1.44	0.68	UD
106-99-0	1,3-Butadiene	1.44	0.32	UD
75-65-0	t-Butyl alcohol	1.44	1.0	UD
75-15-0	Carbon disulfide	1.44	1.5	JD
56-23-5	Carbon tetrachloride	1.44	9.2	D
108-90-7	Chlorobenzene	1.44	0.58	UD
75-00-3	Chloroethane	1.44	0.76	UD
74-87-3	Chloromethane	1.44	0.30	UD
110-82-7	Cyclohexane	1.44	0.55	UD
124-48-1	Dibromochloromethane	1.44	0.62	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.44	2.4	UD
106-93-4	1,2-Dibromoethane	1.44	2.4	JD
74-95-3	Dibromomethane	1.44	0.82	UD
95-50-1	1,2-Dichlorobenzene	1.44	0.72	UD
541-73-1	1,3-Dichlorobenzene	1.44	0.45	UD
106-46-7	1,4-Dichlorobenzene	1.44	0.72	UD
75-71-8	Dichlorodifluoromethane	1.44	8.0	D
75-34-3	1,1-Dichloroethane	1.44	0.33	UD
107-06-2	1,2-Dichloroethane	1.44	0.37	UD
75-35-4	1,1-Dichloroethene	1.44	0.45	UD
156-59-2	cis-1,2-Dichloroethene	1.44	0.46	UD
156-60-5	trans-1,2-Dichloroethene	1.44	0.39	UD
78-87-5	1,2-Dichloropropane	1.44	0.46	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-02
File ID: 04JAN18.D
Sampled: 12/22/20 08:56
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 18:34
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.44	0.43	UD
10061-02-6	trans-1,3-Dichloropropene	1.44	0.58	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.44	1.3	UD
75-37-6	1,1-Difluoroethane	1.44	2.9	UD
108-20-3	Diisopropyl ether	1.44	0.56	UD
123-91-1	1,4-Dioxane	1.44	0.48	UD
64-17-5	Ethanol	1.44	4.0	D
141-78-6	Ethyl acetate	1.44	0.48	UD
100-41-4	Ethylbenzene	1.44	1.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.44	0.43	UD
637-92-3	Ethyl t-butyl ether	1.44	0.48	UD
142-82-5	n-Heptane	1.44	0.49	UD
87-68-3	Hexachlorobutadiene	1.44	2.2	UD
67-72-1	Hexachloroethane	1.44	1.1	UD
110-54-3	Hexane	1.44	0.29	UD
591-78-6	2-Hexanone	1.44	0.42	UD
540-84-1	Isooctane	1.44	0.50	UD
67-63-0	Isopropyl alcohol	1.44	2.0	JD
75-09-2	Methylene chloride	1.44	0.58	UD
78-93-3	Methyl ethyl ketone	1.44	1.8	JD
74-88-4	Methyl iodide	1.44	0.84	UD
108-10-1	Methyl isobutyl ketone	1.44	0.37	UD
1634-04-4	Methyl t-butyl ether	1.44	0.40	UD
91-20-3	Naphthalene	1.44	2.0	UD
115-07-1	Propylene	1.44	0.36	UD
100-42-5	Styrene	1.44	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.44	0.88	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.44	0.68	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.44	0.96	UD
109-99-9	Tetrahydrofuran	1.44	0.39	UD
108-88-3	Toluene	1.44	4.4	D
120-82-1	1,2,4-Trichlorobenzene	1.44	1.2	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-02	File ID:	04JAN18.D
Sampled:	12/22/20 08:56	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 18:34
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.44	0.56	UD
79-00-5	1,1,2-Trichloroethane	1.44	0.88	UD
79-01-6	Trichloroethene	1.44	2.9	JD
75-69-4	Trichlorofluoromethane	1.44	3.4	JD
96-18-4	1,2,3-Trichloropropane	1.44	0.69	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.44	0.79	UD
95-63-6	1,2,4-Trimethylbenzene	1.44	0.58	UD
108-67-8	1,3,5-Trimethylbenzene	1.44	0.58	UD
108-05-4	Vinyl acetate	1.44	0.48	UD
593-60-2	Vinyl bromide	1.44	0.46	UD
75-01-4	Vinyl chloride	1.44	0.56	UD
179601-23-1	p- & m-Xylenes	1.44	4.3	JD
95-47-6	o-Xylene	1.44	2.1	JD
1330-20-7	Total Xylenes	1.44	6.5	JD
---	TPH - Gasoline	1.44	1200	D
---	Total Petroleum Hydrocarbons	1.44	1200	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92880	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	159848	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	293040	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-03RE1	File ID:	04JAN10.D
Sampled:	12/22/20 08:56	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 14:27
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	14.4	630	D
127-18-4	Tetrachloroethene	14.4	230	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.45	94.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83960	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	139004	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	248237	8.69	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-03	File ID:	04JAN19.D
Sampled:	12/22/20 08:56	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 19:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.44	1.2	UD
67-64-1	Acetone	1.44	5.4	JD
107-13-1	Acrylonitrile	1.44	0.39	UD
107-05-1	Allyl chloride	1.44	0.40	UD
994-05-8	t-Amyl Methyl ether	1.44	0.45	UD
71-43-2	Benzene	1.44	0.30	UD
100-44-7	Benzyl chloride	1.44	0.37	UD
75-27-4	Bromodichloromethane	1.44	3.5	JD
75-25-2	Bromoform	1.44	1.2	UD
74-83-9	Bromomethane	1.44	0.68	UD
106-99-0	1,3-Butadiene	1.44	0.32	UD
75-65-0	t-Butyl alcohol	1.44	1.0	UD
75-15-0	Carbon disulfide	1.44	1.5	JD
56-23-5	Carbon tetrachloride	1.44	9.4	D
108-90-7	Chlorobenzene	1.44	0.58	UD
75-00-3	Chloroethane	1.44	0.76	UD
74-87-3	Chloromethane	1.44	0.30	UD
110-82-7	Cyclohexane	1.44	0.55	UD
124-48-1	Dibromochloromethane	1.44	0.62	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.44	2.4	UD
106-93-4	1,2-Dibromoethane	1.44	0.84	UD
74-95-3	Dibromomethane	1.44	0.82	UD
95-50-1	1,2-Dichlorobenzene	1.44	0.72	UD
541-73-1	1,3-Dichlorobenzene	1.44	0.45	UD
106-46-7	1,4-Dichlorobenzene	1.44	0.72	UD
75-71-8	Dichlorodifluoromethane	1.44	7.9	D
75-34-3	1,1-Dichloroethane	1.44	0.33	UD
107-06-2	1,2-Dichloroethane	1.44	0.37	UD
75-35-4	1,1-Dichloroethene	1.44	0.45	UD
156-59-2	cis-1,2-Dichloroethene	1.44	0.46	UD
156-60-5	trans-1,2-Dichloroethene	1.44	0.39	UD
78-87-5	1,2-Dichloropropane	1.44	0.46	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-02

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-03
File ID: 04JAN19.D
Sampled: 12/22/20 08:56
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 19:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.44	0.43	UD
10061-02-6	trans-1,3-Dichloropropene	1.44	0.58	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.44	1.3	UD
75-37-6	1,1-Difluoroethane	1.44	2.9	UD
108-20-3	Diisopropyl ether	1.44	0.56	UD
123-91-1	1,4-Dioxane	1.44	0.48	UD
64-17-5	Ethanol	1.44	5.4	D
141-78-6	Ethyl acetate	1.44	0.48	UD
100-41-4	Ethylbenzene	1.44	0.46	UD
622-96-8	1-Ethyl-4-methylbenzene	1.44	0.43	UD
637-92-3	Ethyl t-butyl ether	1.44	0.48	UD
142-82-5	n-Heptane	1.44	0.49	UD
87-68-3	Hexachlorobutadiene	1.44	2.2	UD
67-72-1	Hexachloroethane	1.44	1.1	UD
110-54-3	Hexane	1.44	0.29	UD
591-78-6	2-Hexanone	1.44	0.42	UD
540-84-1	Isooctane	1.44	0.50	UD
67-63-0	Isopropyl alcohol	1.44	0.46	UD
75-09-2	Methylene chloride	1.44	0.58	UD
78-93-3	Methyl ethyl ketone	1.44	1.5	JD
74-88-4	Methyl iodide	1.44	0.84	UD
108-10-1	Methyl isobutyl ketone	1.44	0.37	UD
1634-04-4	Methyl t-butyl ether	1.44	0.40	UD
91-20-3	Naphthalene	1.44	2.0	UD
115-07-1	Propylene	1.44	0.36	UD
100-42-5	Styrene	1.44	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.44	0.88	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.44	0.68	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.44	0.96	UD
109-99-9	Tetrahydrofuran	1.44	0.39	UD
108-88-3	Toluene	1.44	3.6	D
120-82-1	1,2,4-Trichlorobenzene	1.44	1.2	UD

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW17B-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-03	File ID:	04JAN19.D
Sampled:	12/22/20 08:56	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 19:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.44	0.56	UD
79-00-5	1,1,2-Trichloroethane	1.44	0.88	UD
79-01-6	Trichloroethene	1.44	2.9	JD
75-69-4	Trichlorofluoromethane	1.44	3.3	JD
96-18-4	1,2,3-Trichloropropane	1.44	5.3	JD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.44	0.79	UD
95-63-6	1,2,4-Trimethylbenzene	1.44	0.58	UD
108-67-8	1,3,5-Trimethylbenzene	1.44	0.58	UD
108-05-4	Vinyl acetate	1.44	0.48	UD
593-60-2	Vinyl bromide	1.44	0.46	UD
75-01-4	Vinyl chloride	1.44	0.56	UD
179601-23-1	p- & m-Xylenes	1.44	1.5	JD
95-47-6	o-Xylene	1.44	0.43	UD
1330-20-7	Total Xylenes	1.44	1.5	JD
---	TPH - Gasoline	1.44	1200	D
---	Total Petroleum Hydrocarbons	1.44	1200	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90921	7.502	96371	7.503	
Chlorobenzene-d5 (IS)	157190	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	277742	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-04
File ID: 04JAN20.D
Sampled: 12/22/20 10:09
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 19:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.47	1.2	UD
67-64-1	Acetone	1.47	74	D
107-13-1	Acrylonitrile	1.47	0.40	UD
107-05-1	Allyl chloride	1.47	0.41	UD
994-05-8	t-Amyl Methyl ether	1.47	0.46	UD
71-43-2	Benzene	1.47	31	D
100-44-7	Benzyl chloride	1.47	0.38	UD
75-27-4	Bromodichloromethane	1.47	0.66	UD
75-25-2	Bromoform	1.47	1.3	UD
74-83-9	Bromomethane	1.47	0.69	UD
106-99-0	1,3-Butadiene	1.47	0.32	UD
75-65-0	t-Butyl alcohol	1.47	1.0	UD
75-15-0	Carbon disulfide	1.47	93	D
56-23-5	Carbon tetrachloride	1.47	0.66	UD
108-90-7	Chlorobenzene	1.47	0.59	UD
75-00-3	Chloroethane	1.47	0.78	UD
67-66-3	Chloroform	1.47	5.3	JD
74-87-3	Chloromethane	1.47	0.31	UD
110-82-7	Cyclohexane	1.47	0.56	UD
124-48-1	Dibromochloromethane	1.47	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.47	2.5	UD
106-93-4	1,2-Dibromoethane	1.47	0.85	UD
74-95-3	Dibromomethane	1.47	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.47	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.47	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.47	0.74	UD
75-71-8	Dichlorodifluoromethane	1.47	16	D
75-34-3	1,1-Dichloroethane	1.47	0.34	UD
107-06-2	1,2-Dichloroethane	1.47	0.38	UD
75-35-4	1,1-Dichloroethene	1.47	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.47	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.47	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-04	File ID:	04JAN20.D
Sampled:	12/22/20 10:09	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 19:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.47	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.47	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.47	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.47	1.3	UD
75-37-6	1,1-Difluoroethane	1.47	2.9	UD
108-20-3	Diisopropyl ether	1.47	0.57	UD
123-91-1	1,4-Dioxane	1.47	0.49	UD
64-17-5	Ethanol	1.47	2.7	JD
141-78-6	Ethyl acetate	1.47	0.49	UD
100-41-4	Ethylbenzene	1.47	25	D
622-96-8	1-Ethyl-4-methylbenzene	1.47	19	D
637-92-3	Ethyl t-butyl ether	1.47	0.49	UD
142-82-5	n-Heptane	1.47	4.9	D
87-68-3	Hexachlorobutadiene	1.47	2.2	UD
67-72-1	Hexachloroethane	1.47	1.1	UD
110-54-3	Hexane	1.47	6.9	JD
591-78-6	2-Hexanone	1.47	0.43	UD
540-84-1	Isooctane	1.47	5.9	JD
67-63-0	Isopropyl alcohol	1.47	0.47	UD
75-09-2	Methylene chloride	1.47	0.59	UD
78-93-3	Methyl ethyl ketone	1.47	36	D
74-88-4	Methyl iodide	1.47	0.85	UD
108-10-1	Methyl isobutyl ketone	1.47	5.9	JD
1634-04-4	Methyl t-butyl ether	1.47	0.41	UD
91-20-3	Naphthalene	1.47	2.1	UD
115-07-1	Propylene	1.47	110	D
100-42-5	Styrene	1.47	1.3	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.47	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.47	0.69	UD
127-18-4	Tetrachloroethene	1.47	33	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.47	0.98	UD
109-99-9	Tetrahydrofuran	1.47	3.6	D

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-04	File ID:	04JAN20.D
Sampled:	12/22/20 10:09	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 19:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.47	230	D
120-82-1	1,2,4-Trichlorobenzene	1.47	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.47	0.57	UD
79-00-5	1,1,2-Trichloroethane	1.47	0.90	UD
79-01-6	Trichloroethene	1.47	0.79	UD
75-69-4	Trichlorofluoromethane	1.47	2.9	JD
96-18-4	1,2,3-Trichloropropane	1.47	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.47	2.6	JD
95-63-6	1,2,4-Trimethylbenzene	1.47	25	D
108-67-8	1,3,5-Trimethylbenzene	1.47	8.2	D
108-05-4	Vinyl acetate	1.47	0.49	UD
593-60-2	Vinyl bromide	1.47	0.47	UD
75-01-4	Vinyl chloride	1.47	0.57	UD
179601-23-1	p- & m-Xylenes	1.47	92	D
95-47-6	o-Xylene	1.47	28	D
1330-20-7	Total Xylenes	1.47	120	D
---	TPH - Gasoline	1.47	2700	D
---	Total Petroleum Hydrocarbons	1.47	2700	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95654	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	181371	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	303245	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-05RE1	File ID:	04JAN12.D
Sampled:	12/22/20 09:58	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 15:26
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	14.8	460	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.48	94.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83994	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	140473	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	251348	8.691	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-05
File ID: 04JAN21.D
Sampled: 12/22/20 09:58
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 20:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.48	1.2	UD
67-64-1	Acetone	1.48	10	D
107-13-1	Acrylonitrile	1.48	0.40	UD
107-05-1	Allyl chloride	1.48	0.41	UD
994-05-8	t-Amyl Methyl ether	1.48	0.46	UD
71-43-2	Benzene	1.48	0.31	UD
100-44-7	Benzyl chloride	1.48	0.38	UD
75-27-4	Bromodichloromethane	1.48	0.67	UD
75-25-2	Bromoform	1.48	1.3	UD
74-83-9	Bromomethane	1.48	0.70	UD
106-99-0	1,3-Butadiene	1.48	0.33	UD
75-65-0	t-Butyl alcohol	1.48	1.0	UD
75-15-0	Carbon disulfide	1.48	13	D
56-23-5	Carbon tetrachloride	1.48	0.67	UD
108-90-7	Chlorobenzene	1.48	0.59	UD
75-00-3	Chloroethane	1.48	0.78	UD
67-66-3	Chloroform	1.48	140	D
74-87-3	Chloromethane	1.48	0.31	UD
110-82-7	Cyclohexane	1.48	0.56	UD
124-48-1	Dibromochloromethane	1.48	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.48	2.5	UD
106-93-4	1,2-Dibromoethane	1.48	0.86	UD
74-95-3	Dibromomethane	1.48	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.48	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.48	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.48	0.74	UD
75-71-8	Dichlorodifluoromethane	1.48	32	D
75-34-3	1,1-Dichloroethane	1.48	0.34	UD
107-06-2	1,2-Dichloroethane	1.48	0.38	UD
75-35-4	1,1-Dichloroethene	1.48	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.48	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.48	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-05
File ID: 04JAN21.D
Sampled: 12/22/20 09:58
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 20:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.48	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.48	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.48	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.48	1.3	UD
75-37-6	1,1-Difluoroethane	1.48	3.0	UD
108-20-3	Diisopropyl ether	1.48	0.58	UD
123-91-1	1,4-Dioxane	1.48	0.49	UD
64-17-5	Ethanol	1.48	15	D
141-78-6	Ethyl acetate	1.48	0.49	UD
100-41-4	Ethylbenzene	1.48	0.47	UD
622-96-8	1-Ethyl-4-methylbenzene	1.48	0.44	UD
637-92-3	Ethyl t-butyl ether	1.48	0.49	UD
142-82-5	n-Heptane	1.48	0.50	UD
87-68-3	Hexachlorobutadiene	1.48	2.2	UD
67-72-1	Hexachloroethane	1.48	1.1	UD
110-54-3	Hexane	1.48	0.30	UD
591-78-6	2-Hexanone	1.48	0.43	UD
540-84-1	Isooctane	1.48	0.52	UD
67-63-0	Isopropyl alcohol	1.48	7.0	D
75-09-2	Methylene chloride	1.48	0.59	UD
78-93-3	Methyl ethyl ketone	1.48	6.9	D
74-88-4	Methyl iodide	1.48	0.86	UD
108-10-1	Methyl isobutyl ketone	1.48	0.38	UD
1634-04-4	Methyl t-butyl ether	1.48	0.41	UD
91-20-3	Naphthalene	1.48	2.1	UD
115-07-1	Propylene	1.48	0.37	UD
100-42-5	Styrene	1.48	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.48	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.48	0.70	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.48	0.99	UD
109-99-9	Tetrahydrofuran	1.48	1.8	JD
108-88-3	Toluene	1.48	5.2	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW18B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-05	File ID:	04JAN21.D
Sampled:	12/22/20 09:58	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 20:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.48	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.48	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.48	0.90	UD
79-01-6	Trichloroethene	1.48	0.80	UD
75-69-4	Trichlorofluoromethane	1.48	4.7	JD
96-18-4	1,2,3-Trichloropropane	1.48	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.48	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.48	0.59	UD
108-67-8	1,3,5-Trimethylbenzene	1.48	0.59	UD
108-05-4	Vinyl acetate	1.48	0.49	UD
593-60-2	Vinyl bromide	1.48	0.47	UD
75-01-4	Vinyl chloride	1.48	0.58	UD
179601-23-1	p- & m-Xylenes	1.48	0.90	UD
95-47-6	o-Xylene	1.48	0.44	UD
1330-20-7	Total Xylenes	1.48	1.3	UD
---	TPH - Gasoline	1.48	1100	D
---	Total Petroleum Hydrocarbons	1.48	1100	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	96205	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	166614	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	305742	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-06
File ID: 04JAN22.D
Sampled: 12/22/20 11:13
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 20:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	64	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	1.5	JD
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	10	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	9.0	D
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	46	D
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-06
File ID: 04JAN22.D
Sampled: 12/22/20 11:13
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 20:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	6.5	D
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	5.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.53	7.6	D
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	40	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	3.8	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	140	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	2.9	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-06	File ID:	04JAN22.D
Sampled:	12/22/20 11:13	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 20:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.53	19	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	0.83	UD
75-69-4	Trichlorofluoromethane	1.53	7.6	D
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	11	D
108-67-8	1,3,5-Trimethylbenzene	1.53	3.1	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	20	D
95-47-6	o-Xylene	1.53	7.0	JD
1330-20-7	Total Xylenes	1.53	27	D
---	TPH - Gasoline	1.53	620	D
---	Total Petroleum Hydrocarbons	1.53	620	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.7	107	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92490	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	160844	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	286124	8.696	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-07
File ID: 04JAN23.D
Sampled: 12/22/20 11:02
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 21:34
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.48	1.2	UD
67-64-1	Acetone	1.48	23	D
107-13-1	Acrylonitrile	1.48	0.40	UD
107-05-1	Allyl chloride	1.48	0.41	UD
994-05-8	t-Amyl Methyl ether	1.48	0.46	UD
71-43-2	Benzene	1.48	0.31	UD
100-44-7	Benzyl chloride	1.48	0.38	UD
75-27-4	Bromodichloromethane	1.48	0.67	UD
75-25-2	Bromoform	1.48	1.3	UD
74-83-9	Bromomethane	1.48	0.70	UD
106-99-0	1,3-Butadiene	1.48	0.33	UD
75-65-0	t-Butyl alcohol	1.48	1.0	UD
75-15-0	Carbon disulfide	1.48	4.1	D
56-23-5	Carbon tetrachloride	1.48	0.67	UD
108-90-7	Chlorobenzene	1.48	0.59	UD
75-00-3	Chloroethane	1.48	0.78	UD
67-66-3	Chloroform	1.48	25	D
74-87-3	Chloromethane	1.48	0.31	UD
110-82-7	Cyclohexane	1.48	0.56	UD
124-48-1	Dibromochloromethane	1.48	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.48	2.5	UD
106-93-4	1,2-Dibromoethane	1.48	0.86	UD
74-95-3	Dibromomethane	1.48	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.48	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.48	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.48	0.74	UD
75-71-8	Dichlorodifluoromethane	1.48	57	D
75-34-3	1,1-Dichloroethane	1.48	0.34	UD
107-06-2	1,2-Dichloroethane	1.48	0.38	UD
75-35-4	1,1-Dichloroethene	1.48	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.48	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.48	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-07	File ID:	04JAN23.D
Sampled:	12/22/20 11:02	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 21:34
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.48	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.48	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.48	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.48	1.3	UD
75-37-6	1,1-Difluoroethane	1.48	3.0	UD
108-20-3	Diisopropyl ether	1.48	0.58	UD
123-91-1	1,4-Dioxane	1.48	0.49	UD
64-17-5	Ethanol	1.48	0.62	UD
141-78-6	Ethyl acetate	1.48	0.49	UD
100-41-4	Ethylbenzene	1.48	2.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.48	5.4	JD
637-92-3	Ethyl t-butyl ether	1.48	0.49	UD
142-82-5	n-Heptane	1.48	0.50	UD
87-68-3	Hexachlorobutadiene	1.48	2.2	UD
67-72-1	Hexachloroethane	1.48	1.1	UD
110-54-3	Hexane	1.48	0.30	UD
591-78-6	2-Hexanone	1.48	0.43	UD
540-84-1	Isooctane	1.48	0.52	UD
67-63-0	Isopropyl alcohol	1.48	0.47	UD
75-09-2	Methylene chloride	1.48	0.59	UD
78-93-3	Methyl ethyl ketone	1.48	10	D
74-88-4	Methyl iodide	1.48	0.86	UD
108-10-1	Methyl isobutyl ketone	1.48	0.38	UD
1634-04-4	Methyl t-butyl ether	1.48	0.41	UD
91-20-3	Naphthalene	1.48	2.1	UD
115-07-1	Propylene	1.48	0.37	UD
100-42-5	Styrene	1.48	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.48	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.48	0.70	UD
127-18-4	Tetrachloroethene	1.48	220	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.48	0.99	UD
109-99-9	Tetrahydrofuran	1.48	1.1	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW52B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-07	File ID:	04JAN23.D
Sampled:	12/22/20 11:02	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 21:34
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.48	7.2	D
120-82-1	1,2,4-Trichlorobenzene	1.48	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.48	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.48	0.90	UD
79-01-6	Trichloroethene	1.48	0.80	UD
75-69-4	Trichlorofluoromethane	1.48	10	D
96-18-4	1,2,3-Trichloropropane	1.48	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.48	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.48	10	D
108-67-8	1,3,5-Trimethylbenzene	1.48	2.6	JD
108-05-4	Vinyl acetate	1.48	0.49	UD
593-60-2	Vinyl bromide	1.48	0.47	UD
75-01-4	Vinyl chloride	1.48	0.58	UD
179601-23-1	p- & m-Xylenes	1.48	16	D
95-47-6	o-Xylene	1.48	5.1	JD
1330-20-7	Total Xylenes	1.48	21	D
---	TPH - Gasoline	1.48	380	D
---	Total Petroleum Hydrocarbons	1.48	380	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.4	104	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90121	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	155509	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	275163	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-08RE1	File ID:	04JAN15.D
Sampled:	12/22/20 12:08	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 16:53
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	14.9	140	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.46	94.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82193	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	133878	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	236214	8.689	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-08
File ID: 04JAN24.D
Sampled: 12/22/20 12:08
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 22:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.49	1.2	UD
107-13-1	Acrylonitrile	1.49	0.40	UD
107-05-1	Allyl chloride	1.49	0.42	UD
994-05-8	t-Amyl Methyl ether	1.49	0.46	UD
71-43-2	Benzene	1.49	7.6	D
100-44-7	Benzyl chloride	1.49	0.39	UD
75-27-4	Bromodichloromethane	1.49	0.67	UD
75-25-2	Bromoform	1.49	1.3	UD
74-83-9	Bromomethane	1.49	0.70	UD
106-99-0	1,3-Butadiene	1.49	0.33	UD
75-65-0	t-Butyl alcohol	1.49	1.0	UD
75-15-0	Carbon disulfide	1.49	13	D
56-23-5	Carbon tetrachloride	1.49	0.67	UD
108-90-7	Chlorobenzene	1.49	0.60	UD
75-00-3	Chloroethane	1.49	0.79	UD
67-66-3	Chloroform	1.49	20	D
74-87-3	Chloromethane	1.49	0.31	UD
110-82-7	Cyclohexane	1.49	0.57	UD
124-48-1	Dibromochloromethane	1.49	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.49	2.5	UD
106-93-4	1,2-Dibromoethane	1.49	0.86	UD
74-95-3	Dibromomethane	1.49	0.85	UD
95-50-1	1,2-Dichlorobenzene	1.49	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.49	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.49	0.74	UD
75-71-8	Dichlorodifluoromethane	1.49	4.3	JD
75-34-3	1,1-Dichloroethane	1.49	0.34	UD
107-06-2	1,2-Dichloroethane	1.49	0.39	UD
75-35-4	1,1-Dichloroethene	1.49	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.49	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.49	0.40	UD
78-87-5	1,2-Dichloropropane	1.49	0.48	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-08
File ID: 04JAN24.D
Sampled: 12/22/20 12:08
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 22:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.49	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.49	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.49	1.4	UD
75-37-6	1,1-Difluoroethane	1.49	3.0	UD
108-20-3	Diisopropyl ether	1.49	0.58	UD
123-91-1	1,4-Dioxane	1.49	0.49	UD
64-17-5	Ethanol	1.49	3.8	D
141-78-6	Ethyl acetate	1.49	0.49	UD
100-41-4	Ethylbenzene	1.49	9.4	D
622-96-8	1-Ethyl-4-methylbenzene	1.49	8.2	D
637-92-3	Ethyl t-butyl ether	1.49	0.49	UD
142-82-5	n-Heptane	1.49	2.1	JD
87-68-3	Hexachlorobutadiene	1.49	2.2	UD
67-72-1	Hexachloroethane	1.49	1.1	UD
110-54-3	Hexane	1.49	0.30	UD
591-78-6	2-Hexanone	1.49	0.43	UD
540-84-1	Isooctane	1.49	2.4	JD
67-63-0	Isopropyl alcohol	1.49	0.48	UD
75-09-2	Methylene chloride	1.49	0.60	UD
78-93-3	Methyl ethyl ketone	1.49	80	D
74-88-4	Methyl iodide	1.49	0.86	UD
108-10-1	Methyl isobutyl ketone	1.49	5.6	JD
1634-04-4	Methyl t-butyl ether	1.49	0.42	UD
91-20-3	Naphthalene	1.49	2.1	UD
115-07-1	Propylene	1.49	0.37	UD
100-42-5	Styrene	1.49	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.49	0.91	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.49	0.70	UD
127-18-4	Tetrachloroethene	1.49	9.1	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.49	1.0	UD
109-99-9	Tetrahydrofuran	1.49	8.1	D
108-88-3	Toluene	1.49	69	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-08	File ID:	04JAN24.D
Sampled:	12/22/20 12:08	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 22:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.49	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.49	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.49	0.91	UD
79-01-6	Trichloroethene	1.49	5.5	JD
75-69-4	Trichlorofluoromethane	1.49	2.3	JD
96-18-4	1,2,3-Trichloropropane	1.49	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.49	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.49	11	D
108-67-8	1,3,5-Trimethylbenzene	1.49	3.9	JD
108-05-4	Vinyl acetate	1.49	0.49	UD
593-60-2	Vinyl bromide	1.49	0.48	UD
75-01-4	Vinyl chloride	1.49	0.58	UD
179601-23-1	p- & m-Xylenes	1.49	35	D
95-47-6	o-Xylene	1.49	11	D
1330-20-7	Total Xylenes	1.49	46	D
---	TPH - Gasoline	1.49	810	D
---	Total Petroleum Hydrocarbons	1.49	810	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.7	107	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92707	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	162761	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	283231	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-09
File ID: 04JAN25.D
Sampled: 12/22/20 11:57
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 22:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.47	1.2	UD
67-64-1	Acetone	1.47	64	D
107-13-1	Acrylonitrile	1.47	0.40	UD
107-05-1	Allyl chloride	1.47	0.41	UD
994-05-8	t-Amyl Methyl ether	1.47	0.46	UD
71-43-2	Benzene	1.47	1.1	JD
100-44-7	Benzyl chloride	1.47	0.38	UD
75-27-4	Bromodichloromethane	1.47	0.66	UD
75-25-2	Bromoform	1.47	1.3	UD
74-83-9	Bromomethane	1.47	0.69	UD
106-99-0	1,3-Butadiene	1.47	0.32	UD
75-65-0	t-Butyl alcohol	1.47	1.0	UD
75-15-0	Carbon disulfide	1.47	6.7	D
56-23-5	Carbon tetrachloride	1.47	0.66	UD
108-90-7	Chlorobenzene	1.47	0.59	UD
75-00-3	Chloroethane	1.47	0.78	UD
67-66-3	Chloroform	1.47	73	D
74-87-3	Chloromethane	1.47	0.31	UD
110-82-7	Cyclohexane	1.47	0.56	UD
124-48-1	Dibromochloromethane	1.47	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.47	2.5	UD
106-93-4	1,2-Dibromoethane	1.47	0.85	UD
74-95-3	Dibromomethane	1.47	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.47	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.47	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.47	0.74	UD
75-71-8	Dichlorodifluoromethane	1.47	4.7	JD
75-34-3	1,1-Dichloroethane	1.47	0.34	UD
107-06-2	1,2-Dichloroethane	1.47	0.38	UD
75-35-4	1,1-Dichloroethene	1.47	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.47	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.47	0.40	UD

AECOM - Sacramento
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-09
File ID: 04JAN25.D
Sampled: 12/22/20 11:57
Prepared: 01/04/21 08:32
Analyzed: 01/04/21 22:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096350
Sequence: 2100009
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.47	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.47	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.47	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.47	1.3	UD
75-37-6	1,1-Difluoroethane	1.47	2.9	UD
108-20-3	Diisopropyl ether	1.47	0.57	UD
123-91-1	1,4-Dioxane	1.47	0.49	UD
64-17-5	Ethanol	1.47	0.62	UD
141-78-6	Ethyl acetate	1.47	0.49	UD
100-41-4	Ethylbenzene	1.47	3.1	JD
622-96-8	1-Ethyl-4-methylbenzene	1.47	2.8	JD
637-92-3	Ethyl t-butyl ether	1.47	0.49	UD
142-82-5	n-Heptane	1.47	0.50	UD
87-68-3	Hexachlorobutadiene	1.47	2.2	UD
67-72-1	Hexachloroethane	1.47	1.1	UD
110-54-3	Hexane	1.47	0.29	UD
591-78-6	2-Hexanone	1.47	0.43	UD
540-84-1	Isooctane	1.47	0.51	UD
67-63-0	Isopropyl alcohol	1.47	0.47	UD
75-09-2	Methylene chloride	1.47	0.59	UD
78-93-3	Methyl ethyl ketone	1.47	30	D
74-88-4	Methyl iodide	1.47	0.85	UD
108-10-1	Methyl isobutyl ketone	1.47	2.4	JD
1634-04-4	Methyl t-butyl ether	1.47	0.41	UD
91-20-3	Naphthalene	1.47	2.1	UD
115-07-1	Propylene	1.47	0.37	UD
100-42-5	Styrene	1.47	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.47	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.47	0.69	UD
127-18-4	Tetrachloroethene	1.47	21	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.47	0.98	UD
109-99-9	Tetrahydrofuran	1.47	2.5	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW44B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-09	File ID:	04JAN25.D
Sampled:	12/22/20 11:57	Prepared:	01/04/21 08:32	Analyzed:	01/04/21 22:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.47	17	D
120-82-1	1,2,4-Trichlorobenzene	1.47	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.47	0.57	UD
79-00-5	1,1,2-Trichloroethane	1.47	0.90	UD
79-01-6	Trichloroethene	1.47	5.9	JD
75-69-4	Trichlorofluoromethane	1.47	2.7	JD
96-18-4	1,2,3-Trichloropropane	1.47	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.47	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.47	4.1	JD
108-67-8	1,3,5-Trimethylbenzene	1.47	0.59	UD
108-05-4	Vinyl acetate	1.47	0.49	UD
593-60-2	Vinyl bromide	1.47	0.47	UD
75-01-4	Vinyl chloride	1.47	0.57	UD
179601-23-1	p- & m-Xylenes	1.47	12	D
95-47-6	o-Xylene	1.47	3.1	JD
1330-20-7	Total Xylenes	1.47	15	D
---	TPH - Gasoline	1.47	270	JD
---	Total Petroleum Hydrocarbons	1.47	270	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.1	101	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90319	7.507	96371	7.503	
Chlorobenzene-d5 (IS)	154567	11.018	169282	11.019	
1,4-Difluorobenzene (IS)	274863	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-10
File ID: 05JAN08.D
Sampled: 12/22/20 13:08
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 12:42
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	4.3	JD
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	1.8	JD
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	4.5	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	0.83	UD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	3.1	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-10	File ID:	05JAN08.D
Sampled:	12/22/20 13:08	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 12:42
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	0.64	UD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	3.6	JD
622-96-8	1-Ethyl-4-methylbenzene	1.53	4.9	JD
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	2.0	JD
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	0.40	UD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	5.5	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	2.3	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-10	File ID:	05JAN08.D
Sampled:	12/22/20 13:08	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 12:42
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.53	12	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	0.83	UD
75-69-4	Trichlorofluoromethane	1.53	0.72	UD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	7.2	JD
108-67-8	1,3,5-Trimethylbenzene	1.53	2.2	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	14	D
95-47-6	o-Xylene	1.53	4.3	JD
1330-20-7	Total Xylenes	1.53	19	D
---	TPH - Gasoline	1.53	220	JD
---	Total Petroleum Hydrocarbons	1.53	220	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.3	103	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83840	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	137358	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	240340	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-11
File ID: 05JAN09.D
Sampled: 12/22/20 12:56
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 13:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	11	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	4.3	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	20	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	43	D
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	3.8	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-11	File ID:	05JAN09.D
Sampled:	12/22/20 12:56	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 13:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	0.64	UD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	9.5	D
622-96-8	1-Ethyl-4-methylbenzene	1.53	11	D
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	6.4	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	3.3	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	15	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	2.7	JD

AECOM - Sacramento
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW43B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-11	File ID:	05JAN09.D
Sampled:	12/22/20 12:56	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 13:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.53	55	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	8.4	D
75-69-4	Trichlorofluoromethane	1.53	2.3	JD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	16	D
108-67-8	1,3,5-Trimethylbenzene	1.53	4.8	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	37	D
95-47-6	o-Xylene	1.53	12	D
1330-20-7	Total Xylenes	1.53	49	D
---	TPH - Gasoline	1.53	630	D
---	Total Petroleum Hydrocarbons	1.53	630	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.8	108	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83635	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	146802	11.016	169282	11.019	
1,4-Difluorobenzene (IS)	241815	8.693	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-12RE1	File ID:	04JAN28.D
Sampled:	12/22/20 14:17	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 00:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.6	140	D
108-88-3	Toluene	15.6	140	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.94	99.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	81395	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	139003	11.02	169282	11.019	
1,4-Difluorobenzene (IS)	244717	8.698	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-12
File ID: 05JAN10.D
Sampled: 12/22/20 14:17
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 13:53
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	7.6	D
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.5	JD
75-15-0	Carbon disulfide	1.56	25	D
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	4.7	JD
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	0.59	UD
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	0.90	UD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	3.9	JD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD
78-87-5	1,2-Dichloropropane	1.56	0.50	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-12
File ID: 05JAN10.D
Sampled: 12/22/20 14:17
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 13:53
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	4.6	D
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	15	D
622-96-8	1-Ethyl-4-methylbenzene	1.56	12	D
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	2.0	JD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	0.31	UD
591-78-6	2-Hexanone	1.56	0.45	UD
540-84-1	Isooctane	1.56	1.7	JD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	87	D
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	4.8	JD
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
127-18-4	Tetrachloroethene	1.56	130	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	8.4	D
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-12	File ID:	05JAN10.D
Sampled:	12/22/20 14:17	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 13:53
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.56	7.1	JD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	13	D
75-69-4	Trichlorofluoromethane	1.56	1.8	JD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	16	D
108-67-8	1,3,5-Trimethylbenzene	1.56	5.3	JD
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	50	D
95-47-6	o-Xylene	1.56	16	D
1330-20-7	Total Xylenes	1.56	66	D
---	TPH - Gasoline	1.56	1400	D
---	Total Petroleum Hydrocarbons	1.56	1400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.8	108	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89035	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	158980	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	265444	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-13RE1	File ID:	04JAN29.D
Sampled:	12/22/20 14:17	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 00:44
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.3	160	D
108-88-3	Toluene	15.3	150	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.80	98.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	84034	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	146693	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	248622	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-02

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-13
File ID: 05JAN11.D
Sampled: 12/22/20 14:17
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 14:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	7.6	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	26	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	6.3	JD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	4.0	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD
78-87-5	1,2-Dichloropropane	1.53	0.49	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-02

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-13
File ID: 05JAN11.D
Sampled: 12/22/20 14:17
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 14:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	4.2	D
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	15	D
622-96-8	1-Ethyl-4-methylbenzene	1.53	12	D
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	4.1	D
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	1.4	JD
67-63-0	Isopropyl alcohol	1.53	3.5	D
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	84	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	4.8	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	130	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	8.3	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21A-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-13	File ID:	05JAN11.D
Sampled:	12/22/20 14:17	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 14:29
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.53	7.8	D
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	14	D
75-69-4	Trichlorofluoromethane	1.53	2.5	JD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	16	D
108-67-8	1,3,5-Trimethylbenzene	1.53	5.1	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	48	D
95-47-6	o-Xylene	1.53	15	D
1330-20-7	Total Xylenes	1.53	64	D
---	TPH - Gasoline	1.53	1500	D
---	Total Petroleum Hydrocarbons	1.53	1500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94977	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	169271	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	292122	8.694	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-14RE1	File ID:	04JAN30.D
Sampled:	12/22/20 14:06	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 01:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	15.7	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.70	97.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83325	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	141797	11.02	169282	11.019	
1,4-Difluorobenzene (IS)	247708	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-14
File ID: 05JAN12.D
Sampled: 12/22/20 14:06
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 15:05
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.57	1.3	UD
67-64-1	Acetone	1.57	8.3	D
107-13-1	Acrylonitrile	1.57	0.42	UD
107-05-1	Allyl chloride	1.57	0.44	UD
994-05-8	t-Amyl Methyl ether	1.57	0.49	UD
71-43-2	Benzene	1.57	0.33	UD
100-44-7	Benzyl chloride	1.57	0.41	UD
75-27-4	Bromodichloromethane	1.57	0.71	UD
75-25-2	Bromoform	1.57	1.4	UD
74-83-9	Bromomethane	1.57	0.74	UD
106-99-0	1,3-Butadiene	1.57	0.35	UD
75-65-0	t-Butyl alcohol	1.57	1.1	UD
75-15-0	Carbon disulfide	1.57	2.6	JD
56-23-5	Carbon tetrachloride	1.57	0.71	UD
108-90-7	Chlorobenzene	1.57	0.63	UD
75-00-3	Chloroethane	1.57	0.83	UD
67-66-3	Chloroform	1.57	24	D
74-87-3	Chloromethane	1.57	0.33	UD
110-82-7	Cyclohexane	1.57	0.60	UD
124-48-1	Dibromochloromethane	1.57	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.57	2.7	UD
106-93-4	1,2-Dibromoethane	1.57	0.91	UD
74-95-3	Dibromomethane	1.57	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.57	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.57	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.57	0.78	UD
75-71-8	Dichlorodifluoromethane	1.57	4.6	JD
75-34-3	1,1-Dichloroethane	1.57	0.36	UD
107-06-2	1,2-Dichloroethane	1.57	0.41	UD
75-35-4	1,1-Dichloroethene	1.57	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.57	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.57	0.42	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-14
File ID: 05JAN12.D
Sampled: 12/22/20 14:06
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 15:05
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.57	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.57	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.57	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.57	1.4	UD
75-37-6	1,1-Difluoroethane	1.57	3.1	UD
108-20-3	Diisopropyl ether	1.57	0.61	UD
123-91-1	1,4-Dioxane	1.57	0.52	UD
64-17-5	Ethanol	1.57	0.66	UD
141-78-6	Ethyl acetate	1.57	0.52	UD
100-41-4	Ethylbenzene	1.57	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.57	0.47	UD
637-92-3	Ethyl t-butyl ether	1.57	0.52	UD
142-82-5	n-Heptane	1.57	0.53	UD
87-68-3	Hexachlorobutadiene	1.57	2.4	UD
67-72-1	Hexachloroethane	1.57	1.1	UD
110-54-3	Hexane	1.57	0.31	UD
591-78-6	2-Hexanone	1.57	0.46	UD
540-84-1	Isooctane	1.57	0.55	UD
67-63-0	Isopropyl alcohol	1.57	0.50	UD
75-09-2	Methylene chloride	1.57	0.63	UD
78-93-3	Methyl ethyl ketone	1.57	3.3	D
74-88-4	Methyl iodide	1.57	0.91	UD
108-10-1	Methyl isobutyl ketone	1.57	0.41	UD
1634-04-4	Methyl t-butyl ether	1.57	0.44	UD
91-20-3	Naphthalene	1.57	2.2	UD
115-07-1	Propylene	1.57	0.39	UD
100-42-5	Styrene	1.57	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.57	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.57	0.74	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.57	1.1	UD
109-99-9	Tetrahydrofuran	1.57	0.42	UD
108-88-3	Toluene	1.57	3.8	D

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW21B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-14	File ID:	05JAN12.D
Sampled:	12/22/20 14:06	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 15:05
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.57	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.57	9.4	D
79-00-5	1,1,2-Trichloroethane	1.57	0.96	UD
79-01-6	Trichloroethene	1.57	46	D
75-69-4	Trichlorofluoromethane	1.57	2.1	JD
96-18-4	1,2,3-Trichloropropane	1.57	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.57	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.57	2.2	JD
108-67-8	1,3,5-Trimethylbenzene	1.57	0.63	UD
108-05-4	Vinyl acetate	1.57	0.52	UD
593-60-2	Vinyl bromide	1.57	0.50	UD
75-01-4	Vinyl chloride	1.57	0.61	UD
179601-23-1	p- & m-Xylenes	1.57	3.5	JD
95-47-6	o-Xylene	1.57	1.4	JD
1330-20-7	Total Xylenes	1.57	4.9	JD
---	TPH - Gasoline	1.57	400	D
---	Total Petroleum Hydrocarbons	1.57	400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.4	104	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92272	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	159865	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	287377	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-15RE1	File ID:	04JAN31.D
Sampled:	12/22/20 15:25	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 01:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.5	1200	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.98	99.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	84342	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	146910	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	245518	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-15
File ID: 05JAN13.D
Sampled: 12/22/20 15:25
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 15:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	7.75	6.4	UD
67-64-1	Acetone	7.75	260	D
107-13-1	Acrylonitrile	7.75	2.1	UD
107-05-1	Allyl chloride	7.75	2.2	UD
994-05-8	t-Amyl Methyl ether	7.75	2.4	UD
71-43-2	Benzene	7.75	7.5	JD
100-44-7	Benzyl chloride	7.75	2.0	UD
75-27-4	Bromodichloromethane	7.75	3.5	UD
75-25-2	Bromoform	7.75	6.7	UD
74-83-9	Bromomethane	7.75	3.6	UD
106-99-0	1,3-Butadiene	7.75	1.7	UD
75-65-0	t-Butyl alcohol	7.75	5.4	UD
75-15-0	Carbon disulfide	7.75	18	D
56-23-5	Carbon tetrachloride	7.75	3.5	UD
108-90-7	Chlorobenzene	7.75	3.1	UD
75-00-3	Chloroethane	7.75	4.1	UD
67-66-3	Chloroform	7.75	10	JD
74-87-3	Chloromethane	7.75	1.6	UD
110-82-7	Cyclohexane	7.75	2.9	UD
124-48-1	Dibromochloromethane	7.75	3.3	UD
96-12-8	1,2-Dibromo-3-chloropropane	7.75	13	UD
106-93-4	1,2-Dibromoethane	7.75	4.5	UD
74-95-3	Dibromomethane	7.75	4.4	UD
95-50-1	1,2-Dichlorobenzene	7.75	3.9	UD
541-73-1	1,3-Dichlorobenzene	7.75	2.4	UD
106-46-7	1,4-Dichlorobenzene	7.75	3.9	UD
75-71-8	Dichlorodifluoromethane	7.75	3.5	UD
75-34-3	1,1-Dichloroethane	7.75	1.8	UD
107-06-2	1,2-Dichloroethane	7.75	2.0	UD
75-35-4	1,1-Dichloroethene	7.75	2.4	UD
156-59-2	cis-1,2-Dichloroethene	7.75	2.5	UD
156-60-5	trans-1,2-Dichloroethene	7.75	2.1	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-15
File ID: 05JAN13.D
Sampled: 12/22/20 15:25
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 15:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	7.75	2.5	UD
10061-01-5	cis-1,3-Dichloropropene	7.75	2.3	UD
10061-02-6	trans-1,3-Dichloropropene	7.75	3.1	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	7.75	7.1	UD
75-37-6	1,1-Difluoroethane	7.75	16	UD
108-20-3	Diisopropyl ether	7.75	3.0	UD
123-91-1	1,4-Dioxane	7.75	2.6	UD
64-17-5	Ethanol	7.75	3.3	UD
141-78-6	Ethyl acetate	7.75	2.6	UD
100-41-4	Ethylbenzene	7.75	18	JD
622-96-8	1-Ethyl-4-methylbenzene	7.75	16	JD
637-92-3	Ethyl t-butyl ether	7.75	2.6	UD
142-82-5	n-Heptane	7.75	2.6	UD
87-68-3	Hexachlorobutadiene	7.75	12	UD
67-72-1	Hexachloroethane	7.75	5.7	UD
110-54-3	Hexane	7.75	1.6	UD
591-78-6	2-Hexanone	7.75	2.2	UD
540-84-1	Isooctane	7.75	2.7	UD
67-63-0	Isopropyl alcohol	7.75	2.5	UD
75-09-2	Methylene chloride	7.75	3.1	UD
78-93-3	Methyl ethyl ketone	7.75	170	D
74-88-4	Methyl iodide	7.75	4.5	UD
108-10-1	Methyl isobutyl ketone	7.75	15	JD
1634-04-4	Methyl t-butyl ether	7.75	2.2	UD
91-20-3	Naphthalene	7.75	11	UD
115-07-1	Propylene	7.75	1.9	UD
100-42-5	Styrene	7.75	1.9	UD
630-20-6	1,1,1,2-Tetrachloroethane	7.75	4.7	UD
79-34-5	1,1,2,2-Tetrachloroethane	7.75	3.6	UD
127-18-4	Tetrachloroethene	7.75	93	D
811-97-2	1,1,1,2-Tetrafluoroethane	7.75	5.2	UD
109-99-9	Tetrahydrofuran	7.75	13	JD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-15	File ID:	05JAN13.D
Sampled:	12/22/20 15:25	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 15:35
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	7.75	6.4	UD
71-55-6	1,1,1-Trichloroethane	7.75	3.0	UD
79-00-5	1,1,2-Trichloroethane	7.75	4.7	UD
79-01-6	Trichloroethene	7.75	4.2	UD
75-69-4	Trichlorofluoromethane	7.75	3.6	UD
96-18-4	1,2,3-Trichloropropane	7.75	3.7	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.75	4.3	UD
95-63-6	1,2,4-Trimethylbenzene	7.75	23	JD
108-67-8	1,3,5-Trimethylbenzene	7.75	3.1	UD
108-05-4	Vinyl acetate	7.75	2.6	UD
593-60-2	Vinyl bromide	7.75	2.5	UD
75-01-4	Vinyl chloride	7.75	3.0	UD
179601-23-1	p- & m-Xylenes	7.75	58	D
95-47-6	o-Xylene	7.75	19	JD
1330-20-7	Total Xylenes	7.75	77	JD
---	TPH - Gasoline	7.75	2800	D
---	Total Petroleum Hydrocarbons	7.75	2800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95082	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	167528	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	294735	8.69	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-16RE1	File ID:	04JAN32.D
Sampled:	12/22/20 15:15	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 02:13
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	15.5	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.58	95.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82367	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	136775	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	240682	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-16
File ID: 05JAN14.D
Sampled: 12/22/20 15:15
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 16:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	20	D
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	3.5	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	29	D
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	8.5	D
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-16
File ID: 05JAN14.D
Sampled: 12/22/20 15:15
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 16:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	4.8	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	2.5	JD
622-96-8	1-Ethyl-4-methylbenzene	1.55	2.7	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	6.3	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD
108-88-3	Toluene	1.55	20	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW22B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-16	File ID:	05JAN14.D
Sampled:	12/22/20 15:15	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 16:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	13	D
75-69-4	Trichlorofluoromethane	1.55	2.5	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	3.8	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	8.8	D
95-47-6	o-Xylene	1.55	3.1	JD
1330-20-7	Total Xylenes	1.55	12	JD
---	TPH - Gasoline	1.55	520	D
---	Total Petroleum Hydrocarbons	1.55	520	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	93500	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	162082	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	288359	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-17RE1	File ID:	04JAN33.D
Sampled:	12/23/20 08:54	Prepared:	01/04/21 08:31	Analyzed:	01/05/21 02:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096350	Sequence:	2100009	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.5	250	D
78-93-3	Methyl ethyl ketone	15.5	160	D
108-88-3	Toluene	15.5	130	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.0	100	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82809	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	138059	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	237063	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-17
File ID: 05JAN15.D
Sampled: 12/23/20 08:54
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 16:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	17	D
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	20	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	2.4	JD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	2.9	JD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD
78-87-5	1,2-Dichloropropane	1.55	0.50	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-17
File ID: 05JAN15.D
Sampled: 12/23/20 08:54
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 16:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	3.5	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	24	D
622-96-8	1-Ethyl-4-methylbenzene	1.55	25	D
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	5.0	D
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	5.0	JD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	6.1	JD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	2.6	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	5.1	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	8.7	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-17
File ID: 05JAN15.D
Sampled: 12/23/20 08:54
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 16:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	1.7	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	35	D
108-67-8	1,3,5-Trimethylbenzene	1.55	11	D
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	94	D
95-47-6	o-Xylene	1.55	29	D
1330-20-7	Total Xylenes	1.55	120	D
---	TPH - Gasoline	1.55	2800	D
---	Total Petroleum Hydrocarbons	1.55	2800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.8	108	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100101	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	178890	11.018	169282	11.019	
1,4-Difluorobenzene (IS)	304892	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-18
File ID: 05JAN16.D
Sampled: 12/23/20 08:43
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 17:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.47	1.2	UD
67-64-1	Acetone	1.47	43	D
107-13-1	Acrylonitrile	1.47	0.40	UD
107-05-1	Allyl chloride	1.47	0.41	UD
994-05-8	t-Amyl Methyl ether	1.47	0.46	UD
71-43-2	Benzene	1.47	0.31	UD
100-44-7	Benzyl chloride	1.47	0.38	UD
75-27-4	Bromodichloromethane	1.47	0.66	UD
75-25-2	Bromoform	1.47	1.3	UD
74-83-9	Bromomethane	1.47	0.69	UD
106-99-0	1,3-Butadiene	1.47	0.32	UD
75-65-0	t-Butyl alcohol	1.47	1.0	UD
75-15-0	Carbon disulfide	1.47	2.8	JD
56-23-5	Carbon tetrachloride	1.47	0.66	UD
108-90-7	Chlorobenzene	1.47	0.59	UD
75-00-3	Chloroethane	1.47	0.78	UD
67-66-3	Chloroform	1.47	27	D
74-87-3	Chloromethane	1.47	0.31	UD
110-82-7	Cyclohexane	1.47	0.56	UD
124-48-1	Dibromochloromethane	1.47	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.47	2.5	UD
106-93-4	1,2-Dibromoethane	1.47	0.85	UD
74-95-3	Dibromomethane	1.47	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.47	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.47	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.47	0.74	UD
75-71-8	Dichlorodifluoromethane	1.47	3.0	JD
75-34-3	1,1-Dichloroethane	1.47	0.34	UD
107-06-2	1,2-Dichloroethane	1.47	0.38	UD
75-35-4	1,1-Dichloroethene	1.47	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.47	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.47	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-18
File ID: 05JAN16.D
Sampled: 12/23/20 08:43
Prepared: 01/05/21 08:31
Analyzed: 01/05/21 17:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.47	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.47	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.47	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.47	1.3	UD
75-37-6	1,1-Difluoroethane	1.47	2.9	UD
108-20-3	Diisopropyl ether	1.47	0.57	UD
123-91-1	1,4-Dioxane	1.47	0.49	UD
64-17-5	Ethanol	1.47	1.9	JD
141-78-6	Ethyl acetate	1.47	0.49	UD
100-41-4	Ethylbenzene	1.47	2.2	JD
622-96-8	1-Ethyl-4-methylbenzene	1.47	3.2	JD
637-92-3	Ethyl t-butyl ether	1.47	0.49	UD
142-82-5	n-Heptane	1.47	0.50	UD
87-68-3	Hexachlorobutadiene	1.47	2.2	UD
67-72-1	Hexachloroethane	1.47	1.1	UD
110-54-3	Hexane	1.47	0.29	UD
591-78-6	2-Hexanone	1.47	0.43	UD
540-84-1	Isooctane	1.47	0.51	UD
67-63-0	Isopropyl alcohol	1.47	1.7	JD
75-09-2	Methylene chloride	1.47	0.59	UD
78-93-3	Methyl ethyl ketone	1.47	33	D
74-88-4	Methyl iodide	1.47	0.85	UD
108-10-1	Methyl isobutyl ketone	1.47	2.7	JD
1634-04-4	Methyl t-butyl ether	1.47	0.41	UD
91-20-3	Naphthalene	1.47	2.1	UD
115-07-1	Propylene	1.47	0.37	UD
100-42-5	Styrene	1.47	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.47	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.47	0.69	UD
127-18-4	Tetrachloroethene	1.47	10	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.47	0.98	UD
109-99-9	Tetrahydrofuran	1.47	1.9	JD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-18	File ID:	05JAN16.D
Sampled:	12/23/20 08:43	Prepared:	01/05/21 08:31	Analyzed:	01/05/21 17:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.47	8.6	D
120-82-1	1,2,4-Trichlorobenzene	1.47	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.47	0.57	UD
79-00-5	1,1,2-Trichloroethane	1.47	0.90	UD
79-01-6	Trichloroethene	1.47	0.79	UD
75-69-4	Trichlorofluoromethane	1.47	1.7	JD
96-18-4	1,2,3-Trichloropropane	1.47	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.47	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.47	5.8	JD
108-67-8	1,3,5-Trimethylbenzene	1.47	1.7	JD
108-05-4	Vinyl acetate	1.47	0.49	UD
593-60-2	Vinyl bromide	1.47	0.47	UD
75-01-4	Vinyl chloride	1.47	0.57	UD
179601-23-1	p- & m-Xylenes	1.47	9.5	D
95-47-6	o-Xylene	1.47	3.9	JD
1330-20-7	Total Xylenes	1.47	13	JD
---	TPH - Gasoline	1.47	260	JD
---	Total Petroleum Hydrocarbons	1.47	260	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94346	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	157883	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	288861	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-19
File ID: 05JAN37.D
Sampled: 12/23/20 09:59
Prepared: 01/05/21 08:31
Analyzed: 01/06/21 04:02
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
67-64-1	Acetone	1.5	56	D
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	1.8	JD
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	8.1	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	0.81	UD
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	2.8	JD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD

AECOM - Sacramento
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-19
File ID: 05JAN37.D
Sampled: 12/23/20 09:59
Prepared: 01/05/21 08:31
Analyzed: 01/06/21 04:02
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.5	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	2.0	JD
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	5.6	JD
622-96-8	1-Ethyl-4-methylbenzene	1.5	5.6	JD
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	0.51	UD
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	0.52	UD
67-63-0	Isopropyl alcohol	1.5	0.48	UD
75-09-2	Methylene chloride	1.5	0.60	UD
78-93-3	Methyl ethyl ketone	1.5	43	D
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	3.4	JD
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	5.3	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	4.2	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-19	File ID:	05JAN37.D
Sampled:	12/23/20 09:59	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 04:02
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.5	33	D
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	0.70	UD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	8.3	D
108-67-8	1,3,5-Trimethylbenzene	1.5	2.9	JD
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	23	D
95-47-6	o-Xylene	1.5	7.9	D
1330-20-7	Total Xylenes	1.5	31	D
---	TPH - Gasoline	1.5	510	D
---	Total Petroleum Hydrocarbons	1.5	510	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.0	110	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	91507	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	154564	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	260133	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-20	File ID:	05JAN38.D
Sampled:	12/23/20 09:47	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 04:38
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
67-64-1	Acetone	1.5	32	D
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	1.1	JD
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	2.2	JD
75-15-0	Carbon disulfide	1.5	5.9	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	15	D
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	2.6	JD
75-71-8	Dichlorodifluoromethane	1.5	2.5	JD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-20	File ID:	05JAN38.D
Sampled:	12/23/20 09:47	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 04:38
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.5	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	130	D
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	7.7	D
622-96-8	1-Ethyl-4-methylbenzene	1.5	3.8	JD
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	0.51	UD
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	0.52	UD
67-63-0	Isopropyl alcohol	1.5	35	D
75-09-2	Methylene chloride	1.5	0.60	UD
78-93-3	Methyl ethyl ketone	1.5	40	D
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	7.0	JD
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	7.5	JD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	1.8	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	11	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	7.8	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW46B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-20	File ID:	05JAN38.D
Sampled:	12/23/20 09:47	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 04:38
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.5	13	D
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	0.70	UD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	5.7	JD
108-67-8	1,3,5-Trimethylbenzene	1.5	1.6	JD
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	17	D
95-47-6	o-Xylene	1.5	5.4	JD
1330-20-7	Total Xylenes	1.5	22	D
---	TPH - Gasoline	1.5	720	D
---	Total Petroleum Hydrocarbons	1.5	720	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.3	113	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97611	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	172022	11.019	169282	11.019	
1,4-Difluorobenzene (IS)	303715	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-21
File ID: 05JAN39.D
Sampled: 12/23/20 10:49
Prepared: 01/05/21 08:31
Analyzed: 01/06/21 05:14
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
67-64-1	Acetone	1.5	6.4	JD
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	0.32	UD
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	4.4	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	0.81	UD
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	2.7	JD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-21	File ID:	05JAN39.D
Sampled:	12/23/20 10:49	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 05:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.5	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	2.0	JD
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	0.48	UD
622-96-8	1-Ethyl-4-methylbenzene	1.5	0.45	UD
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	0.51	UD
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	0.52	UD
67-63-0	Isopropyl alcohol	1.5	0.48	UD
75-09-2	Methylene chloride	1.5	0.60	UD
78-93-3	Methyl ethyl ketone	1.5	2.8	JD
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	0.39	UD
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	9.5	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-21	File ID:	05JAN39.D
Sampled:	12/23/20 10:49	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 05:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.5	7.0	D
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	0.70	UD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	0.60	UD
108-67-8	1,3,5-Trimethylbenzene	1.5	0.60	UD
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	0.92	UD
95-47-6	o-Xylene	1.5	1.7	JD
1330-20-7	Total Xylenes	1.5	1.7	JD
---	TPH - Gasoline	1.5	130	JD
---	Total Petroleum Hydrocarbons	1.5	130	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92010	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	155708	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	265066	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-22
File ID: 05JAN40.D
Sampled: 12/23/20 10:38
Prepared: 01/05/21 08:31
Analyzed: 01/06/21 05:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.51	1.2	UD
67-64-1	Acetone	1.51	14	D
107-13-1	Acrylonitrile	1.51	0.41	UD
107-05-1	Allyl chloride	1.51	0.42	UD
994-05-8	t-Amyl Methyl ether	1.51	0.47	UD
71-43-2	Benzene	1.51	0.32	UD
100-44-7	Benzyl chloride	1.51	0.39	UD
75-27-4	Bromodichloromethane	1.51	2.3	JD
75-25-2	Bromoform	1.51	1.3	UD
74-83-9	Bromomethane	1.51	0.71	UD
106-99-0	1,3-Butadiene	1.51	0.33	UD
75-65-0	t-Butyl alcohol	1.51	1.1	UD
75-15-0	Carbon disulfide	1.51	3.7	D
56-23-5	Carbon tetrachloride	1.51	0.68	UD
108-90-7	Chlorobenzene	1.51	0.60	UD
75-00-3	Chloroethane	1.51	0.80	UD
67-66-3	Chloroform	1.51	170	D
74-87-3	Chloromethane	1.51	0.32	UD
110-82-7	Cyclohexane	1.51	0.57	UD
124-48-1	Dibromochloromethane	1.51	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.51	2.6	UD
106-93-4	1,2-Dibromoethane	1.51	0.88	UD
74-95-3	Dibromomethane	1.51	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.51	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.51	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.51	0.76	UD
75-71-8	Dichlorodifluoromethane	1.51	2.7	JD
75-34-3	1,1-Dichloroethane	1.51	0.35	UD
107-06-2	1,2-Dichloroethane	1.51	0.39	UD
75-35-4	1,1-Dichloroethene	1.51	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.51	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.51	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-22
File ID: 05JAN40.D
Sampled: 12/23/20 10:38
Prepared: 01/05/21 08:31
Analyzed: 01/06/21 05:50
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096447
Sequence: 2100086
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.51	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.51	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.51	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.51	1.4	UD
75-37-6	1,1-Difluoroethane	1.51	3.0	UD
108-20-3	Diisopropyl ether	1.51	0.59	UD
123-91-1	1,4-Dioxane	1.51	0.50	UD
64-17-5	Ethanol	1.51	1.7	JD
141-78-6	Ethyl acetate	1.51	0.50	UD
100-41-4	Ethylbenzene	1.51	2.4	JD
622-96-8	1-Ethyl-4-methylbenzene	1.51	1.9	JD
637-92-3	Ethyl t-butyl ether	1.51	0.50	UD
142-82-5	n-Heptane	1.51	0.51	UD
87-68-3	Hexachlorobutadiene	1.51	2.3	UD
67-72-1	Hexachloroethane	1.51	1.1	UD
110-54-3	Hexane	1.51	0.30	UD
591-78-6	2-Hexanone	1.51	0.44	UD
540-84-1	Isooctane	1.51	0.53	UD
67-63-0	Isopropyl alcohol	1.51	0.48	UD
75-09-2	Methylene chloride	1.51	0.60	UD
78-93-3	Methyl ethyl ketone	1.51	8.9	D
74-88-4	Methyl iodide	1.51	0.88	UD
108-10-1	Methyl isobutyl ketone	1.51	1.8	JD
1634-04-4	Methyl t-butyl ether	1.51	0.42	UD
91-20-3	Naphthalene	1.51	2.1	UD
115-07-1	Propylene	1.51	0.38	UD
100-42-5	Styrene	1.51	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.51	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.51	0.71	UD
127-18-4	Tetrachloroethene	1.51	11	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.51	1.0	UD
109-99-9	Tetrahydrofuran	1.51	1.5	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW47B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-22	File ID:	05JAN40.D
Sampled:	12/23/20 10:38	Prepared:	01/05/21 08:31	Analyzed:	01/06/21 05:50
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096447	Sequence:	2100086	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.51	7.6	D
120-82-1	1,2,4-Trichlorobenzene	1.51	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.51	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.51	0.92	UD
79-01-6	Trichloroethene	1.51	0.82	UD
75-69-4	Trichlorofluoromethane	1.51	0.71	UD
96-18-4	1,2,3-Trichloropropane	1.51	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.51	0.83	UD
95-63-6	1,2,4-Trimethylbenzene	1.51	3.4	JD
108-67-8	1,3,5-Trimethylbenzene	1.51	0.60	UD
108-05-4	Vinyl acetate	1.51	0.50	UD
593-60-2	Vinyl bromide	1.51	0.48	UD
75-01-4	Vinyl chloride	1.51	0.59	UD
179601-23-1	p- & m-Xylenes	1.51	7.5	JD
95-47-6	o-Xylene	1.51	3.1	JD
1330-20-7	Total Xylenes	1.51	11	JD
---	TPH - Gasoline	1.51	240	JD
---	Total Petroleum Hydrocarbons	1.51	240	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89224	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	150808	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	259814	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-23
File ID: 06JAN32.D
Sampled: 12/23/20 12:07
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 01:04
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	14	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	0.32	UD
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	4.5	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	3.5	JD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	2.9	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-23
File ID: 06JAN32.D
Sampled: 12/23/20 12:07
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 01:04
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	2.8	JD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	5.2	JD
622-96-8	1-Ethyl-4-methylbenzene	1.53	6.4	JD
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	1.4	JD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	19	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	4.8	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	35	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	5.8	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-23	File ID:	06JAN32.D
Sampled:	12/23/20 12:07	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 01:04
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.53	18	D
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	0.83	UD
75-69-4	Trichlorofluoromethane	1.53	0.72	UD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	10	D
108-67-8	1,3,5-Trimethylbenzene	1.53	3.0	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	20	D
95-47-6	o-Xylene	1.53	7.5	JD
1330-20-7	Total Xylenes	1.53	27	D
---	TPH - Gasoline	1.53	410	D
---	Total Petroleum Hydrocarbons	1.53	410	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.9	109	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82875	7.511	96371	7.503	
Chlorobenzene-d5 (IS)	136136	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	231927	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-24
File ID: 06JAN33.D
Sampled: 12/23/20 11:56
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 01:40
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
67-64-1	Acetone	1.5	7.4	JD
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	0.32	UD
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	1.7	JD
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	130	D
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	2.8	JD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-24
File ID: 06JAN33.D
Sampled: 12/23/20 11:56
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 01:40
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.5	0.48	UD
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	3.0	UD
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	6.4	D
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	0.48	UD
622-96-8	1-Ethyl-4-methylbenzene	1.5	0.45	UD
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	0.51	UD
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	0.52	UD
67-63-0	Isopropyl alcohol	1.5	0.48	UD
75-09-2	Methylene chloride	1.5	0.60	UD
78-93-3	Methyl ethyl ketone	1.5	1.0	JD
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	0.39	UD
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	41	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	1.2	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-24	File ID:	06JAN33.D
Sampled:	12/23/20 11:56	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 01:40
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.5	1.5	JD
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	0.70	UD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	0.60	UD
108-67-8	1,3,5-Trimethylbenzene	1.5	0.60	UD
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	2.1	JD
95-47-6	o-Xylene	1.5	0.45	UD
1330-20-7	Total Xylenes	1.5	2.1	JD
---	TPH - Gasoline	1.5	180	JD
---	Total Petroleum Hydrocarbons	1.5	180	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.1	101	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82131	7.51	96371	7.503	
Chlorobenzene-d5 (IS)	134050	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	235878	8.699	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-25
File ID: 06JAN34.D
Sampled: 12/23/20 12:59
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 02:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
67-64-1	Acetone	1.56	18	D
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	1.0	JD
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.1	UD
75-15-0	Carbon disulfide	1.56	4.1	D
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	4.7	JD
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	0.59	UD
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	0.90	UD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	3.0	JD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-25
File ID: 06JAN34.D
Sampled: 12/23/20 12:59
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 02:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.56	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	3.9	D
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	3.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.56	2.0	JD
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	0.53	UD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	0.31	UD
591-78-6	2-Hexanone	1.56	2.5	JD
540-84-1	Isooctane	1.56	0.55	UD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	13	D
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	2.4	JD
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
127-18-4	Tetrachloroethene	1.56	54	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	3.5	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-25	File ID:	06JAN34.D
Sampled:	12/23/20 12:59	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 02:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.56	14	D
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.56	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	0.84	UD
75-69-4	Trichlorofluoromethane	1.56	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	3.5	JD
108-67-8	1,3,5-Trimethylbenzene	1.56	0.62	UD
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	7.6	JD
95-47-6	o-Xylene	1.56	4.7	JD
1330-20-7	Total Xylenes	1.56	12	JD
---	TPH - Gasoline	1.56	190	JD
---	Total Petroleum Hydrocarbons	1.56	190	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	81312	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	134368	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	230688	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-26
File ID: 06JAN35.D
Sampled: 12/23/20 12:49
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 02:52
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
67-64-1	Acetone	1.56	11	D
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	0.33	UD
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.1	UD
75-15-0	Carbon disulfide	1.56	1.9	JD
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	39	D
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	0.59	UD
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	0.90	UD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	2.7	JD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-26
File ID: 06JAN35.D
Sampled: 12/23/20 12:49
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 02:52
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.56	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	2.6	JD
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.56	0.47	UD
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	0.53	UD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	0.31	UD
591-78-6	2-Hexanone	1.56	0.45	UD
540-84-1	Isooctane	1.56	0.55	UD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	11	D
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	0.41	UD
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
127-18-4	Tetrachloroethene	1.56	98	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	0.42	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-26	File ID:	06JAN35.D
Sampled:	12/23/20 12:49	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 02:52
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.56	1.3	JD
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.56	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	0.84	UD
75-69-4	Trichlorofluoromethane	1.56	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	0.62	UD
108-67-8	1,3,5-Trimethylbenzene	1.56	0.62	UD
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	2.0	JD
95-47-6	o-Xylene	1.56	1.4	JD
1330-20-7	Total Xylenes	1.56	3.3	JD
---	TPH - Gasoline	1.56	180	JD
---	Total Petroleum Hydrocarbons	1.56	180	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.1	101	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	79934	7.507	96371	7.503	
Chlorobenzene-d5 (IS)	131989	11.018	169282	11.019	
1,4-Difluorobenzene (IS)	229792	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-27RE1	File ID:	06JAN23.D
Sampled:	12/23/20 13:55	Prepared:	01/06/21 08:49	Analyzed:	01/06/21 20:32
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.2	110	D
78-93-3	Methyl ethyl ketone	15.2	100	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.69	96.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	79967	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	127992	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	225833	8.696	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-27
File ID: 06JAN36.D
Sampled: 12/23/20 13:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 03:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	2.0	JD
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	5.6	D
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	2.6	JD
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	0.58	UD
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	0.88	UD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	2.9	JD
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	0.40	UD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD
78-87-5	1,2-Dichloropropane	1.52	0.49	UD

AECOM - Sacramento
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-27
File ID: 06JAN36.D
Sampled: 12/23/20 13:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 03:29
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	11	D
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	11	D
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	8.3	D
622-96-8	1-Ethyl-4-methylbenzene	1.52	8.9	D
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	0.52	UD
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	0.30	UD
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	0.53	UD
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	8.8	D
1634-04-4	Methyl t-butyl ether	1.52	0.43	UD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	71	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	10	D
108-88-3	Toluene	1.52	39	D
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-27	File ID:	06JAN36.D
Sampled:	12/23/20 13:55	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 03:29
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.52	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	0.71	UD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	14	D
108-67-8	1,3,5-Trimethylbenzene	1.52	4.0	JD
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	32	D
95-47-6	o-Xylene	1.52	12	D
1330-20-7	Total Xylenes	1.52	44	D
---	TPH - Gasoline	1.52	710	D
---	Total Petroleum Hydrocarbons	1.52	710	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.8	108	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	84119	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	139992	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	236543	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-28RE1	File ID:	06JAN24.D
Sampled:	12/23/20 13:55	Prepared:	01/06/21 08:49	Analyzed:	01/06/21 21:01
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15	100	D
78-93-3	Methyl ethyl ketone	15	99	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.69	96.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	80358	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	127433	11.019	169282	11.019	
1,4-Difluorobenzene (IS)	225003	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-02

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-28
File ID: 06JAN37.D
Sampled: 12/23/20 13:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 04:04
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.5	1.2	UD
107-13-1	Acrylonitrile	1.5	0.40	UD
107-05-1	Allyl chloride	1.5	0.42	UD
994-05-8	t-Amyl Methyl ether	1.5	0.46	UD
71-43-2	Benzene	1.5	1.9	JD
100-44-7	Benzyl chloride	1.5	0.39	UD
75-27-4	Bromodichloromethane	1.5	0.68	UD
75-25-2	Bromoform	1.5	1.3	UD
74-83-9	Bromomethane	1.5	0.70	UD
106-99-0	1,3-Butadiene	1.5	0.33	UD
75-65-0	t-Butyl alcohol	1.5	1.0	UD
75-15-0	Carbon disulfide	1.5	5.8	D
56-23-5	Carbon tetrachloride	1.5	0.68	UD
108-90-7	Chlorobenzene	1.5	0.60	UD
75-00-3	Chloroethane	1.5	0.80	UD
67-66-3	Chloroform	1.5	1.7	JD
74-87-3	Chloromethane	1.5	0.32	UD
110-82-7	Cyclohexane	1.5	0.57	UD
124-48-1	Dibromochloromethane	1.5	0.64	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.5	2.6	UD
106-93-4	1,2-Dibromoethane	1.5	0.87	UD
74-95-3	Dibromomethane	1.5	0.86	UD
95-50-1	1,2-Dichlorobenzene	1.5	0.75	UD
541-73-1	1,3-Dichlorobenzene	1.5	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.5	0.75	UD
75-71-8	Dichlorodifluoromethane	1.5	3.0	JD
75-34-3	1,1-Dichloroethane	1.5	0.34	UD
107-06-2	1,2-Dichloroethane	1.5	0.39	UD
75-35-4	1,1-Dichloroethene	1.5	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.5	0.48	UD
156-60-5	trans-1,2-Dichloroethene	1.5	0.40	UD
78-87-5	1,2-Dichloropropane	1.5	0.48	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-02

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-28
File ID: 06JAN37.D
Sampled: 12/23/20 13:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 04:04
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.5	0.45	UD
10061-02-6	trans-1,3-Dichloropropene	1.5	0.60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.5	1.4	UD
75-37-6	1,1-Difluoroethane	1.5	8.1	D
108-20-3	Diisopropyl ether	1.5	0.58	UD
123-91-1	1,4-Dioxane	1.5	0.50	UD
64-17-5	Ethanol	1.5	8.6	D
141-78-6	Ethyl acetate	1.5	0.50	UD
100-41-4	Ethylbenzene	1.5	8.2	D
622-96-8	1-Ethyl-4-methylbenzene	1.5	8.9	D
637-92-3	Ethyl t-butyl ether	1.5	0.50	UD
142-82-5	n-Heptane	1.5	0.51	UD
87-68-3	Hexachlorobutadiene	1.5	2.2	UD
67-72-1	Hexachloroethane	1.5	1.1	UD
110-54-3	Hexane	1.5	0.30	UD
591-78-6	2-Hexanone	1.5	0.44	UD
540-84-1	Isooctane	1.5	0.52	UD
67-63-0	Isopropyl alcohol	1.5	2.8	JD
75-09-2	Methylene chloride	1.5	0.60	UD
74-88-4	Methyl iodide	1.5	0.87	UD
108-10-1	Methyl isobutyl ketone	1.5	8.9	D
1634-04-4	Methyl t-butyl ether	1.5	0.42	UD
91-20-3	Naphthalene	1.5	2.1	UD
115-07-1	Propylene	1.5	0.38	UD
100-42-5	Styrene	1.5	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.5	0.92	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.5	0.70	UD
127-18-4	Tetrachloroethene	1.5	71	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.5	1.0	UD
109-99-9	Tetrahydrofuran	1.5	11	D
108-88-3	Toluene	1.5	39	D
120-82-1	1,2,4-Trichlorobenzene	1.5	1.2	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50A-02

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-28	File ID:	06JAN37.D
Sampled:	12/23/20 13:55	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 04:04
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.5	0.58	UD
79-00-5	1,1,2-Trichloroethane	1.5	0.92	UD
79-01-6	Trichloroethene	1.5	0.81	UD
75-69-4	Trichlorofluoromethane	1.5	0.70	UD
96-18-4	1,2,3-Trichloropropane	1.5	0.72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	0.82	UD
95-63-6	1,2,4-Trimethylbenzene	1.5	14	D
108-67-8	1,3,5-Trimethylbenzene	1.5	4.3	JD
108-05-4	Vinyl acetate	1.5	0.50	UD
593-60-2	Vinyl bromide	1.5	0.48	UD
75-01-4	Vinyl chloride	1.5	0.58	UD
179601-23-1	p- & m-Xylenes	1.5	32	D
95-47-6	o-Xylene	1.5	12	D
1330-20-7	Total Xylenes	1.5	43	D
---	TPH - Gasoline	1.5	730	D
---	Total Petroleum Hydrocarbons	1.5	730	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.9	109	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	87335	7.507	96371	7.503	
Chlorobenzene-d5 (IS)	147177	11.018	169282	11.019	
1,4-Difluorobenzene (IS)	249668	8.695	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-29RE1	File ID:	06JAN25.D
Sampled:	12/23/20 13:43	Prepared:	01/06/21 08:49	Analyzed:	01/06/21 21:30
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	14.7	220	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.39	93.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	73080	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	126448	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	223116	8.696	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-29
File ID: 06JAN38.D
Sampled: 12/23/20 13:43
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 04:41
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.47	1.2	UD
67-64-1	Acetone	1.47	9.8	D
107-13-1	Acrylonitrile	1.47	0.40	UD
107-05-1	Allyl chloride	1.47	0.41	UD
994-05-8	t-Amyl Methyl ether	1.47	0.46	UD
71-43-2	Benzene	1.47	0.31	UD
100-44-7	Benzyl chloride	1.47	0.38	UD
75-27-4	Bromodichloromethane	1.47	0.66	UD
75-25-2	Bromoform	1.47	1.3	UD
74-83-9	Bromomethane	1.47	0.69	UD
106-99-0	1,3-Butadiene	1.47	0.32	UD
75-65-0	t-Butyl alcohol	1.47	1.0	UD
75-15-0	Carbon disulfide	1.47	6.4	D
56-23-5	Carbon tetrachloride	1.47	0.66	UD
108-90-7	Chlorobenzene	1.47	0.59	UD
75-00-3	Chloroethane	1.47	0.78	UD
67-66-3	Chloroform	1.47	17	D
74-87-3	Chloromethane	1.47	0.31	UD
110-82-7	Cyclohexane	1.47	0.56	UD
124-48-1	Dibromochloromethane	1.47	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.47	2.5	UD
106-93-4	1,2-Dibromoethane	1.47	0.85	UD
74-95-3	Dibromomethane	1.47	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.47	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.47	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.47	0.74	UD
75-71-8	Dichlorodifluoromethane	1.47	3.0	JD
75-34-3	1,1-Dichloroethane	1.47	0.34	UD
107-06-2	1,2-Dichloroethane	1.47	0.38	UD
75-35-4	1,1-Dichloroethene	1.47	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.47	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.47	0.40	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-29
File ID: 06JAN38.D
Sampled: 12/23/20 13:43
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 04:41
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.47	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.47	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.47	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.47	1.3	UD
75-37-6	1,1-Difluoroethane	1.47	2.9	UD
108-20-3	Diisopropyl ether	1.47	0.57	UD
123-91-1	1,4-Dioxane	1.47	0.49	UD
64-17-5	Ethanol	1.47	4.0	D
141-78-6	Ethyl acetate	1.47	0.49	UD
100-41-4	Ethylbenzene	1.47	0.47	UD
622-96-8	1-Ethyl-4-methylbenzene	1.47	0.44	UD
637-92-3	Ethyl t-butyl ether	1.47	0.49	UD
142-82-5	n-Heptane	1.47	0.50	UD
87-68-3	Hexachlorobutadiene	1.47	2.2	UD
67-72-1	Hexachloroethane	1.47	1.1	UD
110-54-3	Hexane	1.47	0.29	UD
591-78-6	2-Hexanone	1.47	3.9	JD
540-84-1	Isooctane	1.47	0.51	UD
67-63-0	Isopropyl alcohol	1.47	0.47	UD
75-09-2	Methylene chloride	1.47	0.59	UD
78-93-3	Methyl ethyl ketone	1.47	3.0	D
74-88-4	Methyl iodide	1.47	0.85	UD
108-10-1	Methyl isobutyl ketone	1.47	0.38	UD
1634-04-4	Methyl t-butyl ether	1.47	0.41	UD
91-20-3	Naphthalene	1.47	2.1	UD
115-07-1	Propylene	1.47	0.37	UD
100-42-5	Styrene	1.47	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.47	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.47	0.69	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.47	0.98	UD
109-99-9	Tetrahydrofuran	1.47	0.40	UD
108-88-3	Toluene	1.47	2.0	JD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW50B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-29	File ID:	06JAN38.D
Sampled:	12/23/20 13:43	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 04:41
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.47	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.47	0.57	UD
79-00-5	1,1,2-Trichloroethane	1.47	0.90	UD
79-01-6	Trichloroethene	1.47	0.79	UD
75-69-4	Trichlorofluoromethane	1.47	0.69	UD
96-18-4	1,2,3-Trichloropropane	1.47	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.47	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.47	0.59	UD
108-67-8	1,3,5-Trimethylbenzene	1.47	0.59	UD
108-05-4	Vinyl acetate	1.47	0.49	UD
593-60-2	Vinyl bromide	1.47	0.47	UD
75-01-4	Vinyl chloride	1.47	0.57	UD
179601-23-1	p- & m-Xylenes	1.47	1.8	JD
95-47-6	o-Xylene	1.47	0.44	UD
1330-20-7	Total Xylenes	1.47	1.8	JD
---	TPH - Gasoline	1.47	320	D
---	Total Petroleum Hydrocarbons	1.47	320	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.1	101	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	83773	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	141523	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	243893	8.697	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-30RE1	File ID:	06JAN26.D
Sampled:	12/23/20 15:07	Prepared:	01/06/21 08:49	Analyzed:	01/06/21 21:59
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	16.3	320	D
78-93-3	Methyl ethyl ketone	16.3	130	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.65	96.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	78055	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	124825	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	219240	8.692	295787	8.697	

* Values outside of QC limits

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2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-30
File ID: 06JAN39.D
Sampled: 12/23/20 15:07
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 05:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.63	1.3	UD
107-13-1	Acrylonitrile	1.63	0.44	UD
107-05-1	Allyl chloride	1.63	0.46	UD
994-05-8	t-Amyl Methyl ether	1.63	0.51	UD
71-43-2	Benzene	1.63	4.2	D
100-44-7	Benzyl chloride	1.63	0.42	UD
75-27-4	Bromodichloromethane	1.63	0.73	UD
75-25-2	Bromoform	1.63	1.4	UD
74-83-9	Bromomethane	1.63	0.77	UD
106-99-0	1,3-Butadiene	1.63	0.36	UD
75-65-0	t-Butyl alcohol	1.63	1.1	UD
75-15-0	Carbon disulfide	1.63	4.4	D
56-23-5	Carbon tetrachloride	1.63	0.73	UD
108-90-7	Chlorobenzene	1.63	0.65	UD
75-00-3	Chloroethane	1.63	0.86	UD
67-66-3	Chloroform	1.63	0.88	UD
74-87-3	Chloromethane	1.63	0.34	UD
110-82-7	Cyclohexane	1.63	0.62	UD
124-48-1	Dibromochloromethane	1.63	0.70	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.63	2.8	UD
106-93-4	1,2-Dibromoethane	1.63	0.95	UD
74-95-3	Dibromomethane	1.63	0.93	UD
95-50-1	1,2-Dichlorobenzene	1.63	0.82	UD
541-73-1	1,3-Dichlorobenzene	1.63	0.51	UD
106-46-7	1,4-Dichlorobenzene	1.63	0.82	UD
75-71-8	Dichlorodifluoromethane	1.63	2.9	JD
75-34-3	1,1-Dichloroethane	1.63	0.37	UD
107-06-2	1,2-Dichloroethane	1.63	0.42	UD
75-35-4	1,1-Dichloroethene	1.63	0.51	UD
156-59-2	cis-1,2-Dichloroethene	1.63	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.63	0.44	UD
78-87-5	1,2-Dichloropropane	1.63	0.52	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51A-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-30
File ID: 06JAN39.D
Sampled: 12/23/20 15:07
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 05:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.63	0.49	UD
10061-02-6	trans-1,3-Dichloropropene	1.63	0.65	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.63	1.5	UD
75-37-6	1,1-Difluoroethane	1.63	3.3	UD
108-20-3	Diisopropyl ether	1.63	0.64	UD
123-91-1	1,4-Dioxane	1.63	0.54	UD
64-17-5	Ethanol	1.63	28	D
141-78-6	Ethyl acetate	1.63	0.54	UD
100-41-4	Ethylbenzene	1.63	9.9	D
622-96-8	1-Ethyl-4-methylbenzene	1.63	8.6	D
637-92-3	Ethyl t-butyl ether	1.63	0.54	UD
142-82-5	n-Heptane	1.63	0.55	UD
87-68-3	Hexachlorobutadiene	1.63	2.4	UD
67-72-1	Hexachloroethane	1.63	1.2	UD
110-54-3	Hexane	1.63	0.33	UD
591-78-6	2-Hexanone	1.63	0.47	UD
540-84-1	Isooctane	1.63	0.57	UD
67-63-0	Isopropyl alcohol	1.63	0.52	UD
75-09-2	Methylene chloride	1.63	0.65	UD
74-88-4	Methyl iodide	1.63	0.95	UD
108-10-1	Methyl isobutyl ketone	1.63	4.2	JD
1634-04-4	Methyl t-butyl ether	1.63	0.46	UD
91-20-3	Naphthalene	1.63	2.3	UD
115-07-1	Propylene	1.63	0.41	UD
100-42-5	Styrene	1.63	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.63	0.99	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.63	0.77	UD
127-18-4	Tetrachloroethene	1.63	23	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.63	1.1	UD
109-99-9	Tetrahydrofuran	1.63	9.5	D
108-88-3	Toluene	1.63	51	D
120-82-1	1,2,4-Trichlorobenzene	1.63	1.3	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51A-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-30	File ID:	06JAN39.D
Sampled:	12/23/20 15:07	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 05:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.63	0.64	UD
79-00-5	1,1,2-Trichloroethane	1.63	0.99	UD
79-01-6	Trichloroethene	1.63	0.88	UD
75-69-4	Trichlorofluoromethane	1.63	0.77	UD
96-18-4	1,2,3-Trichloropropane	1.63	0.78	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.63	0.90	UD
95-63-6	1,2,4-Trimethylbenzene	1.63	12	D
108-67-8	1,3,5-Trimethylbenzene	1.63	3.7	JD
108-05-4	Vinyl acetate	1.63	0.54	UD
593-60-2	Vinyl bromide	1.63	0.52	UD
75-01-4	Vinyl chloride	1.63	0.64	UD
179601-23-1	p- & m-Xylenes	1.63	37	D
95-47-6	o-Xylene	1.63	12	D
1330-20-7	Total Xylenes	1.63	49	D
---	TPH - Gasoline	1.63	870	D
---	Total Petroleum Hydrocarbons	1.63	870	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.9	109	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	87453	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	148166	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	256158	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-31
File ID: 06JAN40.D
Sampled: 12/23/20 14:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 05:54
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	36	D
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	0.33	UD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	1.1	UD
75-15-0	Carbon disulfide	1.59	5.9	D
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	27	D
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	3.1	JD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51B-01

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2037849-31
File ID: 06JAN40.D
Sampled: 12/23/20 14:55
Prepared: 01/06/21 08:49
Analyzed: 01/07/21 05:54
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096551
Sequence: 2100182
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	4.3	D
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	1.5	JD
622-96-8	1-Ethyl-4-methylbenzene	1.59	0.48	UD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	4.0	D
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	16	D
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	0.41	UD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	2.2	UD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	97	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	0.94	JD

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW51B-01

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2037849-31	File ID:	06JAN40.D
Sampled:	12/23/20 14:55	Prepared:	01/06/21 08:49	Analyzed:	01/07/21 05:54
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096551	Sequence:	2100182	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	4.2	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	0.75	UD
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	2.2	JD
108-67-8	1,3,5-Trimethylbenzene	1.59	0.64	UD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	5.8	JD
95-47-6	o-Xylene	1.59	1.8	JD
1330-20-7	Total Xylenes	1.59	7.6	JD
---	TPH - Gasoline	1.59	240	JD
---	Total Petroleum Hydrocarbons	1.59	240	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.4	104	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	85522	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	143074	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	249044	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096350
Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW17A-01	2037849-01	04JAN17.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW17A-01	2037849-01RE1	04JAN08.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW17B-01	2037849-02	04JAN18.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW17B-01	2037849-02RE1	04JAN09.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW17B-02	2037849-03	04JAN19.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW17B-02	2037849-03RE1	04JAN10.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW18A-01	2037849-04	04JAN20.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW18B-01	2037849-05	04JAN21.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW18B-01	2037849-05RE1	04JAN12.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW52A-01	2037849-06	04JAN22.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW52B-01	2037849-07	04JAN23.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW44A-01	2037849-08	04JAN24.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW44A-01	2037849-08RE1	04JAN15.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW44B-01	2037849-09	04JAN25.D	01/04/21 08:32	FULL Customized List-All Table 8
SG-VW21A-01	2037849-12RE1	04JAN28.D	01/04/21 08:31	FULL Customized List-All Table 8
SG-VW21A-02	2037849-13RE1	04JAN29.D	01/04/21 08:31	FULL Customized List-All Table 8
SG-VW21B-01	2037849-14RE1	04JAN30.D	01/04/21 08:31	FULL Customized List-All Table 8
SG-VW22A-01	2037849-15RE1	04JAN31.D	01/04/21 08:31	FULL Customized List-All Table 8
SG-VW22B-01	2037849-16RE1	04JAN32.D	01/04/21 08:31	FULL Customized List-All Table 8

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096350 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW45A-01	2037849-17RE1	04JAN33.D	01/04/21 08:31	FULL Customized List-All Table 8
Blank	B096350-BLK1	04JAN07.D	01/04/21 08:32	
LCS	B096350-BS1	04JAN05.D	01/04/21 08:32	
LCS Dup	B096350-BSD1	04JAN06.D	01/04/21 08:32	

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096447 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW43A-01	2037849-10	05JAN08.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW43B-01	2037849-11	05JAN09.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW21A-01	2037849-12	05JAN10.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW21A-02	2037849-13	05JAN11.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW21B-01	2037849-14	05JAN12.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW22A-01	2037849-15	05JAN13.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW22B-01	2037849-16	05JAN14.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW45A-01	2037849-17	05JAN15.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW45B-01	2037849-18	05JAN16.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW46A-01	2037849-19	05JAN37.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW46B-01	2037849-20	05JAN38.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW47A-01	2037849-21	05JAN39.D	01/05/21 08:31	FULL Customized List-All Table 8
SG-VW47B-01	2037849-22	05JAN40.D	01/05/21 08:31	FULL Customized List-All Table 8
Blank	B096447-BLK1	05JAN07.D	01/05/21 08:31	
LCS	B096447-BS1	05JAN05.D	01/05/21 08:31	
LCS Dup	B096447-BSD1	05JAN06.D	01/05/21 08:31	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096551 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW48A-01	2037849-23	06JAN32.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW48B-01	2037849-24	06JAN33.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW49A-01	2037849-25	06JAN34.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW49B-01	2037849-26	06JAN35.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50A-01	2037849-27	06JAN36.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50A-01	2037849-27RE1	06JAN23.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50A-02	2037849-28	06JAN37.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50A-02	2037849-28RE1	06JAN24.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50B-01	2037849-29	06JAN38.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW50B-01	2037849-29RE1	06JAN25.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW51A-01	2037849-30	06JAN39.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW51A-01	2037849-30RE1	06JAN26.D	01/06/21 08:49	FULL Customized List-All Table 8
SG-VW51B-01	2037849-31	06JAN40.D	01/06/21 08:49	FULL Customized List-All Table 8
Blank	B096551-BLK1	06JAN07.D	01/06/21 08:49	
LCS	B096551-BS1	06JAN05.D	01/06/21 08:49	
LCS Dup	B096551-BSD1	06JAN06.D	01/06/21 08:49	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096350-BLK1	File ID:	04JAN07.D
Prepared:	01/04/21 08:32	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/04/21 12:46	Instrument:	MS-A1		
Batch:	B096350	Sequence:	2100009	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096350-BLK1	File ID:	04JAN07.D
Prepared:	01/04/21 08:32	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/04/21 12:46	Instrument:	MS-A1		
Batch:	B096350	Sequence:	2100009	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096350-BLK1	File ID:	04JAN07.D
Prepared:	01/04/21 08:32	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/04/21 12:46	Instrument:	MS-A1		
Batch:	B096350	Sequence:	2100009	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096350-BLK1	File ID:	04JAN07.D
Prepared:	01/04/21 08:32	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/04/21 12:46	Instrument:	MS-A1		
Batch:	B096350	Sequence:	2100009	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.66	96.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89218	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	148842	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	262667	8.691	295787	8.697	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096447-BLK1	File ID:	05JAN07.D
Prepared:	01/05/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/05/21 12:06	Instrument:	MS-A1		
Batch:	B096447	Sequence:	2100086	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096447-BLK1	File ID:	05JAN07.D
Prepared:	01/05/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/05/21 12:06	Instrument:	MS-A1		
Batch:	B096447	Sequence:	2100086	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096447-BLK1	File ID:	05JAN07.D
Prepared:	01/05/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/05/21 12:06	Instrument:	MS-A1		
Batch:	B096447	Sequence:	2100086	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096447-BLK1	File ID:	05JAN07.D
Prepared:	01/05/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/05/21 12:06	Instrument:	MS-A1		
Batch:	B096447	Sequence:	2100086	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.53	95.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	82717	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	134398	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	241078	8.689	295787	8.697	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096551-BLK1	File ID:	06JAN07.D
Prepared:	01/06/21 08:49	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/06/21 12:00	Instrument:	MS-A1		
Batch:	B096551	Sequence:	2100182	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096551-BLK1	File ID:	06JAN07.D
Prepared:	01/06/21 08:49	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/06/21 12:00	Instrument:	MS-A1		
Batch:	B096551	Sequence:	2100182	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096551-BLK1	File ID:	06JAN07.D
Prepared:	01/06/21 08:49	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/06/21 12:00	Instrument:	MS-A1		
Batch:	B096551	Sequence:	2100182	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2037849
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096551-BLK1	File ID:	06JAN07.D
Prepared:	01/06/21 08:49	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/06/21 12:00	Instrument:	MS-A1		
Batch:	B096551	Sequence:	2100182	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.51	95.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	86306	7.5	96371	7.503	
Chlorobenzene-d5 (IS)	141742	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	250310	8.694	295787	8.697	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096350
Preparation: EPA TO-15

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096350-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	14.827	92.8	70 - 130
Chloroform	24.413	22.484	92.1	70 - 130
Ethylbenzene	21.711	19.301	88.9	70 - 130
Tetrachloroethene	33.913	29.592	87.3	70 - 130
Toluene	18.842	17.192	91.2	70 - 130
Trichloroethene	26.869	23.392	87.1	70 - 130
Trichlorofluoromethane	28.092	25.535	90.9	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	35.130	91.7	70 - 130
p- & m-Xylenes	43.421	37.724	86.9	70 - 130
o-Xylene	21.711	18.354	84.5	70 - 130
Total Xylenes	65.132	56.079	86.1	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	14.737	92.3	0.605	30	70 - 130
Chloroform	24.413	22.518	92.2	0.152	30	70 - 130
Ethylbenzene	21.711	19.440	89.5	0.717	30	70 - 130
Tetrachloroethene	33.913	29.775	87.8	0.617	30	70 - 130
Toluene	18.842	17.003	90.2	1.10	30	70 - 130
Trichloroethene	26.869	23.225	86.4	0.715	30	70 - 130
Trichlorofluoromethane	28.092	25.839	92.0	1.18	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	35.061	91.5	0.197	30	70 - 130
p- & m-Xylenes	43.421	38.020	87.6	0.780	30	70 - 130
o-Xylene	21.711	18.710	86.2	1.92	30	70 - 130

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096350
Preparation: EPA TO-15

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096350-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	56.730	87.1	1.15	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096447
Preparation: EPA TO-15

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096447-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	16.769	105	70 - 130
Chloroform	24.413	25.526	105	70 - 130
Ethylbenzene	21.711	21.810	100	70 - 130
Tetrachloroethene	33.913	34.177	101	70 - 130
Toluene	18.842	19.701	105	70 - 130
Trichloroethene	26.869	27.342	102	70 - 130
Trichlorofluoromethane	28.092	28.957	103	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	39.437	103	70 - 130
p- & m-Xylenes	43.421	43.282	99.7	70 - 130
o-Xylene	21.711	21.268	98.0	70 - 130
Total Xylenes	65.132	64.550	99.1	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	17.009	106	1.42	30	70 - 130
Chloroform	24.413	25.711	105	0.724	30	70 - 130
Ethylbenzene	21.711	22.101	102	1.33	30	70 - 130
Tetrachloroethene	33.913	34.272	101	0.277	30	70 - 130
Toluene	18.842	19.992	106	1.46	30	70 - 130
Trichloroethene	26.869	27.019	101	1.19	30	70 - 130
Trichlorofluoromethane	28.092	29.564	105	2.07	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	40.349	105	2.29	30	70 - 130
p- & m-Xylenes	43.421	44.385	102	2.52	30	70 - 130
o-Xylene	21.711	21.632	99.6	1.70	30	70 - 130

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096447
Preparation: EPA TO-15

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096447-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	66.018	101	2.25	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096551
Preparation: EPA TO-15

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096551-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	15.616	97.8	70 - 130
Chloroform	24.413	23.793	97.5	70 - 130
Ethylbenzene	21.711	20.273	93.4	70 - 130
Tetrachloroethene	33.913	31.125	91.8	70 - 130
Toluene	18.842	18.322	97.2	70 - 130
Trichloroethene	26.869	25.074	93.3	70 - 130
Trichlorofluoromethane	28.092	27.047	96.3	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	37.406	97.6	70 - 130
p- & m-Xylenes	43.421	40.256	92.7	70 - 130
o-Xylene	21.711	19.857	91.5	70 - 130
Total Xylenes	65.132	60.112	92.3	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	15.990	100	2.37	30	70 - 130
Chloroform	24.413	24.149	98.9	1.49	30	70 - 130
Ethylbenzene	21.711	20.777	95.7	2.45	30	70 - 130
Tetrachloroethene	33.913	31.946	94.2	2.60	30	70 - 130
Toluene	18.842	18.624	98.8	1.63	30	70 - 130
Trichloroethene	26.869	25.488	94.9	1.64	30	70 - 130
Trichlorofluoromethane	28.092	27.884	99.3	3.05	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	38.303	100	2.37	30	70 - 130
p- & m-Xylenes	43.421	41.220	94.9	2.37	30	70 - 130
o-Xylene	21.711	20.304	93.5	2.23	30	70 - 130

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Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Batch: B096551
Laboratory ID: B096551-BSD1
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	61.524	94.5	2.32	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100009-TUN1	04JAN01.D	01/04/21 09:32
Calibration Check	2100009-CCV1	04JAN02.D	01/04/21 10:15
Calibration Check	2100009-CCV2	04JAN03.D	01/04/21 10:47
Calibration Blank	2100009-CCB1	04JAN04.D	01/04/21 11:15
LCS	B096350-BS1	04JAN05.D	01/04/21 11:47
LCS Dup	B096350-BSD1	04JAN06.D	01/04/21 12:18
Blank	B096350-BLK1	04JAN07.D	01/04/21 12:46
SG-VW17A-01	2037849-01RE1	04JAN08.D	01/04/21 13:28
SG-VW17B-01	2037849-02RE1	04JAN09.D	01/04/21 13:58
SG-VW17B-02	2037849-03RE1	04JAN10.D	01/04/21 14:27
SG-VW18B-01	2037849-05RE1	04JAN12.D	01/04/21 15:26
SG-VW44A-01	2037849-08RE1	04JAN15.D	01/04/21 16:53
SG-VW17A-01	2037849-01	04JAN17.D	01/04/21 17:58
SG-VW17B-01	2037849-02	04JAN18.D	01/04/21 18:34
SG-VW17B-02	2037849-03	04JAN19.D	01/04/21 19:10
SG-VW18A-01	2037849-04	04JAN20.D	01/04/21 19:46
SG-VW18B-01	2037849-05	04JAN21.D	01/04/21 20:22
SG-VW52A-01	2037849-06	04JAN22.D	01/04/21 20:58
SG-VW52B-01	2037849-07	04JAN23.D	01/04/21 21:34
SG-VW44A-01	2037849-08	04JAN24.D	01/04/21 22:10
SG-VW44B-01	2037849-09	04JAN25.D	01/04/21 22:46
SG-VW21A-01	2037849-12RE1	04JAN28.D	01/05/21 00:14
SG-VW21A-02	2037849-13RE1	04JAN29.D	01/05/21 00:44
SG-VW21B-01	2037849-14RE1	04JAN30.D	01/05/21 01:14
SG-VW22A-01	2037849-15RE1	04JAN31.D	01/05/21 01:43
SG-VW22B-01	2037849-16RE1	04JAN32.D	01/05/21 02:13

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2100009	Instrument:	MS-A1
Matrix:	Air	Calibration:	2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
SG-VW45A-01	2037849-17RE1	04JAN33.D	01/05/21 02:43
Initial Cal Check	2100009-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100009-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2100009-ICV1	28DEC17.D	12/28/20 21:20
Initial Cal Blank	2100009-ICB1	28DEC19.D	12/28/20 22:19

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100086-TUN1	05JAN01.D	01/05/21 09:03
Calibration Check	2100086-CCV1	05JAN02.D	01/05/21 09:35
Calibration Check	2100086-CCV2	05JAN03.D	01/05/21 10:07
Calibration Blank	2100086-CCB1	05JAN04.D	01/05/21 10:35
LCS	B096447-BS1	05JAN05.D	01/05/21 11:06
LCS Dup	B096447-BSD1	05JAN06.D	01/05/21 11:38
Blank	B096447-BLK1	05JAN07.D	01/05/21 12:06
SG-VW43A-01	2037849-10	05JAN08.D	01/05/21 12:42
SG-VW43B-01	2037849-11	05JAN09.D	01/05/21 13:17
SG-VW21A-01	2037849-12	05JAN10.D	01/05/21 13:53
SG-VW21A-02	2037849-13	05JAN11.D	01/05/21 14:29
SG-VW21B-01	2037849-14	05JAN12.D	01/05/21 15:05
SG-VW22A-01	2037849-15	05JAN13.D	01/05/21 15:35
SG-VW22B-01	2037849-16	05JAN14.D	01/05/21 16:10
SG-VW45A-01	2037849-17	05JAN15.D	01/05/21 16:46
SG-VW45B-01	2037849-18	05JAN16.D	01/05/21 17:22
Calibration Check	2100086-CCV3	05JAN34.D	01/06/21 02:27
Calibration Check	2100086-CCV4	05JAN35.D	01/06/21 02:59
Calibration Blank	2100086-CCB2	05JAN36.D	01/06/21 03:27
SG-VW46A-01	2037849-19	05JAN37.D	01/06/21 04:02
SG-VW46B-01	2037849-20	05JAN38.D	01/06/21 04:38
SG-VW47A-01	2037849-21	05JAN39.D	01/06/21 05:14
SG-VW47B-01	2037849-22	05JAN40.D	01/06/21 05:50
Initial Cal Check	2100086-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100086-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2100086-ICV1	28DEC17.D	12/28/20 21:20

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2100086	Instrument:	MS-A1
Matrix:	Air	Calibration:	2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Blank	2100086-ICB1	28DEC19.D	12/28/20 22:19

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100148-TUN2	16OCT09.D	10/16/20 13:36
Cal Standard	2100148-CAL7	16OCT10.D	10/16/20 14:05
Cal Standard	2100148-CAL8	16OCT11.D	10/16/20 14:34
Cal Standard	2100148-CAL9	16OCT12.D	10/16/20 15:03
Cal Standard	2100148-CALA	16OCT13.D	10/16/20 15:34
Cal Standard	2100148-CALB	16OCT14.D	10/16/20 16:05
Cal Standard	2100148-CALC	16OCT15.D	10/16/20 16:41
MS Tune	2100148-TUN1	28DEC10.D	12/28/20 17:12
Cal Standard	2100148-CAL1	28DEC11.D	12/28/20 17:41
Cal Standard	2100148-CAL2	28DEC12.D	12/28/20 18:10
Cal Standard	2100148-CAL3	28DEC13.D	12/28/20 18:42
Cal Standard	2100148-CAL4	28DEC14.D	12/28/20 19:21
Cal Standard	2100148-CAL5	28DEC15.D	12/28/20 20:03
Cal Standard	2100148-CAL6	28DEC16.D	12/28/20 20:49

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100182-TUN1	06JAN01.D	01/06/21 08:55
Calibration Check	2100182-CCV1	06JAN02.D	01/06/21 09:27
Calibration Check	2100182-CCV2	06JAN03.D	01/06/21 09:59
Calibration Blank	2100182-CCB1	06JAN04.D	01/06/21 10:27
LCS	B096551-BS1	06JAN05.D	01/06/21 10:59
LCS Dup	B096551-BSD1	06JAN06.D	01/06/21 11:31
Blank	B096551-BLK1	06JAN07.D	01/06/21 12:00
SG-VW50A-01	2037849-27RE1	06JAN23.D	01/06/21 20:32
SG-VW50A-02	2037849-28RE1	06JAN24.D	01/06/21 21:01
SG-VW50B-01	2037849-29RE1	06JAN25.D	01/06/21 21:30
SG-VW51A-01	2037849-30RE1	06JAN26.D	01/06/21 21:59
MS Tune	2100182-TUN2	06JAN28.D	01/06/21 22:57
Calibration Check	2100182-CCV3	06JAN29.D	01/06/21 23:29
Calibration Check	2100182-CCV4	06JAN30.D	01/07/21 00:01
Calibration Blank	2100182-CCB2	06JAN31.D	01/07/21 00:28
SG-VW48A-01	2037849-23	06JAN32.D	01/07/21 01:04
SG-VW48B-01	2037849-24	06JAN33.D	01/07/21 01:40
SG-VW49A-01	2037849-25	06JAN34.D	01/07/21 02:17
SG-VW49B-01	2037849-26	06JAN35.D	01/07/21 02:52
SG-VW50A-01	2037849-27	06JAN36.D	01/07/21 03:29
SG-VW50A-02	2037849-28	06JAN37.D	01/07/21 04:04
SG-VW50B-01	2037849-29	06JAN38.D	01/07/21 04:41
SG-VW51A-01	2037849-30	06JAN39.D	01/07/21 05:17
SG-VW51B-01	2037849-31	06JAN40.D	01/07/21 05:54
Initial Cal Check	2100182-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100182-ICB2	16OCT17.D	10/16/20 17:40

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2100182	Instrument:	MS-A1
Matrix:	Air	Calibration:	2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2100182-ICV1	28DEC17.D	12/28/20 21:20
Initial Cal Blank	2100182-ICB1	28DEC19.D	12/28/20 22:19

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	04JAN01.D	Injection Date:	01/04/21
Instrument ID:	MS-A1	Injection Time:	09:32
Sequence:	2100009	Lab Sample ID:	2100009-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	17.9	PASS
Mass 75	30 - 66% of Mass 95	55.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.79	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.9	PASS
Mass 175	4 - 9% of Mass 174	7.64	PASS
Mass 176	93 - 101% of Mass 174	96.5	PASS
Mass 177	5 - 9% of Mass 176	7.07	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	05JAN01.D	Injection Date:	01/05/21
Instrument ID:	MS-A1	Injection Time:	09:03
Sequence:	2100086	Lab Sample ID:	2100086-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.9	PASS
Mass 75	30 - 66% of Mass 95	58.2	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.36	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	74.3	PASS
Mass 175	4 - 9% of Mass 174	7.61	PASS
Mass 176	93 - 101% of Mass 174	97.3	PASS
Mass 177	5 - 9% of Mass 176	6.75	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	28DEC10.D	Injection Date:	12/28/20
Instrument ID:	MS-A1	Injection Time:	17:12
Sequence:	2100148	Lab Sample ID:	2100148-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.6	PASS
Mass 75	30 - 66% of Mass 95	56.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.89	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	76	PASS
Mass 175	4 - 9% of Mass 174	7.55	PASS
Mass 176	93 - 101% of Mass 174	96.5	PASS
Mass 177	5 - 9% of Mass 176	6.96	PASS

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	16OCT09.D	Injection Date:	10/16/20
Instrument ID:	MS-A1	Injection Time:	13:36
Sequence:	2100148	Lab Sample ID:	2100148-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28	PASS
Mass 75	30 - 66% of Mass 95	54.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.88	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.7	PASS
Mass 175	4 - 9% of Mass 174	7.82	PASS
Mass 176	93 - 101% of Mass 174	97.7	PASS
Mass 177	5 - 9% of Mass 176	6.13	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	06JAN01.D	Injection Date:	01/06/21
Instrument ID:	MS-A1	Injection Time:	08:55
Sequence:	2100182	Lab Sample ID:	2100182-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	17.9	PASS
Mass 75	30 - 66% of Mass 95	54.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.78	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	74	PASS
Mass 175	4 - 9% of Mass 174	7.46	PASS
Mass 176	93 - 101% of Mass 174	96.6	PASS
Mass 177	5 - 9% of Mass 176	6.08	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	06JAN28.D	Injection Date:	01/06/21
Instrument ID:	MS-A1	Injection Time:	22:57
Sequence:	2100182	Lab Sample ID:	2100182-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	19.5	PASS
Mass 75	30 - 66% of Mass 95	57.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.58	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	74.1	PASS
Mass 175	4 - 9% of Mass 174	7.21	PASS
Mass 176	93 - 101% of Mass 174	95.8	PASS
Mass 177	5 - 9% of Mass 176	6.69	PASS

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	04JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	01/04/21
Lab Sample ID:	2100009-CCV1	Injection Time:	10:15

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.6870	1.35416	1.269344		-6.3	30
Acrylonitrile	A	5.0000	4.7690	0.4040217	0.3853304		-4.6	30
Allyl chloride	A	5.0000	4.7020	1.073815	1.009772		-6.0	30
t-Amyl Methyl ether	A	5.0000	4.9270	0.5752153	0.566764		-1.5	30
Benzene	A	5.0000	4.6010	2.765383	2.544964		-8.0	30
Benzyl chloride	Q	5.0000	4.3790	1.074474	0.8353748		-12.4	30
Bromodichloromethane	A	5.0000	4.4400	0.8005675	0.7109208		-11.2	30
Bromoform	A	5.0000	4.7250	1.099773	1.039369		-5.5	30
Bromomethane	A	5.0000	4.4880	0.9577811	0.8596622		-10.2	30
1,3-Butadiene	A	5.0000	4.5240	0.8688991	0.7862406		-9.5	30
t-Butyl alcohol	A	10.000	9.7850	1.094313	1.070825		-2.1	30
Carbon disulfide	A	5.0000	4.7000	2.703689	2.541441		-6.0	30
Carbon tetrachloride	A	5.0000	4.8730	1.454776	1.41782		-2.5	30
Chlorobenzene	A	5.0000	4.3980	0.84432	0.7426878		-12.0	30
Chloroethane	A	5.0000	4.6310	0.6005614	0.5562315		-7.4	30
Chloroform	A	5.0000	4.6260	1.869029	1.72927		-7.5	30
Chloromethane	A	5.0000	4.8080	0.6797098	0.6536009		-3.8	30
Cyclohexane	L	5.0000	4.8150	2.004777	1.626267		-3.7	30
Dibromochloromethane	A	5.0000	4.6320	0.6541537	0.6060256		-7.4	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.3480	0.1180701	0.1151405		-13.0	30
1,2-Dibromoethane	A	5.0000	4.6840	0.4781468	0.4479621		-6.3	30
Dibromomethane	A	5.0000	4.3480	0.1342412	0.1167382		-13.0	30
1,2-Dichlorobenzene	A	5.0000	4.4330	1.130988	1.00274		-11.3	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	04JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	01/04/21
Lab Sample ID:	2100009-CCV1	Injection Time:	10:15

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	4.4390	1.211305	1.075484		-11.2	30
1,4-Dichlorobenzene	A	5.0000	4.4040	1.048992	0.924033		-11.9	30
Dichlorodifluoromethane	A	5.0000	4.5850	2.092947	1.919385		-8.3	30
1,1-Dichloroethane	A	5.0000	4.7440	1.471357	1.396148		-5.1	30
1,2-Dichloroethane	A	5.0000	4.5910	1.204454	1.105875		-8.2	30
1,1-Dichloroethene	A	5.0000	4.5740	1.328236	1.215099		-8.5	30
cis-1,2-Dichloroethene	A	5.0000	4.6970	1.11657	1.048914		-6.1	30
trans-1,2-Dichloroethene	A	5.0000	4.6770	1.28934	1.205942		-6.5	30
1,2-Dichloropropane	A	5.0000	4.6130	0.3111577	0.2870934		-7.7	30
cis-1,3-Dichloropropene	A	5.0000	4.9460	0.3815768	0.3774718		-1.1	30
trans-1,3-Dichloropropene	A	5.0000	4.6450	0.4869158	0.4523166		-7.1	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.4520	2.653017	2.362392		-11.0	30
1,1-Difluoroethane	A	5.0000	4.7870	1.098082	1.051336		-4.3	30
Diisopropyl ether	A	5.0000	4.4310	0.6705967	0.5942177		-11.4	30
1,4-Dioxane	A	5.0000	4.5590	0.1526062	0.1391564		-8.8	30
Ethanol	A	10.000	9.4220	0.3232062	0.3045134		-5.8	30
Ethyl acetate	A	5.0000	4.7210	0.3044504	0.2874471		-5.6	30
Ethylbenzene	A	5.0000	4.4810	0.7537756	0.6755147		-10.4	30
1-Ethyl-4-methylbenzene	A	5.0000	4.4500	3.168324	2.8198		-11.0	30
Ethyl t-butyl ether	A	5.0000	5.1860	1.571763	1.630158		3.7	30
n-Heptane	A	5.0000	4.6090	0.320847	0.2957305		-7.8	30
Hexachlorobutadiene	A	5.0000	3.5870	1.357569	0.9739032		-28.3	30
Hexachloroethane	L	5.0000	4.6140	0.1427386	0.1470405		-7.7	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	04JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	01/04/21
Lab Sample ID:	2100009-CCV1	Injection Time:	10:15

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.7170	1.515678	1.429785		-5.7	30
2-Hexanone	A	5.0000	4.5150	0.5953603	0.5375869		-9.7	30
Isooctane	A	5.0000	4.5990	1.660449	1.527383		-8.0	30
Isopropyl alcohol	A	5.0000	4.7840	0.8990552	0.8602127		-4.3	30
Methylene chloride	A	5.0000	4.4770	0.835122	0.7477773		-10.5	30
Methyl ethyl ketone	A	5.0000	4.7440	1.781817	1.690624		-5.1	30
Methyl iodide	A	5.0000	4.4830	0.8675081	0.7778909		-10.3	30
Methyl isobutyl ketone	A	5.0000	4.4250	0.7696382	0.6811874		-11.5	30
Methyl t-butyl ether	A	5.0000	4.8330	2.615894	2.528302		-3.3	30
Naphthalene	Q	5.0000	4.6610	1.012718	0.9046545		-6.8	30
Propylene	A	5.0000	4.5850	0.6480759	0.594236		-8.3	30
Styrene	A	5.0000	4.5490	1.318255	1.199393		-9.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.7000	0.2389174	0.2245822		-6.0	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.3440	1.58216	1.374633		-13.1	30
Tetrachloroethene	A	5.0000	4.3270	0.4672849	0.4043819		-13.5	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.6200	1.09536	1.012121		-7.6	30
Tetrahydrofuran	A	5.0000	4.7050	1.081503	1.017718		-5.9	30
Toluene	A	5.0000	4.5200	1.079179	0.97562		-9.6	30
1,2,4-Trichlorobenzene	Q	5.0000	4.3870	0.5002153	0.3646971		-12.3	30
1,1,1-Trichloroethane	A	5.0000	4.7670	1.533047	1.46155		-4.7	30
1,1,2-Trichloroethane	A	5.0000	4.5220	0.3511086	0.3175206		-9.6	30
Trichloroethene	A	5.0000	4.3390	0.3588897	0.3114615		-13.2	30
Trichlorofluoromethane	A	5.0000	4.5300	2.034791	1.843559		-9.4	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	04JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	01/04/21
Lab Sample ID:	2100009-CCV1	Injection Time:	10:15

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	4.7260	0.3162859	0.2989231		-5.5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.5760	1.593303	1.458284		-8.5	30
1,2,4-Trimethylbenzene	A	5.0000	4.4370	2.184116	1.938225		-11.3	30
1,3,5-Trimethylbenzene	A	5.0000	4.5950	2.146865	1.973045		-8.1	30
Vinyl acetate	A	5.0000	4.6620	2.126359	1.98253		-6.8	30
Vinyl bromide	A	5.0000	4.4640	0.8700704	0.7768449		-10.7	30
Vinyl chloride	A	5.0000	4.6500	1.015745	0.9446081		-7.0	30
p- & m-Xylenes	A	10.000	8.8400	2.061228	1.822154		-11.6	30
o-Xylene	A	5.0000	4.3290	2.18082	1.88819		-13.4	30
Total Xylenes	A	15.000	13.169	2.101092	1.844166		-12.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	04JAN03.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	01/04/21
Lab Sample ID:	2100009-CCV2	Injection Time:	10:47

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	375.60	3.784361	2.842801		-24.9	30
Total Petroleum Hydrocarbons	A	500.00	375.60	3.784361	2.842801		-24.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	10/16/20
Lab Sample ID:	2100009-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	12/28/20
Lab Sample ID:	2100009-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	12/28/20
Lab Sample ID:	2100009-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	12/28/20
Lab Sample ID:	2100009-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100009	Injection Date:	12/28/20
Lab Sample ID:	2100009-ICV1	Injection Time:	21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/05/21
Lab Sample ID:	2100086-CCV1	Injection Time:	09:35

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	5.0000	5.2700	1.35416	1.42715		5.4	30	
Acrylonitrile	A	5.0000	5.1500	0.4040217	0.416161		3.0	30	
Allyl chloride	A	5.0000	5.3830	1.073815	1.156131		7.7	30	
t-Amyl Methyl ether	A	5.0000	6.6550	0.5752153	0.7655655		33.1	30	*
Benzene	A	5.0000	5.2480	2.765383	2.902542		5.0	30	
Benzyl chloride	Q	5.0000	5.1260	1.074474	1.03945		2.5	30	
Bromodichloromethane	A	5.0000	5.1430	0.8005675	0.8234982		2.9	30	
Bromoform	A	5.0000	5.3550	1.099773	1.1779		7.1	30	
Bromomethane	A	5.0000	5.1050	0.9577811	0.977858		2.1	30	
1,3-Butadiene	A	5.0000	5.3880	0.8688991	0.9362856		7.8	30	
t-Butyl alcohol	A	10.000	11.800	1.094313	1.291324		18.0	30	
Carbon disulfide	A	5.0000	5.2420	2.703689	2.834334		4.8	30	
Carbon tetrachloride	A	5.0000	5.4470	1.454776	1.584801		8.9	30	
Chlorobenzene	A	5.0000	5.1210	0.84432	0.8647523		2.4	30	
Chloroethane	A	5.0000	5.4060	0.6005614	0.6493467		8.1	30	
Chloroform	A	5.0000	5.2030	1.869029	1.945022		4.1	30	
Chloromethane	A	5.0000	5.4930	0.6797098	0.7467716		9.9	30	
Cyclohexane	L	5.0000	5.5360	2.004777	1.837866		10.7	30	
Dibromochloromethane	A	5.0000	5.3490	0.6541537	0.6998668		7.0	30	
1,2-Dibromo-3-chloropropane	L	5.0000	4.9450	0.1180701	0.1343957		-1.1	30	
1,2-Dibromoethane	A	5.0000	5.5710	0.4781468	0.5327532		11.4	30	
Dibromomethane	A	5.0000	5.1340	0.1342412	0.1378352		2.7	30	
1,2-Dichlorobenzene	A	5.0000	5.0730	1.130988	1.147578		1.5	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/05/21
Lab Sample ID:	2100086-CCV1	Injection Time:	09:35

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	4.8710	1.211305	1.179952		-2.6	30	
1,4-Dichlorobenzene	A	5.0000	5.2680	1.048992	1.105143		5.4	30	
Dichlorodifluoromethane	A	5.0000	5.3260	2.092947	2.229249		6.5	30	
1,1-Dichloroethane	A	5.0000	5.3770	1.471357	1.582308		7.5	30	
1,2-Dichloroethane	A	5.0000	5.2790	1.204454	1.271598		5.6	30	
1,1-Dichloroethene	A	5.0000	5.1980	1.328236	1.380963		4.0	30	
cis-1,2-Dichloroethene	A	5.0000	5.3230	1.11657	1.188803		6.5	30	
trans-1,2-Dichloroethene	A	5.0000	5.2660	1.28934	1.357804		5.3	30	
1,2-Dichloropropane	A	5.0000	5.5470	0.3111577	0.345194		10.9	30	
cis-1,3-Dichloropropene	A	5.0000	6.0460	0.3815768	0.4613933		20.9	30	
trans-1,3-Dichloropropene	A	5.0000	5.6160	0.4869158	0.5468553		12.3	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.1920	2.653017	2.755125		3.8	30	
1,1-Difluoroethane	A	5.0000	5.6010	1.098082	1.230135		12.0	30	
Diisopropyl ether	A	5.0000	5.2800	0.6705967	0.7080859		5.6	30	
1,4-Dioxane	A	5.0000	5.4340	0.1526062	0.165858		8.7	30	
Ethanol	A	10.000	11.014	0.3232062	0.3559784		10.1	30	
Ethyl acetate	A	5.0000	5.7920	0.3044504	0.352698		15.8	30	
Ethylbenzene	A	5.0000	5.1360	0.7537756	0.7742094		2.7	30	
1-Ethyl-4-methylbenzene	A	5.0000	5.2140	3.168324	3.303941		4.3	30	
Ethyl t-butyl ether	A	5.0000	7.0340	1.571763	2.211142		40.7	30	*
n-Heptane	A	5.0000	5.4310	0.320847	0.3484818		8.6	30	
Hexachlorobutadiene	A	5.0000	3.9380	1.357569	1.069329		-21.2	30	
Hexachloroethane	L	5.0000	5.1760	0.1427386	0.1681696		3.5	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/05/21
Lab Sample ID:	2100086-CCV1	Injection Time:	09:35

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.3410	1.515678	1.619179		6.8	30
2-Hexanone	A	5.0000	5.4950	0.5953603	0.654258		9.9	30
Isooctane	A	5.0000	5.4020	1.660449	1.794078		8.0	30
Isopropyl alcohol	A	5.0000	5.7820	0.8990552	1.039724		15.6	30
Methylene chloride	A	5.0000	5.0440	0.835122	0.8424471		0.9	30
Methyl ethyl ketone	A	5.0000	5.3930	1.781817	1.921994		7.9	30
Methyl iodide	A	5.0000	4.8680	0.8675081	0.8445465		-2.6	30
Methyl isobutyl ketone	A	5.0000	5.2540	0.7696382	0.8087719		5.1	30
Methyl t-butyl ether	A	5.0000	5.9460	2.615894	3.110951		18.9	30
Naphthalene	Q	5.0000	5.1660	1.012718	1.022545		3.3	30
Propylene	A	5.0000	5.3490	0.6480759	0.6933465		7.0	30
Styrene	A	5.0000	5.2360	1.318255	1.380421		4.7	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.3790	0.2389174	0.2570465		7.6	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.0470	1.58216	1.597071		0.9	30
Tetrachloroethene	A	5.0000	5.1010	0.4672849	0.4767365		2.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4280	1.09536	1.189197		8.6	30
Tetrahydrofuran	A	5.0000	5.4190	1.081503	1.172183		8.4	30
Toluene	A	5.0000	5.3620	1.079179	1.157319		7.2	30
1,2,4-Trichlorobenzene	Q	5.0000	4.8680	0.5002153	0.4133966		-2.6	30
1,1,1-Trichloroethane	A	5.0000	5.4770	1.533047	1.67934		9.5	30
1,1,2-Trichloroethane	A	5.0000	5.3210	0.3511086	0.3736668		6.4	30
Trichloroethene	A	5.0000	5.0240	0.3588897	0.3605953		0.5	30
Trichlorofluoromethane	A	5.0000	4.9380	2.034791	2.009535		-1.2	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/05/21
Lab Sample ID:	2100086-CCV1	Injection Time:	09:35

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4960	0.3162859	0.34763		9.9	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.0360	1.593303	1.604833		0.7	30
1,2,4-Trimethylbenzene	A	5.0000	5.1070	2.184116	2.230816		2.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.1330	2.146865	2.203971		2.7	30
Vinyl acetate	A	5.0000	5.6940	2.126359	2.421409		13.9	30
Vinyl bromide	A	5.0000	5.1040	0.8700704	0.888087		2.1	30
Vinyl chloride	A	5.0000	5.4560	1.015745	1.108348		9.1	30
p- & m-Xylenes	A	10.000	10.160	2.061228	2.09419		1.6	30
o-Xylene	A	5.0000	5.0080	2.18082	2.184092		0.2	30
Total Xylenes	A	15.000	15.168	2.101092	2.124157		1.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN03.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/05/21
Lab Sample ID:	2100086-CCV2	Injection Time:	10:07

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	383.00	3.784361	2.8988		-23.4	30
Total Petroleum Hydrocarbons	A	500.00	383.00	3.784361	2.8988		-23.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN34.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/06/21
Lab Sample ID:	2100086-CCV3	Injection Time:	02:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.0870	1.35416	1.377792		1.7	30
Acrylonitrile	A	5.0000	5.0410	0.4040217	0.4073451		0.8	30
Allyl chloride	A	5.0000	4.9950	1.073815	1.072669		-0.1	30
t-Amyl Methyl ether	A	5.0000	6.3630	0.5752153	0.7320448		27.3	30
Benzene	A	5.0000	4.8300	2.765383	2.671095		-3.4	30
Benzyl chloride	Q	5.0000	5.0770	1.074474	1.025752		1.5	30
Bromodichloromethane	A	5.0000	4.7280	0.8005675	0.7569985		-5.4	30
Bromoform	A	5.0000	4.9200	1.099773	1.082265		-1.6	30
Bromomethane	A	5.0000	4.6760	0.9577811	0.8956543		-6.5	30
1,3-Butadiene	A	5.0000	4.9300	0.8688991	0.856765		-1.4	30
t-Butyl alcohol	A	10.000	11.898	1.094313	1.302048		19.0	30
Carbon disulfide	A	5.0000	4.8610	2.703689	2.628519		-2.8	30
Carbon tetrachloride	A	5.0000	5.1710	1.454776	1.504538		3.4	30
Chlorobenzene	A	5.0000	4.5990	0.84432	0.776689		-8.0	30
Chloroethane	A	5.0000	4.9430	0.6005614	0.5936767		-1.1	30
Chloroform	A	5.0000	4.7540	1.869029	1.777023		-4.9	30
Chloromethane	A	5.0000	5.1300	0.6797098	0.6974414		2.6	30
Cyclohexane	L	5.0000	5.1260	2.004777	1.717617		2.5	30
Dibromochloromethane	A	5.0000	4.7920	0.6541537	0.6269201		-4.2	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.7610	0.1180701	0.1284706		-4.8	30
1,2-Dibromoethane	A	5.0000	5.0660	0.4781468	0.4844413		1.3	30
Dibromomethane	A	5.0000	4.7060	0.1342412	0.1263569		-5.9	30
1,2-Dichlorobenzene	A	5.0000	4.6450	1.130988	1.050676		-7.1	30

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2020 L St, Suite 400
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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN34.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/06/21
Lab Sample ID:	2100086-CCV3	Injection Time:	02:27

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	4.5730	1.211305	1.107783		-8.5	30	
1,4-Dichlorobenzene	A	5.0000	4.5630	1.048992	0.957407		-8.7	30	
Dichlorodifluoromethane	A	5.0000	4.8920	2.092947	2.047785		-2.2	30	
1,1-Dichloroethane	A	5.0000	5.0200	1.471357	1.477109		0.4	30	
1,2-Dichloroethane	A	5.0000	4.7530	1.204454	1.144898		-4.9	30	
1,1-Dichloroethene	A	5.0000	4.8190	1.328236	1.280199		-3.6	30	
cis-1,2-Dichloroethene	A	5.0000	4.9450	1.11657	1.104246		-1.1	30	
trans-1,2-Dichloroethene	A	5.0000	4.8920	1.28934	1.261526		-2.2	30	
1,2-Dichloropropane	A	5.0000	5.0530	0.3111577	0.3144502		1.1	30	
cis-1,3-Dichloropropene	A	5.0000	5.6460	0.3815768	0.4308655		12.9	30	
trans-1,3-Dichloropropene	A	5.0000	5.1980	0.4869158	0.5062318		4.0	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.6640	2.653017	2.474685		-6.7	30	
1,1-Difluoroethane	A	5.0000	5.1070	1.098082	1.121476		2.1	30	
Diisopropyl ether	A	5.0000	4.7690	0.6705967	0.6396586		-4.6	30	
1,4-Dioxane	A	5.0000	4.8440	0.1526062	0.1478417		-3.1	30	
Ethanol	A	10.000	10.326	0.3232062	0.3337541		3.3	30	
Ethyl acetate	A	5.0000	5.4410	0.3044504	0.3313097		8.8	30	
Ethylbenzene	A	5.0000	4.6380	0.7537756	0.6992311		-7.2	30	
1-Ethyl-4-methylbenzene	A	5.0000	4.6050	3.168324	2.918067		-7.9	30	
Ethyl t-butyl ether	A	5.0000	6.8640	1.571763	2.15758		37.3	30	*
n-Heptane	A	5.0000	4.8910	0.320847	0.3138455		-2.2	30	
Hexachlorobutadiene	A	5.0000	3.5220	1.357569	0.9563095		-29.6	30	
Hexachloroethane	L	5.0000	5.0800	0.1427386	0.164564		1.6	30	

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN34.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/06/21
Lab Sample ID:	2100086-CCV3	Injection Time:	02:27

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.9550	1.515678	1.502094		-0.9	30
2-Hexanone	A	5.0000	5.0340	0.5953603	0.5993946		0.7	30
Isooctane	A	5.0000	4.9570	1.660449	1.646328		-0.9	30
Isopropyl alcohol	A	5.0000	6.0680	0.8990552	1.091022		21.4	30
Methylene chloride	A	5.0000	4.6830	0.835122	0.7820921		-6.3	30
Methyl ethyl ketone	A	5.0000	5.0310	1.781817	1.792771		0.6	30
Methyl iodide	A	5.0000	4.5970	0.8675081	0.7976598		-8.1	30
Methyl isobutyl ketone	A	5.0000	4.7800	0.7696382	0.735846		-4.4	30
Methyl t-butyl ether	A	5.0000	5.6300	2.615894	2.945643		12.6	30
Naphthalene	Q	5.0000	4.6360	1.012718	0.8989167		-7.3	30
Propylene	A	5.0000	4.9490	0.6480759	0.6414618		-1.0	30
Styrene	A	5.0000	4.7450	1.318255	1.251116		-5.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.9590	0.2389174	0.2369641		-0.8	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.5550	1.58216	1.441358		-8.9	30
Tetrachloroethene	A	5.0000	4.5490	0.4672849	0.4251438		-9.0	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.9550	1.09536	1.085552		-0.9	30
Tetrahydrofuran	A	5.0000	4.9690	1.081503	1.074873		-0.6	30
Toluene	A	5.0000	4.7930	1.079179	1.0344		-4.1	30
1,2,4-Trichlorobenzene	Q	5.0000	4.4180	0.5002153	0.3677252		-11.6	30
1,1,1-Trichloroethane	A	5.0000	5.2030	1.533047	1.595219		4.1	30
1,1,2-Trichloroethane	A	5.0000	4.8090	0.3511086	0.3377027		-3.8	30
Trichloroethene	A	5.0000	4.5970	0.3588897	0.3299541		-8.1	30
Trichlorofluoromethane	A	5.0000	4.7620	2.034791	1.937889		-4.8	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN34.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/06/21
Lab Sample ID:	2100086-CCV3	Injection Time:	02:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.0590	0.3162859	0.3200046		1.2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.7680	1.593303	1.519525		-4.6	30
1,2,4-Trimethylbenzene	A	5.0000	4.6210	2.184116	2.01867		-7.6	30
1,3,5-Trimethylbenzene	A	5.0000	4.8190	2.146865	2.069203		-3.6	30
Vinyl acetate	A	5.0000	5.5000	2.126359	2.339023		10.0	30
Vinyl bromide	A	5.0000	4.8890	0.8700704	0.8507343		-2.2	30
Vinyl chloride	A	5.0000	4.9590	1.015745	1.007513		-0.8	30
p- & m-Xylenes	A	10.000	9.2240	2.061228	1.901289		-7.8	30
o-Xylene	A	5.0000	4.5450	2.18082	1.982439		-9.1	30
Total Xylenes	A	15.000	13.769	2.101092	1.928339		-8.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	05JAN35.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	01/06/21
Lab Sample ID:	2100086-CCV4	Injection Time:	02:59

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	368.99	3.784361	2.792792		-26.2	30
Total Petroleum Hydrocarbons	A	500.00	368.99	3.784361	2.792792		-26.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	10/16/20
Lab Sample ID:	2100086-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 28DEC17.D
Sequence: 2100086
Lab Sample ID: 2100086-ICV1

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Calibration Date: 10/16/20 14:05
Injection Date: 12/28/20
Injection Time: 21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	12/28/20
Lab Sample ID:	2100086-ICV1	Injection Time:	21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	12/28/20
Lab Sample ID:	2100086-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100086	Injection Date:	12/28/20
Lab Sample ID:	2100086-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV1	Injection Time:	09:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	5.0000	4.9650	1.35416	1.344584		-0.7	30	
Acrylonitrile	A	5.0000	5.0150	0.4040217	0.4052586		0.3	30	
Allyl chloride	A	5.0000	4.9820	1.073815	1.069999		-0.4	30	
t-Amyl Methyl ether	A	5.0000	6.5090	0.5752153	0.7487583		30.2	30	*
Benzene	A	5.0000	4.8270	2.765383	2.669971		-3.5	30	
Benzyl chloride	Q	5.0000	5.1150	1.074474	1.036315		2.3	30	
Bromodichloromethane	A	5.0000	4.7760	0.8005675	0.7647199		-4.5	30	
Bromoform	A	5.0000	4.9660	1.099773	1.092199		-0.7	30	
Bromomethane	A	5.0000	4.8230	0.9577811	0.9238582		-3.5	30	
1,3-Butadiene	A	5.0000	4.9510	0.8688991	0.8603053		-1.0	30	
t-Butyl alcohol	A	10.000	12.142	1.094313	1.328691		21.4	30	
Carbon disulfide	A	5.0000	4.8480	2.703689	2.621582		-3.0	30	
Carbon tetrachloride	A	5.0000	5.3350	1.454776	1.552373		6.7	30	
Chlorobenzene	A	5.0000	4.6860	0.84432	0.7913565		-6.3	30	
Chloroethane	A	5.0000	5.0280	0.6005614	0.6039247		0.6	30	
Chloroform	A	5.0000	4.8740	1.869029	1.822011		-2.5	30	
Chloromethane	A	5.0000	5.1530	0.6797098	0.7004804		3.1	30	
Cyclohexane	L	5.0000	5.1320	2.004777	1.719151		2.6	30	
Dibromochloromethane	A	5.0000	4.9590	0.6541537	0.6488454		-0.8	30	
1,2-Dibromo-3-chloropropane	L	5.0000	4.6840	0.1180701	0.1259841		-6.3	30	
1,2-Dibromoethane	A	5.0000	5.0950	0.4781468	0.4872226		1.9	30	
Dibromomethane	A	5.0000	4.7490	0.1342412	0.1275021		-5.0	30	
1,2-Dichlorobenzene	A	5.0000	4.6050	1.130988	1.041698		-7.9	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV1	Injection Time:	09:27

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	4.4570	1.211305	1.079755		-10.9	30	
1,4-Dichlorobenzene	A	5.0000	4.6520	1.048992	0.9759223		-7.0	30	
Dichlorodifluoromethane	A	5.0000	4.9200	2.092947	2.05964		-1.6	30	
1,1-Dichloroethane	A	5.0000	5.0040	1.471357	1.472501		0.08	30	
1,2-Dichloroethane	A	5.0000	4.8280	1.204454	1.163048		-3.4	30	
1,1-Dichloroethene	A	5.0000	4.8490	1.328236	1.288187		-3.0	30	
cis-1,2-Dichloroethene	A	5.0000	4.9470	1.11657	1.104665		-1.1	30	
trans-1,2-Dichloroethene	A	5.0000	4.9130	1.28934	1.266942		-1.7	30	
1,2-Dichloropropane	A	5.0000	5.1560	0.3111577	0.3208575		3.1	30	
cis-1,3-Dichloropropene	A	5.0000	5.8390	0.3815768	0.4456245		16.8	30	
trans-1,3-Dichloropropene	A	5.0000	5.3030	0.4869158	0.516431		6.1	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.7380	2.653017	2.513815		-5.2	30	
1,1-Difluoroethane	A	5.0000	5.1050	1.098082	1.121186		2.1	30	
Diisopropyl ether	A	5.0000	4.8310	0.6705967	0.6478947		-3.4	30	
1,4-Dioxane	A	5.0000	4.8580	0.1526062	0.1482807		-2.8	30	
Ethanol	A	10.000	10.081	0.3232062	0.3258327		0.8	30	
Ethyl acetate	A	5.0000	5.0430	0.3044504	0.3070608		0.9	30	
Ethylbenzene	A	5.0000	4.7000	0.7537756	0.708577		-6.0	30	
1-Ethyl-4-methylbenzene	A	5.0000	4.8190	3.168324	3.05382		-3.6	30	
Ethyl t-butyl ether	A	5.0000	6.9430	1.571763	2.182408		38.9	30	*
n-Heptane	A	5.0000	5.0460	0.320847	0.3238172		0.9	30	
Hexachlorobutadiene	A	5.0000	3.5630	1.357569	0.9673309		-28.7	30	
Hexachloroethane	L	5.0000	5.2150	0.1427386	0.1696196		4.3	30	

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV1	Injection Time:	09:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.9670	1.515678	1.505585		-0.7	30
2-Hexanone	A	5.0000	4.9560	0.5953603	0.5901768		-0.9	30
Isooctane	A	5.0000	5.0580	1.660449	1.679755		1.2	30
Isopropyl alcohol	A	5.0000	6.2540	0.8990552	1.124511		25.1	30
Methylene chloride	A	5.0000	4.7180	0.835122	0.7879949		-5.6	30
Methyl ethyl ketone	A	5.0000	5.0030	1.781817	1.782907		0.06	30
Methyl iodide	A	5.0000	4.6420	0.8675081	0.8054086		-7.2	30
Methyl isobutyl ketone	A	5.0000	4.8490	0.7696382	0.7464042		-3.0	30
Methyl t-butyl ether	A	5.0000	5.6670	2.615894	2.964767		13.3	30
Naphthalene	Q	5.0000	4.5480	1.012718	0.8784956		-9.0	30
Propylene	A	5.0000	4.9310	0.6480759	0.6391575		-1.4	30
Styrene	A	5.0000	4.7540	1.318255	1.253343		-4.9	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.0990	0.2389174	0.2436283		2.0	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.5370	1.58216	1.435763		-9.3	30
Tetrachloroethene	A	5.0000	4.6600	0.4672849	0.4355142		-6.8	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.9720	1.09536	1.089136		-0.6	30
Tetrahydrofuran	A	5.0000	4.9790	1.081503	1.076892		-0.4	30
Toluene	A	5.0000	4.9220	1.079179	1.062261		-1.6	30
1,2,4-Trichlorobenzene	Q	5.0000	4.3020	0.5002153	0.3562035		-14.0	30
1,1,1-Trichloroethane	A	5.0000	5.2650	1.533047	1.614223		5.3	30
1,1,2-Trichloroethane	A	5.0000	4.8870	0.3511086	0.343201		-2.3	30
Trichloroethene	A	5.0000	4.6890	0.3588897	0.3366014		-6.2	30
Trichlorofluoromethane	A	5.0000	4.7150	2.034791	1.918689		-5.7	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV1	Injection Time:	09:27

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.1160	0.3162859	0.3236206		2.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.6990	1.593303	1.497354		-6.0	30
1,2,4-Trimethylbenzene	A	5.0000	4.6130	2.184116	2.015239		-7.7	30
1,3,5-Trimethylbenzene	A	5.0000	4.5560	2.146865	1.956399		-8.9	30
Vinyl acetate	A	5.0000	5.4640	2.126359	2.323826		9.3	30
Vinyl bromide	A	5.0000	4.9390	0.8700704	0.8593728		-1.2	30
Vinyl chloride	A	5.0000	5.1080	1.015745	1.037625		2.2	30
p- & m-Xylenes	A	10.000	9.2770	2.061228	1.912165		-7.2	30
o-Xylene	A	5.0000	4.5320	2.18082	1.976595		-9.4	30
Total Xylenes	A	15.000	13.809	2.101092	1.933642		-8.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN03.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV2	Injection Time:	09:59

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	366.56	3.784361	2.774365		-26.7	30
Total Petroleum Hydrocarbons	A	500.00	366.56	3.784361	2.774365		-26.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN29.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV3	Injection Time:	23:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	5.0000	4.9900	1.35416	1.351562		-0.2	30	
Acrylonitrile	A	5.0000	4.9590	0.4040217	0.4007401		-0.8	30	
Allyl chloride	A	5.0000	4.9910	1.073815	1.071979		-0.2	30	
t-Amyl Methyl ether	A	5.0000	6.5370	0.5752153	0.75203		30.7	30	*
Benzene	A	5.0000	4.8950	2.765383	2.707333		-2.1	30	
Benzyl chloride	Q	5.0000	4.8310	1.074474	0.9577277		-3.4	30	
Bromodichloromethane	A	5.0000	4.9980	0.8005675	0.8003239		-0.03	30	
Bromoform	A	5.0000	4.9930	1.099773	1.09825		-0.1	30	
Bromomethane	A	5.0000	4.6930	0.9577811	0.8990616		-6.1	30	
1,3-Butadiene	A	5.0000	4.8970	0.8688991	0.8509134		-2.1	30	
t-Butyl alcohol	A	10.000	11.699	1.094313	1.280259		17.0	30	
Carbon disulfide	A	5.0000	4.8500	2.703689	2.622603		-3.0	30	
Carbon tetrachloride	A	5.0000	5.1790	1.454776	1.506952		3.6	30	
Chlorobenzene	A	5.0000	4.9130	0.84432	0.8296712		-1.7	30	
Chloroethane	A	5.0000	5.0100	0.6005614	0.6017527		0.2	30	
Chloroform	A	5.0000	4.7840	1.869029	1.788152		-4.3	30	
Chloromethane	A	5.0000	5.2000	0.6797098	0.7068677		4.0	30	
Cyclohexane	L	5.0000	5.2320	2.004777	1.748579		4.6	30	
Dibromochloromethane	A	5.0000	5.1200	0.6541537	0.6697889		2.4	30	
1,2-Dibromo-3-chloropropane	L	5.0000	4.6110	0.1180701	0.1236281		-7.8	30	
1,2-Dibromoethane	A	5.0000	5.2830	0.4781468	0.5051624		5.7	30	
Dibromomethane	A	5.0000	4.8740	0.1342412	0.1308543		-2.5	30	
1,2-Dichlorobenzene	A	5.0000	4.6590	1.130988	1.053946		-6.8	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN29.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV3	Injection Time:	23:29

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	4.6310	1.211305	1.121987		-7.4	30	
1,4-Dichlorobenzene	A	5.0000	4.5290	1.048992	0.9502179		-9.4	30	
Dichlorodifluoromethane	A	5.0000	4.9080	2.092947	2.054618		-1.8	30	
1,1-Dichloroethane	A	5.0000	5.0270	1.471357	1.479322		0.5	30	
1,2-Dichloroethane	A	5.0000	4.9100	1.204454	1.182855		-1.8	30	
1,1-Dichloroethene	A	5.0000	4.8190	1.328236	1.280059		-3.6	30	
cis-1,2-Dichloroethene	A	5.0000	4.9580	1.11657	1.107165		-0.8	30	
trans-1,2-Dichloroethene	A	5.0000	4.8310	1.28934	1.245715		-3.4	30	
1,2-Dichloropropane	A	5.0000	5.3460	0.3111577	0.33272		6.9	30	
cis-1,3-Dichloropropene	A	5.0000	5.9820	0.3815768	0.4565112		19.6	30	
trans-1,3-Dichloropropene	A	5.0000	5.4160	0.4869158	0.5274694		8.3	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.6740	2.653017	2.479975		-6.5	30	
1,1-Difluoroethane	A	5.0000	5.2640	1.098082	1.155955		5.3	30	
Diisopropyl ether	A	5.0000	4.8290	0.6705967	0.6476408		-3.4	30	
1,4-Dioxane	A	5.0000	5.0270	0.1526062	0.153435		0.5	30	
Ethanol	A	10.000	10.224	0.3232062	0.3304455		2.2	30	
Ethyl acetate	A	5.0000	5.2440	0.3044504	0.3193335		4.9	30	
Ethylbenzene	A	5.0000	4.7400	0.7537756	0.7145723		-5.2	30	
1-Ethyl-4-methylbenzene	A	5.0000	4.7210	3.168324	2.991427		-5.6	30	
Ethyl t-butyl ether	A	5.0000	6.9870	1.571763	2.196227		39.7	30	*
n-Heptane	A	5.0000	5.2660	0.320847	0.3379052		5.3	30	
Hexachlorobutadiene	A	5.0000	3.6080	1.357569	0.9796155		-27.8	30	
Hexachloroethane	L	5.0000	5.3770	0.1427386	0.1757058		7.5	30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN29.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV3	Injection Time:	23:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.9870	1.515678	1.511671		-0.3	30
2-Hexanone	A	5.0000	5.1170	0.5953603	0.6092923		2.3	30
Isooctane	A	5.0000	5.2870	1.660449	1.755877		5.7	30
Isopropyl alcohol	A	5.0000	5.9480	0.8990552	1.069497		19.0	30
Methylene chloride	A	5.0000	4.7260	0.835122	0.7893378		-5.5	30
Methyl ethyl ketone	A	5.0000	5.1160	1.781817	1.823316		2.3	30
Methyl iodide	A	5.0000	4.4030	0.8675081	0.7639232		-11.9	30
Methyl isobutyl ketone	A	5.0000	5.0670	0.7696382	0.780024		1.3	30
Methyl t-butyl ether	A	5.0000	5.5140	2.615894	2.88477		10.3	30
Naphthalene	Q	5.0000	4.5220	1.012718	0.8725667		-9.6	30
Propylene	A	5.0000	5.0880	0.6480759	0.6594729		1.8	30
Styrene	A	5.0000	4.8050	1.318255	1.266785		-3.9	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.3080	0.2389174	0.2536342		6.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.7130	1.58216	1.491399		-5.7	30
Tetrachloroethene	A	5.0000	4.7630	0.4672849	0.4451676		-4.7	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.0560	1.09536	1.107541		1.1	30
Tetrahydrofuran	A	5.0000	5.1150	1.081503	1.106323		2.3	30
Toluene	A	5.0000	5.0850	1.079179	1.097531		1.7	30
1,2,4-Trichlorobenzene	Q	5.0000	4.1960	0.5002153	0.3457636		-16.1	30
1,1,1-Trichloroethane	A	5.0000	5.1150	1.533047	1.568262		2.3	30
1,1,2-Trichloroethane	A	5.0000	5.0120	0.3511086	0.3519251		0.2	30
Trichloroethene	A	5.0000	4.8630	0.3588897	0.349074		-2.7	30
Trichlorofluoromethane	A	5.0000	4.5390	2.034791	1.847379		-9.2	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN29.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/06/21
Lab Sample ID:	2100182-CCV3	Injection Time:	23:29

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.2310	0.3162859	0.3309202		4.6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.6920	1.593303	1.495208		-6.2	30
1,2,4-Trimethylbenzene	A	5.0000	4.7480	2.184116	2.074079		-5.0	30
1,3,5-Trimethylbenzene	A	5.0000	4.9020	2.146865	2.104935		-2.0	30
Vinyl acetate	A	5.0000	5.3860	2.126359	2.290307		7.7	30
Vinyl bromide	A	5.0000	4.9210	0.8700704	0.8562534		-1.6	30
Vinyl chloride	A	5.0000	4.9690	1.015745	1.009384		-0.6	30
p- & m-Xylenes	A	10.000	9.4830	2.061228	1.954608		-5.2	30
o-Xylene	A	5.0000	4.6880	2.18082	2.044857		-6.2	30
Total Xylenes	A	15.000	14.171	2.101092	1.984691		-5.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	06JAN30.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	01/07/21
Lab Sample ID:	2100182-CCV4	Injection Time:	00:01

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	427.53	3.784361	3.235887		-14.5	30
Total Petroleum Hydrocarbons	A	500.00	427.53	3.784361	3.235887		-14.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	10/16/20
Lab Sample ID:	2100182-ICV2	Injection Time:	17:12

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	12/28/20
Lab Sample ID:	2100182-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 28DEC17.D
Sequence: 2100182
Lab Sample ID: 2100182-ICV1

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Calibration Date: 10/16/20 14:05
Injection Date: 12/28/20
Injection Time: 21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	12/28/20
Lab Sample ID:	2100182-ICV1	Injection Time:	21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100182	Injection Date:	12/28/20
Lab Sample ID:	2100182-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100009-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100009-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100009-CCV1)			Lab File ID: 04JAN02.D		Analyzed: 01/04/21 10:15			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
Calibration Blank (2100009-CCB1)			Lab File ID: 04JAN04.D		Analyzed: 01/04/21 11:15			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
LCS (B096350-BS1)			Lab File ID: 04JAN05.D		Analyzed: 01/04/21 11:47			
4-Bromofluorobenzene (Surrogate)	10.000	114	70 - 130	11.74	11.73933	0.0007	+/-1.0	
LCS Dup (B096350-BSD1)			Lab File ID: 04JAN06.D		Analyzed: 01/04/21 12:18			
4-Bromofluorobenzene (Surrogate)	10.000	111	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Blank (B096350-BLK1)			Lab File ID: 04JAN07.D		Analyzed: 01/04/21 12:46			
4-Bromofluorobenzene (Surrogate)	10.000	96.6	70 - 130	11.734	11.73933	-0.0053	+/-1.0	
SG-VW17A-01 (2037849-01RE1)			Lab File ID: 04JAN08.D		Analyzed: 01/04/21 13:28			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW17B-01 (2037849-02RE1)			Lab File ID: 04JAN09.D		Analyzed: 01/04/21 13:58			
4-Bromofluorobenzene (Surrogate)	10.000	94.7	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW17B-02 (2037849-03RE1)			Lab File ID: 04JAN10.D		Analyzed: 01/04/21 14:27			
4-Bromofluorobenzene (Surrogate)	10.000	94.5	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW18B-01 (2037849-05RE1)			Lab File ID: 04JAN12.D		Analyzed: 01/04/21 15:26			
4-Bromofluorobenzene (Surrogate)	10.000	94.8	70 - 130	11.734	11.73933	-0.0053	+/-1.0	
SG-VW44A-01 (2037849-08RE1)			Lab File ID: 04JAN15.D		Analyzed: 01/04/21 16:53			
4-Bromofluorobenzene (Surrogate)	10.000	94.6	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW17A-01 (2037849-01)			Lab File ID: 04JAN17.D		Analyzed: 01/04/21 17:58			
4-Bromofluorobenzene (Surrogate)	10.000	119	70 - 130	11.74	11.73933	0.0007	+/-1.0	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW17B-01 (2037849-02)			Lab File ID: 04JAN18.D		Analyzed: 01/04/21 18:34			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW17B-02 (2037849-03)			Lab File ID: 04JAN19.D		Analyzed: 01/04/21 19:10			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW18A-01 (2037849-04)			Lab File ID: 04JAN20.D		Analyzed: 01/04/21 19:46			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW18B-01 (2037849-05)			Lab File ID: 04JAN21.D		Analyzed: 01/04/21 20:22			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW52A-01 (2037849-06)			Lab File ID: 04JAN22.D		Analyzed: 01/04/21 20:58			
4-Bromofluorobenzene (Surrogate)	10.000	107	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW52B-01 (2037849-07)			Lab File ID: 04JAN23.D		Analyzed: 01/04/21 21:34			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW44A-01 (2037849-08)			Lab File ID: 04JAN24.D		Analyzed: 01/04/21 22:10			
4-Bromofluorobenzene (Surrogate)	10.000	107	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW44B-01 (2037849-09)			Lab File ID: 04JAN25.D		Analyzed: 01/04/21 22:46			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW21A-01 (2037849-12RE1)			Lab File ID: 04JAN28.D		Analyzed: 01/05/21 00:14			
4-Bromofluorobenzene (Surrogate)	10.000	99.4	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW21A-02 (2037849-13RE1)			Lab File ID: 04JAN29.D		Analyzed: 01/05/21 00:44			
4-Bromofluorobenzene (Surrogate)	10.000	98.0	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW21B-01 (2037849-14RE1)			Lab File ID: 04JAN30.D		Analyzed: 01/05/21 01:14			
4-Bromofluorobenzene (Surrogate)	10.000	97.0	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW22A-01 (2037849-15RE1)			Lab File ID: 04JAN31.D		Analyzed: 01/05/21 01:43			
4-Bromofluorobenzene (Surrogate)	10.000	99.8	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW22B-01 (2037849-16RE1)			Lab File ID: 04JAN32.D		Analyzed: 01/05/21 02:13			
4-Bromofluorobenzene (Surrogate)	10.000	95.8	70 - 130	11.74	11.73933	0.0007	+/-1.0	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2037849
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Sequence:	2100009	Instrument:	MS-A1
Matrix:	Air	Calibration:	2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW45A-01 (2037849-17RE1)			Lab File ID: 04JAN33.D		Analyzed: 01/05/21 02:43			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.74	11.73933	0.0007	+/-1.0	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100086-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100086-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100086-CCV1)			Lab File ID: 05JAN02.D		Analyzed: 01/05/21 09:35			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
Calibration Blank (2100086-CCB1)			Lab File ID: 05JAN04.D		Analyzed: 01/05/21 10:35			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
LCS (B096447-BS1)			Lab File ID: 05JAN05.D		Analyzed: 01/05/21 11:06			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
LCS Dup (B096447-BSD1)			Lab File ID: 05JAN06.D		Analyzed: 01/05/21 11:38			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
Blank (B096447-BLK1)			Lab File ID: 05JAN07.D		Analyzed: 01/05/21 12:06			
4-Bromofluorobenzene (Surrogate)	10.000	95.3	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW43A-01 (2037849-10)			Lab File ID: 05JAN08.D		Analyzed: 01/05/21 12:42			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW43B-01 (2037849-11)			Lab File ID: 05JAN09.D		Analyzed: 01/05/21 13:17			
4-Bromofluorobenzene (Surrogate)	10.000	108	70 - 130	11.736	11.73933	-0.0033	+/-1.0	
SG-VW21A-01 (2037849-12)			Lab File ID: 05JAN10.D		Analyzed: 01/05/21 13:53			
4-Bromofluorobenzene (Surrogate)	10.000	108	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW21A-02 (2037849-13)			Lab File ID: 05JAN11.D		Analyzed: 01/05/21 14:29			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW21B-01 (2037849-14)			Lab File ID: 05JAN12.D		Analyzed: 01/05/21 15:05			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW22A-01 (2037849-15)			Lab File ID: 05JAN13.D		Analyzed: 01/05/21 15:35			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.738	11.73933	-0.0013	+/-1.0	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW22B-01 (2037849-16)			Lab File ID: 05JAN14.D		Analyzed: 01/05/21 16:10			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.734	11.73933	-0.0053	+/-1.0	
SG-VW45A-01 (2037849-17)			Lab File ID: 05JAN15.D		Analyzed: 01/05/21 16:46			
4-Bromofluorobenzene (Surrogate)	10.000	108	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW45B-01 (2037849-18)			Lab File ID: 05JAN16.D		Analyzed: 01/05/21 17:22			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Calibration Check (2100086-CCV3)			Lab File ID: 05JAN34.D		Analyzed: 01/06/21 02:27			
4-Bromofluorobenzene (Surrogate)	10.000	116	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Calibration Blank (2100086-CCB2)			Lab File ID: 05JAN36.D		Analyzed: 01/06/21 03:27			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW46A-01 (2037849-19)			Lab File ID: 05JAN37.D		Analyzed: 01/06/21 04:02			
4-Bromofluorobenzene (Surrogate)	10.000	110	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW46B-01 (2037849-20)			Lab File ID: 05JAN38.D		Analyzed: 01/06/21 04:38			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW47A-01 (2037849-21)			Lab File ID: 05JAN39.D		Analyzed: 01/06/21 05:14			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW47B-01 (2037849-22)			Lab File ID: 05JAN40.D		Analyzed: 01/06/21 05:50			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL1)			Lab File ID: 28DEC11.D		Analyzed: 12/28/20 17:41			
4-Bromofluorobenzene (Surrogate)	10.000	93.4		11.735	11.73933	-0.0043	+/-1.0	
Cal Standard (2100148-CAL2)			Lab File ID: 28DEC12.D		Analyzed: 12/28/20 18:10			
4-Bromofluorobenzene (Surrogate)	10.000	97.1		11.74	11.73933	0.0007	+/-1.0	
Cal Standard (2100148-CAL3)			Lab File ID: 28DEC13.D		Analyzed: 12/28/20 18:42			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.739	11.73933	-0.0003	+/-1.0	
Cal Standard (2100148-CAL4)			Lab File ID: 28DEC14.D		Analyzed: 12/28/20 19:21			
4-Bromofluorobenzene (Surrogate)	10.000	99.3		11.742	11.73933	0.0027	+/-1.0	
Cal Standard (2100148-CAL5)			Lab File ID: 28DEC15.D		Analyzed: 12/28/20 20:03			
4-Bromofluorobenzene (Surrogate)	10.000	96.0		11.74	11.73933	0.0007	+/-1.0	
Cal Standard (2100148-CAL6)			Lab File ID: 28DEC16.D		Analyzed: 12/28/20 20:49			
4-Bromofluorobenzene (Surrogate)	10.000	92.9		11.74	11.73933	0.0007	+/-1.0	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100182-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100182-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100182-CCV1)			Lab File ID: 06JAN02.D		Analyzed: 01/06/21 09:27			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
Calibration Blank (2100182-CCB1)			Lab File ID: 06JAN04.D		Analyzed: 01/06/21 10:27			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
LCS (B096551-BS1)			Lab File ID: 06JAN05.D		Analyzed: 01/06/21 10:59			
4-Bromofluorobenzene (Surrogate)	10.000	114	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
LCS Dup (B096551-BSD1)			Lab File ID: 06JAN06.D		Analyzed: 01/06/21 11:31			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.741	11.73933	0.0017	+/-1.0	
Blank (B096551-BLK1)			Lab File ID: 06JAN07.D		Analyzed: 01/06/21 12:00			
4-Bromofluorobenzene (Surrogate)	10.000	95.1	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW50A-01 (2037849-27RE1)			Lab File ID: 06JAN23.D		Analyzed: 01/06/21 20:32			
4-Bromofluorobenzene (Surrogate)	10.000	96.9	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW50A-02 (2037849-28RE1)			Lab File ID: 06JAN24.D		Analyzed: 01/06/21 21:01			
4-Bromofluorobenzene (Surrogate)	10.000	96.9	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW50B-01 (2037849-29RE1)			Lab File ID: 06JAN25.D		Analyzed: 01/06/21 21:30			
4-Bromofluorobenzene (Surrogate)	10.000	93.9	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW51A-01 (2037849-30RE1)			Lab File ID: 06JAN26.D		Analyzed: 01/06/21 21:59			
4-Bromofluorobenzene (Surrogate)	10.000	96.5	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100182-CCV3)			Lab File ID: 06JAN29.D		Analyzed: 01/06/21 23:29			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
Calibration Blank (2100182-CCB2)			Lab File ID: 06JAN31.D		Analyzed: 01/07/21 00:28			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.74	11.73933	0.0007	+/-1.0	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW48A-01 (2037849-23)			Lab File ID: 06JAN32.D		Analyzed: 01/07/21 01:04			
4-Bromofluorobenzene (Surrogate)	10.000	109	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW48B-01 (2037849-24)			Lab File ID: 06JAN33.D		Analyzed: 01/07/21 01:40			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW49A-01 (2037849-25)			Lab File ID: 06JAN34.D		Analyzed: 01/07/21 02:17			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW49B-01 (2037849-26)			Lab File ID: 06JAN35.D		Analyzed: 01/07/21 02:52			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW50A-01 (2037849-27)			Lab File ID: 06JAN36.D		Analyzed: 01/07/21 03:29			
4-Bromofluorobenzene (Surrogate)	10.000	108	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW50A-02 (2037849-28)			Lab File ID: 06JAN37.D		Analyzed: 01/07/21 04:04			
4-Bromofluorobenzene (Surrogate)	10.000	109	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW50B-01 (2037849-29)			Lab File ID: 06JAN38.D		Analyzed: 01/07/21 04:41			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW51A-01 (2037849-30)			Lab File ID: 06JAN39.D		Analyzed: 01/07/21 05:17			
4-Bromofluorobenzene (Surrogate)	10.000	109	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW51B-01 (2037849-31)			Lab File ID: 06JAN40.D		Analyzed: 01/07/21 05:54			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100009-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100009-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100009-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100009-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100009-CCV1)			Lab File ID: 04JAN02.D			Analyzed: 01/04/21 10:15			
Bromochloromethane (IS)	108987	7.506	96371	7.503	113	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	194545	11.017	169282	11.019	115	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	334372	8.695	295787	8.697	113	50 - 200	-0.0020	+/-0.50	
Calibration Check (2100009-CCV2)			Lab File ID: 04JAN03.D			Analyzed: 01/04/21 10:47			
Chlorobenzene-d5 (IS)	171613	11.016	169282	11.019	101	50 - 200	-0.0030	+/-0.50	
Calibration Blank (2100009-CCB1)			Lab File ID: 04JAN04.D			Analyzed: 01/04/21 11:15			
Bromochloromethane (IS)	90871	7.503	96371	7.503	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	157252	11.014	169282	11.019	93	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	271636	8.691	295787	8.697	92	50 - 200	-0.0060	+/-0.50	
LCS (B096350-BS1)			Lab File ID: 04JAN05.D			Analyzed: 01/04/21 11:47			
Bromochloromethane (IS)	110371	7.504	96371	7.503	115	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	200054	11.015	169282	11.019	118	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	339272	8.697	295787	8.697	115	50 - 200	0.0000	+/-0.50	
LCS Dup (B096350-BSD1)			Lab File ID: 04JAN06.D			Analyzed: 01/04/21 12:18			
Bromochloromethane (IS)	111205	7.501	96371	7.503	115	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	199769	11.018	169282	11.019	118	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	340653	8.695	295787	8.697	115	50 - 200	-0.0020	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096350-BLK1)			Lab File ID: 04JAN07.D			Analyzed: 01/04/21 12:46			
Bromochloromethane (IS)	89218	7.503	96371	7.503	93	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	148842	11.014	169282	11.019	88	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	262667	8.691	295787	8.697	89	50 - 200	-0.0060	+/-0.50	
SG-VW17A-01 (2037849-01RE1)			Lab File ID: 04JAN08.D			Analyzed: 01/04/21 13:28			
Bromochloromethane (IS)	84483	7.498	96371	7.503	88	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147927	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	252592	8.692	295787	8.697	85	50 - 200	-0.0050	+/-0.50	
SG-VW17B-01 (2037849-02RE1)			Lab File ID: 04JAN09.D			Analyzed: 01/04/21 13:58			
Bromochloromethane (IS)	85128	7.504	96371	7.503	88	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	143552	11.015	169282	11.019	85	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	256457	8.692	295787	8.697	87	50 - 200	-0.0050	+/-0.50	
SG-VW17B-02 (2037849-03RE1)			Lab File ID: 04JAN10.D			Analyzed: 01/04/21 14:27			
Bromochloromethane (IS)	83960	7.501	96371	7.503	87	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	139004	11.013	169282	11.019	82	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	248237	8.69	295787	8.697	84	50 - 200	-0.0070	+/-0.50	
SG-VW18B-01 (2037849-05RE1)			Lab File ID: 04JAN12.D			Analyzed: 01/04/21 15:26			
Bromochloromethane (IS)	83994	7.503	96371	7.503	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	140473	11.014	169282	11.019	83	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	251348	8.691	295787	8.697	85	50 - 200	-0.0060	+/-0.50	
SG-VW44A-01 (2037849-08RE1)			Lab File ID: 04JAN15.D			Analyzed: 01/04/21 16:53			
Bromochloromethane (IS)	82193	7.501	96371	7.503	85	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	133878	11.017	169282	11.019	79	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	236214	8.689	295787	8.697	80	50 - 200	-0.0080	+/-0.50	
SG-VW17A-01 (2037849-01)			Lab File ID: 04JAN17.D			Analyzed: 01/04/21 17:58			
Bromochloromethane (IS)	85051	7.503	96371	7.503	88	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	160185	11.015	169282	11.019	95	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	251322	8.692	295787	8.697	85	50 - 200	-0.0050	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW17B-01 (2037849-02)			Lab File ID: 04JAN18.D			Analyzed: 01/04/21 18:34			
Bromochloromethane (IS)	92880	7.504	96371	7.503	96	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	159848	11.015	169282	11.019	94	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	293040	8.697	295787	8.697	99	50 - 200	0.0000	+/-0.50	
SG-VW17B-02 (2037849-03)			Lab File ID: 04JAN19.D			Analyzed: 01/04/21 19:10			
Bromochloromethane (IS)	90921	7.502	96371	7.503	94	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	157190	11.013	169282	11.019	93	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	277742	8.695	295787	8.697	94	50 - 200	-0.0020	+/-0.50	
SG-VW18A-01 (2037849-04)			Lab File ID: 04JAN20.D			Analyzed: 01/04/21 19:46			
Bromochloromethane (IS)	95654	7.503	96371	7.503	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	181371	11.014	169282	11.019	107	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	303245	8.692	295787	8.697	103	50 - 200	-0.0050	+/-0.50	
SG-VW18B-01 (2037849-05)			Lab File ID: 04JAN21.D			Analyzed: 01/04/21 20:22			
Bromochloromethane (IS)	96205	7.506	96371	7.503	100	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	166614	11.017	169282	11.019	98	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	305742	8.695	295787	8.697	103	50 - 200	-0.0020	+/-0.50	
SG-VW52A-01 (2037849-06)			Lab File ID: 04JAN22.D			Analyzed: 01/04/21 20:58			
Bromochloromethane (IS)	92490	7.503	96371	7.503	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	160844	11.014	169282	11.019	95	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	286124	8.696	295787	8.697	97	50 - 200	-0.0010	+/-0.50	
SG-VW52B-01 (2037849-07)			Lab File ID: 04JAN23.D			Analyzed: 01/04/21 21:34			
Bromochloromethane (IS)	90121	7.509	96371	7.503	94	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	155509	11.015	169282	11.019	92	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	275163	8.697	295787	8.697	93	50 - 200	0.0000	+/-0.50	
SG-VW44A-01 (2037849-08)			Lab File ID: 04JAN24.D			Analyzed: 01/04/21 22:10			
Bromochloromethane (IS)	92707	7.509	96371	7.503	96	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	162761	11.015	169282	11.019	96	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	283231	8.697	295787	8.697	96	50 - 200	0.0000	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100009
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW44B-01 (2037849-09)			Lab File ID: 04JAN25.D			Analyzed: 01/04/21 22:46			
Bromochloromethane (IS)	90319	7.507	96371	7.503	94	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	154567	11.018	169282	11.019	91	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	274863	8.695	295787	8.697	93	50 - 200	-0.0020	+/-0.50	
SG-VW21A-01 (2037849-12RE1)			Lab File ID: 04JAN28.D			Analyzed: 01/05/21 00:14			
Bromochloromethane (IS)	81395	7.504	96371	7.503	84	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	139003	11.02	169282	11.019	82	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	244717	8.698	295787	8.697	83	50 - 200	0.0010	+/-0.50	
SG-VW21A-02 (2037849-13RE1)			Lab File ID: 04JAN29.D			Analyzed: 01/05/21 00:44			
Bromochloromethane (IS)	84034	7.509	96371	7.503	87	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	146693	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	248622	8.697	295787	8.697	84	50 - 200	0.0000	+/-0.50	
SG-VW21B-01 (2037849-14RE1)			Lab File ID: 04JAN30.D			Analyzed: 01/05/21 01:14			
Bromochloromethane (IS)	83325	7.509	96371	7.503	86	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	141797	11.02	169282	11.019	84	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	247708	8.697	295787	8.697	84	50 - 200	0.0000	+/-0.50	
SG-VW22A-01 (2037849-15RE1)			Lab File ID: 04JAN31.D			Analyzed: 01/05/21 01:43			
Bromochloromethane (IS)	84342	7.506	96371	7.503	88	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	146910	11.017	169282	11.019	87	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	245518	8.694	295787	8.697	83	50 - 200	-0.0030	+/-0.50	
SG-VW22B-01 (2037849-16RE1)			Lab File ID: 04JAN32.D			Analyzed: 01/05/21 02:13			
Bromochloromethane (IS)	82367	7.503	96371	7.503	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	136775	11.015	169282	11.019	81	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	240682	8.697	295787	8.697	81	50 - 200	0.0000	+/-0.50	
SG-VW45A-01 (2037849-17RE1)			Lab File ID: 04JAN33.D			Analyzed: 01/05/21 02:43			
Bromochloromethane (IS)	82809	7.509	96371	7.503	86	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	138059	11.015	169282	11.019	82	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	237063	8.692	295787	8.697	80	50 - 200	-0.0050	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100086-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100086-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100086-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100086-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100086-CCV1)			Lab File ID: 05JAN02.D			Analyzed: 01/05/21 09:35			
Bromochloromethane (IS)	91455	7.501	96371	7.503	95	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	162788	11.017	169282	11.019	96	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	275561	8.694	295787	8.697	93	50 - 200	-0.0030	+/-0.50	
Calibration Check (2100086-CCV2)			Lab File ID: 05JAN03.D			Analyzed: 01/05/21 10:07			
Chlorobenzene-d5 (IS)	170510	11.017	169282	11.019	101	50 - 200	-0.0020	+/-0.50	
Calibration Blank (2100086-CCB1)			Lab File ID: 05JAN04.D			Analyzed: 01/05/21 10:35			
Bromochloromethane (IS)	85792	7.501	96371	7.503	89	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	145167	11.017	169282	11.019	86	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	252920	8.694	295787	8.697	86	50 - 200	-0.0030	+/-0.50	
LCS (B096447-BS1)			Lab File ID: 05JAN05.D			Analyzed: 01/05/21 11:06			
Bromochloromethane (IS)	94582	7.503	96371	7.503	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	169972	11.019	169282	11.019	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	285978	8.697	295787	8.697	97	50 - 200	0.0000	+/-0.50	
LCS Dup (B096447-BSD1)			Lab File ID: 05JAN06.D			Analyzed: 01/05/21 11:38			
Bromochloromethane (IS)	93995	7.503	96371	7.503	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	166504	11.019	169282	11.019	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	285216	8.696	295787	8.697	96	50 - 200	-0.0010	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096447-BLK1)			Lab File ID: 05JAN07.D			Analyzed: 01/05/21 12:06			
Bromochloromethane (IS)	82717	7.501	96371	7.503	86	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	134398	11.017	169282	11.019	79	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	241078	8.689	295787	8.697	82	50 - 200	-0.0080	+/-0.50	
SG-VW43A-01 (2037849-10)			Lab File ID: 05JAN08.D			Analyzed: 01/05/21 12:42			
Bromochloromethane (IS)	83840	7.503	96371	7.503	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	137358	11.015	169282	11.019	81	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	240340	8.697	295787	8.697	81	50 - 200	0.0000	+/-0.50	
SG-VW43B-01 (2037849-11)			Lab File ID: 05JAN09.D			Analyzed: 01/05/21 13:17			
Bromochloromethane (IS)	83635	7.509	96371	7.503	87	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	146802	11.016	169282	11.019	87	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	241815	8.693	295787	8.697	82	50 - 200	-0.0040	+/-0.50	
SG-VW21A-01 (2037849-12)			Lab File ID: 05JAN10.D			Analyzed: 01/05/21 13:53			
Bromochloromethane (IS)	89035	7.504	96371	7.503	92	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	158980	11.015	169282	11.019	94	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	265444	8.692	295787	8.697	90	50 - 200	-0.0050	+/-0.50	
SG-VW21A-02 (2037849-13)			Lab File ID: 05JAN11.D			Analyzed: 01/05/21 14:29			
Bromochloromethane (IS)	94977	7.501	96371	7.503	99	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	169271	11.017	169282	11.019	100	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	292122	8.694	295787	8.697	99	50 - 200	-0.0030	+/-0.50	
SG-VW21B-01 (2037849-14)			Lab File ID: 05JAN12.D			Analyzed: 01/05/21 15:05			
Bromochloromethane (IS)	92272	7.504	96371	7.503	96	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	159865	11.015	169282	11.019	94	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	287377	8.692	295787	8.697	97	50 - 200	-0.0050	+/-0.50	
SG-VW22A-01 (2037849-15)			Lab File ID: 05JAN13.D			Analyzed: 01/05/21 15:35			
Bromochloromethane (IS)	95082	7.501	96371	7.503	99	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	167528	11.013	169282	11.019	99	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	294735	8.69	295787	8.697	100	50 - 200	-0.0070	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW22B-01 (2037849-16)			Lab File ID: 05JAN14.D			Analyzed: 01/05/21 16:10			
Bromochloromethane (IS)	93500	7.503	96371	7.503	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	162082	11.014	169282	11.019	96	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	288359	8.692	295787	8.697	97	50 - 200	-0.0050	+/-0.50	
SG-VW45A-01 (2037849-17)			Lab File ID: 05JAN15.D			Analyzed: 01/05/21 16:46			
Bromochloromethane (IS)	100101	7.506	96371	7.503	104	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	178890	11.018	169282	11.019	106	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	304892	8.695	295787	8.697	103	50 - 200	-0.0020	+/-0.50	
SG-VW45B-01 (2037849-18)			Lab File ID: 05JAN16.D			Analyzed: 01/05/21 17:22			
Bromochloromethane (IS)	94346	7.506	96371	7.503	98	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	157883	11.013	169282	11.019	93	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	288861	8.695	295787	8.697	98	50 - 200	-0.0020	+/-0.50	
Calibration Check (2100086-CCV3)			Lab File ID: 05JAN34.D			Analyzed: 01/06/21 02:27			
Bromochloromethane (IS)	99822	7.506	96371	7.503	104	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	174935	11.018	169282	11.019	103	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	300957	8.695	295787	8.697	102	50 - 200	-0.0020	+/-0.50	
Calibration Check (2100086-CCV4)			Lab File ID: 05JAN35.D			Analyzed: 01/06/21 02:59			
Chlorobenzene-d5 (IS)	171801	11.02	169282	11.019	101	50 - 200	0.0010	+/-0.50	
Calibration Blank (2100086-CCB2)			Lab File ID: 05JAN36.D			Analyzed: 01/06/21 03:27			
Bromochloromethane (IS)	88665	7.502	96371	7.503	92	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	151435	11.019	169282	11.019	89	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	261461	8.696	295787	8.697	88	50 - 200	-0.0010	+/-0.50	
SG-VW46A-01 (2037849-19)			Lab File ID: 05JAN37.D			Analyzed: 01/06/21 04:02			
Bromochloromethane (IS)	91507	7.509	96371	7.503	95	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	154564	11.015	169282	11.019	91	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	260133	8.697	295787	8.697	88	50 - 200	0.0000	+/-0.50	
SG-VW46B-01 (2037849-20)			Lab File ID: 05JAN38.D			Analyzed: 01/06/21 04:38			
Bromochloromethane (IS)	97611	7.508	96371	7.503	101	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	172022	11.019	169282	11.019	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	303715	8.697	295787	8.697	103	50 - 200	0.0000	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100086
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW47A-01 (2037849-21)			Lab File ID: 05JAN39.D			Analyzed: 01/06/21 05:14			
Bromochloromethane (IS)	92010	7.506	96371	7.503	95	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	155708	11.017	169282	11.019	92	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	265066	8.694	295787	8.697	90	50 - 200	-0.0030	+/-0.50	
SG-VW47B-01 (2037849-22)			Lab File ID: 05JAN40.D			Analyzed: 01/06/21 05:50			
Bromochloromethane (IS)	89224	7.508	96371	7.503	93	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	150808	11.015	169282	11.019	89	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	259814	8.697	295787	8.697	88	50 - 200	0.0000	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL7)			Lab File ID: 16OCT10.D			Analyzed: 10/16/20 14:05			
Chlorobenzene-d5 (IS)	64445	11.017	169282	11.019	38	50 - 200	-0.0020	+/-0.50	*
Cal Standard (2100148-CAL8)			Lab File ID: 16OCT11.D			Analyzed: 10/16/20 14:34			
Chlorobenzene-d5 (IS)	65904	11.017	169282	11.019	39	50 - 200	-0.0020	+/-0.50	*
Cal Standard (2100148-CAL9)			Lab File ID: 16OCT12.D			Analyzed: 10/16/20 15:03			
Chlorobenzene-d5 (IS)	71033	11.018	169282	11.019	42	50 - 200	-0.0010	+/-0.50	*
Cal Standard (2100148-CALA)			Lab File ID: 16OCT13.D			Analyzed: 10/16/20 15:34			
Chlorobenzene-d5 (IS)	75959	11.016	169282	11.019	45	50 - 200	-0.0030	+/-0.50	*
Cal Standard (2100148-CALB)			Lab File ID: 16OCT14.D			Analyzed: 10/16/20 16:05			
Chlorobenzene-d5 (IS)	81415	11.016	169282	11.019	48	50 - 200	-0.0030	+/-0.50	*
Cal Standard (2100148-CALC)			Lab File ID: 16OCT15.D			Analyzed: 10/16/20 16:41			
Chlorobenzene-d5 (IS)	92664	11.021	169282	11.019	55	50 - 200	0.0020	+/-0.50	
Cal Standard (2100148-CAL1)			Lab File ID: 28DEC11.D			Analyzed: 12/28/20 17:41			
Bromochloromethane (IS)	82775	7.499	96371	7.503	86	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	140348	11.015	169282	11.019	83	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	257000	8.692	295787	8.697	87	50 - 200	-0.0050	+/-0.50	
Cal Standard (2100148-CAL2)			Lab File ID: 28DEC12.D			Analyzed: 12/28/20 18:10			
Bromochloromethane (IS)	86478	7.499	96371	7.503	90	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	147863	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	267952	8.692	295787	8.697	91	50 - 200	-0.0050	+/-0.50	
Cal Standard (2100148-CAL3)			Lab File ID: 28DEC13.D			Analyzed: 12/28/20 18:42			
Bromochloromethane (IS)	96371	7.503	96371	7.503	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	169282	11.019	169282	11.019	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295787	8.697	295787	8.697	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2100148-CAL4)			Lab File ID: 28DEC14.D			Analyzed: 12/28/20 19:21			
Bromochloromethane (IS)	108487	7.511	96371	7.503	113	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	192330	11.022	169282	11.019	114	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	323166	8.699	295787	8.697	109	50 - 200	0.0020	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL5)			Lab File ID: 28DEC15.D			Analyzed: 12/28/20 20:03			
Bromochloromethane (IS)	117923	7.509	96371	7.503	122	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	209559	11.02	169282	11.019	124	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	346276	8.702	295787	8.697	117	50 - 200	0.0050	+/-0.50	
Cal Standard (2100148-CAL6)			Lab File ID: 28DEC16.D			Analyzed: 12/28/20 20:49			
Bromochloromethane (IS)	121879	7.509	96371	7.503	126	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	219386	11.02	169282	11.019	130	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	353230	8.698	295787	8.697	119	50 - 200	0.0010	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100182-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100182-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100182-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100182-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100182-CCV1)			Lab File ID: 06JAN02.D			Analyzed: 01/06/21 09:27			
Bromochloromethane (IS)	98658	7.498	96371	7.503	102	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	173895	11.014	169282	11.019	103	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	293956	8.696	295787	8.697	99	50 - 200	-0.0010	+/-0.50	
Calibration Check (2100182-CCV2)			Lab File ID: 06JAN03.D			Analyzed: 01/06/21 09:59			
Chlorobenzene-d5 (IS)	172953	11.017	169282	11.019	102	50 - 200	-0.0020	+/-0.50	
Calibration Blank (2100182-CCB1)			Lab File ID: 06JAN04.D			Analyzed: 01/06/21 10:27			
Bromochloromethane (IS)	91025	7.5	96371	7.503	94	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	152693	11.017	169282	11.019	90	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	268446	8.694	295787	8.697	91	50 - 200	-0.0030	+/-0.50	
LCS (B096551-BS1)			Lab File ID: 06JAN05.D			Analyzed: 01/06/21 10:59			
Bromochloromethane (IS)	98122	7.503	96371	7.503	102	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	174221	11.019	169282	11.019	103	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	296480	8.696	295787	8.697	100	50 - 200	-0.0010	+/-0.50	
LCS Dup (B096551-BSD1)			Lab File ID: 06JAN06.D			Analyzed: 01/06/21 11:31			
Bromochloromethane (IS)	96776	7.505	96371	7.503	100	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	169669	11.016	169282	11.019	100	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	290888	8.698	295787	8.697	98	50 - 200	0.0010	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096551-BLK1)			Lab File ID: 06JAN07.D			Analyzed: 01/06/21 12:00			
Bromochloromethane (IS)	86306	7.5	96371	7.503	90	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	141742	11.017	169282	11.019	84	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	250310	8.694	295787	8.697	85	50 - 200	-0.0030	+/-0.50	
SG-VW50A-01 (2037849-27RE1)			Lab File ID: 06JAN23.D			Analyzed: 01/06/21 20:32			
Bromochloromethane (IS)	79967	7.508	96371	7.503	83	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	127992	11.014	169282	11.019	76	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	225833	8.696	295787	8.697	76	50 - 200	-0.0010	+/-0.50	
SG-VW50A-02 (2037849-28RE1)			Lab File ID: 06JAN24.D			Analyzed: 01/06/21 21:01			
Bromochloromethane (IS)	80358	7.508	96371	7.503	83	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	127433	11.019	169282	11.019	75	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	225003	8.697	295787	8.697	76	50 - 200	0.0000	+/-0.50	
SG-VW50B-01 (2037849-29RE1)			Lab File ID: 06JAN25.D			Analyzed: 01/06/21 21:30			
Bromochloromethane (IS)	73080	7.503	96371	7.503	76	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	126448	11.014	169282	11.019	75	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	223116	8.696	295787	8.697	75	50 - 200	-0.0010	+/-0.50	
SG-VW51A-01 (2037849-30RE1)			Lab File ID: 06JAN26.D			Analyzed: 01/06/21 21:59			
Bromochloromethane (IS)	78055	7.504	96371	7.503	81	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	124825	11.015	169282	11.019	74	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	219240	8.692	295787	8.697	74	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100182-CCV3)			Lab File ID: 06JAN29.D			Analyzed: 01/06/21 23:29			
Bromochloromethane (IS)	90263	7.506	96371	7.503	94	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	158993	11.017	169282	11.019	94	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	263056	8.7	295787	8.697	89	50 - 200	0.0030	+/-0.50	
Calibration Check (2100182-CCV4)			Lab File ID: 06JAN30.D			Analyzed: 01/07/21 00:01			
Chlorobenzene-d5 (IS)	161470	11.02	169282	11.019	95	50 - 200	0.0010	+/-0.50	
Calibration Blank (2100182-CCB2)			Lab File ID: 06JAN31.D			Analyzed: 01/07/21 00:28			
Bromochloromethane (IS)	80487	7.504	96371	7.503	84	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	135522	11.015	169282	11.019	80	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	232983	8.692	295787	8.697	79	50 - 200	-0.0050	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW48A-01 (2037849-23)			Lab File ID: 06JAN32.D			Analyzed: 01/07/21 01:04			
Bromochloromethane (IS)	82875	7.511	96371	7.503	86	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	136136	11.017	169282	11.019	80	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	231927	8.694	295787	8.697	78	50 - 200	-0.0030	+/-0.50	
SG-VW48B-01 (2037849-24)			Lab File ID: 06JAN33.D			Analyzed: 01/07/21 01:40			
Bromochloromethane (IS)	82131	7.51	96371	7.503	85	50 - 200	0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	134050	11.017	169282	11.019	79	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	235878	8.699	295787	8.697	80	50 - 200	0.0020	+/-0.50	
SG-VW49A-01 (2037849-25)			Lab File ID: 06JAN34.D			Analyzed: 01/07/21 02:17			
Bromochloromethane (IS)	81312	7.508	96371	7.503	84	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	134368	11.015	169282	11.019	79	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	230688	8.697	295787	8.697	78	50 - 200	0.0000	+/-0.50	
SG-VW49B-01 (2037849-26)			Lab File ID: 06JAN35.D			Analyzed: 01/07/21 02:52			
Bromochloromethane (IS)	79934	7.507	96371	7.503	83	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	131989	11.018	169282	11.019	78	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	229792	8.695	295787	8.697	78	50 - 200	-0.0020	+/-0.50	
SG-VW50A-01 (2037849-27)			Lab File ID: 06JAN36.D			Analyzed: 01/07/21 03:29			
Bromochloromethane (IS)	84119	7.503	96371	7.503	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	139992	11.015	169282	11.019	83	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	236543	8.697	295787	8.697	80	50 - 200	0.0000	+/-0.50	
SG-VW50A-02 (2037849-28)			Lab File ID: 06JAN37.D			Analyzed: 01/07/21 04:04			
Bromochloromethane (IS)	87335	7.507	96371	7.503	91	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	147177	11.018	169282	11.019	87	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	249668	8.695	295787	8.697	84	50 - 200	-0.0020	+/-0.50	
SG-VW50B-01 (2037849-29)			Lab File ID: 06JAN38.D			Analyzed: 01/07/21 04:41			
Bromochloromethane (IS)	83773	7.509	96371	7.503	87	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	141523	11.015	169282	11.019	84	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	243893	8.697	295787	8.697	82	50 - 200	0.0000	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100182
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW51A-01 (2037849-30)			Lab File ID: 06JAN39.D			Analyzed: 01/07/21 05:17			
Bromochloromethane (IS)	87453	7.509	96371	7.503	91	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	148166	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	256158	8.697	295787	8.697	87	50 - 200	0.0000	+/-0.50	
SG-VW51B-01 (2037849-31)			Lab File ID: 06JAN40.D			Analyzed: 01/07/21 05:54			
Bromochloromethane (IS)	85522	7.504	96371	7.503	89	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	143074	11.015	169282	11.019	85	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	249044	8.697	295787	8.697	84	50 - 200	0.0000	+/-0.50	

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Calibration: 2101002

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J07014	TO-14A/TO-15 Working BFB	2100148-TUN2	16OCT09.D	10/16/20 13:36
0L12008	MS-A1 TO-14A / TO-15 CAL1 TPH	2100148-CAL7	16OCT10.D	10/16/20 14:05
0L12009	MS-A1 TO-14A / TO-15 CAL2 TPH	2100148-CAL8	16OCT11.D	10/16/20 14:34
0L12010	MS-A1 TO-14A / TO-15 CAL3 TPH	2100148-CAL9	16OCT12.D	10/16/20 15:03
0L12011	MS-A1 TO-14A / TO-15 CAL4 TPH	2100148-CALA	16OCT13.D	10/16/20 15:34
0L12012	MS-A1 TO-14A / TO-15 CAL5 TPH	2100148-CALB	16OCT14.D	10/16/20 16:05
0L12013	MS-A1 TO-14A / TO-15 CAL6 TPH	2100148-CALC	16OCT15.D	10/16/20 16:41
0L19003	TO-14A/TO-15 Working BFB	2100148-TUN1	28DEC10.D	12/28/20 17:12
0L29055	MS-A1 TO-14A /TO-15 CAL1	2100148-CAL1	28DEC11.D	12/28/20 17:41
0L29056	MS-A1 TO-14A /TO-15 CAL2	2100148-CAL2	28DEC12.D	12/28/20 18:10
0L29057	MS-A1 TO-14A /TO-15 CAL3	2100148-CAL3	28DEC13.D	12/28/20 18:42
0L29058	MS-A1 TO-14A /TO-15 CAL4	2100148-CAL4	28DEC14.D	12/28/20 19:21
0L29059	MS-A1 TO-14A /TO-15 CAL5	2100148-CAL5	28DEC15.D	12/28/20 20:03
0L29060	MS-A1 TO-14A /TO-15 CAL6	2100148-CAL6	28DEC16.D	12/28/20 20:49

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.638659	1	1.44823	5	1.344678	15	1.24182	20	1.224151	25	1.227421
Acrylonitrile	0.5	0.4199336	1	0.4011425	5	0.3890797	15	0.407164	20	0.3970303	25	0.4097802
Allyl chloride	0.5	1.131743	1	1.097389	5	1.072294	15	1.050872	20	1.040675	25	1.04992
t-Amyl Methyl ether	0.5	0.4513619	1	0.4479907	5	0.5432287	15	0.6396713	20	0.6659846	25	0.7030547
Benzene	0.5	2.984959	1	2.925946	5	2.772556	15	2.690203	20	2.601473	25	2.61716
Benzyl chloride	0.5	0.2076268	1	0.2567241	5	0.7760187	15	1.549344	20	1.740744	25	1.916387
Bromodichloromethane	0.5	0.7592996	1	0.7537917	5	0.7619807	15	0.816734	20	0.8307506	25	0.8808482
Bromoform	0.5	0.8132642	1	0.8323245	5	1.069494	15	1.258587	20	1.290742	25	1.334224
Bromomethane	0.5	1.162187	1	1.119938	5	0.9432713	15	0.8629052	20	0.8167406	25	0.8416446
1,3-Butadiene	0.5	1.049351	1	0.9737737	5	0.858557	15	0.8000283	20	0.7492559	25	0.7824285
t-Butyl alcohol	1	0.7676231	2	0.775573	10	1.043229	30	1.256246	40	1.334634	50	1.388572
Carbon disulfide	0.5	2.933253	1	2.714795	5	2.734848	15	2.658008	20	2.592119	25	2.589112
Carbon tetrachloride	0.5	1.252069	1	1.280326	5	1.416899	15	1.552862	20	1.58654	25	1.639958
Chlorobenzene	0.5	0.8656031	1	0.8193258	5	0.8097178	15	0.8382606	20	0.8475826	25	0.8854299
Chloroethane	0.5	0.7304138	1	0.6780915	5	0.6024011	15	0.5515561	20	0.5120502	25	0.5288557
Chloroform	0.5	2.037813	1	1.958995	5	1.901817	15	1.801703	20	1.742552	25	1.771294
Chloromethane	0.5	0.8401087	1	0.7801984	5	0.6897511	15	0.6091175	20	0.5784877	25	0.5805955
Cyclohexane	0.5	3.299064	1	2.418534	5	1.744446	15	1.550041	20	1.504092	25	1.512484
Dibromochloromethane	0.5	0.5464591	1	0.554353	5	0.6343213	15	0.705693	20	0.7244467	25	0.759649
1,2-Dibromo-3-chloropropane	0.5	5.514863E-02	1	7.608394E-02	5	0.1153696	15	0.148682	20	0.1547034	25	0.1584331
1,2-Dibromoethane	0.5	0.4164202	1	0.4250761	5	0.487797	15	0.508426	20	0.5077554	25	0.5234063
Dibromomethane	0.5	0.1512062	1	0.1406222	5	0.1297758	15	0.1280518	20	0.1270692	25	0.1287218
1,2-Dichlorobenzene	0.5	1.025451	1	1.006878	5	1.098262	15	1.201487	20	1.206221	25	1.247629
1,3-Dichlorobenzene	0.5	0.9306866	1	0.966638	5	1.172481	15	1.39521	20	1.398549	25	1.404263
1,4-Dichlorobenzene	0.5	0.8068515	1	0.8286725	5	0.9789227	15	1.140564	20	1.216836	25	1.322106

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.459921	1	2.300007	5	2.075085	15	1.951877	20	1.887185	25	1.883609
1,1-Dichloroethane	0.5	1.535971	1	1.503157	5	1.497587	15	1.447965	20	1.414571	25	1.428889
1,2-Dichloroethane	0.5	1.356448	1	1.280673	5	1.225493	15	1.142244	20	1.109114	25	1.112753
1,1-Dichloroethene	0.5	1.383268	1	1.349939	5	1.316579	15	1.308956	20	1.29317	25	1.317503
cis-1,2-Dichloroethene	0.5	1.184416	1	1.135318	5	1.133972	15	1.100765	20	1.070711	25	1.074239
trans-1,2-Dichloroethene	0.5	1.392449	1	1.301603	5	1.296054	15	1.267753	20	1.230884	25	1.247296
1,2-Dichloropropane	0.5	0.3172763	1	0.3149071	5	0.307762	15	0.3090445	20	0.3054269	25	0.3125295
cis-1,3-Dichloropropene	0.5	0.2628794	1	0.2707948	5	0.3797936	15	0.4471448	20	0.456682	25	0.472166
trans-1,3-Dichloropropene	0.5	0.3798444	1	0.390555	5	0.4756937	15	0.5375875	20	0.5537938	25	0.5840206
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	3.122199	1	3.044936	5	2.618858	15	2.426878	20	2.321498	25	2.383735
1,1-Difluoroethane	0.5	1.291453	1	1.237656	5	1.121167	15	0.9999908	20	0.9740127	25	0.9642153
Diisopropyl ether	0.5	0.6825732	1	0.6324152	5	0.6494485	15	0.6713124	20	0.6862529	25	0.7015778
1,4-Dioxane	0.5	0.1349416	1	0.1342405	5	0.1555241	15	0.1584882	20	0.1630101	25	0.1694329
Ethanol	1	0.3958925	2	0.3828719	10	0.3268307	30	0.29064	40	0.2678634	50	0.2751385
Ethyl acetate	0.5	0.2628813	1	0.2897847	5	0.3152401	15	0.3201674	20	0.3138743	25	0.3247549
Ethylbenzene	0.5	0.7860461	1	0.7701048	5	0.7473092	15	0.7390041	20	0.7333138	25	0.7468754
1-Ethyl-4-methylbenzene	0.5	2.863596	1	2.923179	5	3.14734	15	3.353323	20	3.299321	25	3.423187
Ethyl t-butyl ether	0.5	1.345334	1	1.318486	5	1.434892	15	1.664433	20	1.775205	25	1.892228
n-Heptane	0.5	0.324358	1	0.3106527	5	0.320866	15	0.3183544	20	0.320246	25	0.330605
Hexachlorobutadiene	0.5	1.671274	1	1.412253	5	1.149821	15	1.240417	20	1.304036	25	1.367611
Hexachloroethane	0.5	8.108416E-02	1	9.569669E-02	5	0.1380182	15	0.1770499	20	0.179298	25	0.1852844
Hexane	0.5	1.598067	1	1.532066	5	1.505453	15	1.49452	20	1.474479	25	1.489484
2-Hexanone	0.5	0.5071595	1	0.5001642	5	0.5878622	15	0.6439559	20	0.6548707	25	0.6781496
Isooctane	0.5	1.727393	1	1.68213	5	1.645583	15	1.621136	20	1.62001	25	1.666442
Isopropyl alcohol	0.5	0.7093929	1	0.6787854	5	0.8129001	15	1.028652	20	1.070631	25	1.09397
Methylene chloride	0.5	1.030504	1	0.9276348	5	0.8141246	15	0.7635201	20	0.7379816	25	0.736967

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	2.01341	1	1.895164	5	1.822042	15	1.68709	20	1.636352	25	1.636843
Methyl iodide	0.5	0.938206	1	0.8776799	5	0.8378662	15	0.8452011	20	0.8459503	25	0.8601449
Methyl isobutyl ketone	0.5	0.7635019	1	0.7508434	5	0.754401	15	0.773031	20	0.7730409	25	0.8030111
Methyl t-butyl ether	0.5	2.423195	1	2.392285	5	2.548651	15	2.690006	20	2.763977	25	2.87725
Naphthalene	0.5	0.439764	1	0.5812137	5	0.9393793	15	1.264923	20	1.368514	25	1.482512
Propylene	0.5	0.8649955	1	0.7574181	5	0.6241712	15	0.5582543	20	0.5426041	25	0.541012
Styrene	0.5	1.294782	1	1.265158	5	1.32847	15	1.358232	20	1.330401	25	1.332484
1,1,1,2-Tetrachloroethane	0.5	0.1877821	1	0.2058578	5	0.2342699	15	0.2597942	20	0.2650588	25	0.2807417
1,1,2,2-Tetrachloroethane	0.5	1.532904	1	1.491042	5	1.521272	15	1.623186	20	1.64395	25	1.680609
Tetrachloroethene	0.5	0.44	1	0.4343688	5	0.4504863	15	0.4776513	20	0.4895849	25	0.5116179
1,1,1,2-Tetrafluoroethane	0.5	1.351374	1	1.238928	5	1.135798	15	0.9993886	20	0.9408258	25	0.905846
Tetrahydrofuran	0.5	1.197705	1	1.165036	5	1.083604	15	1.027804	20	1.00123	25	1.013641
Toluene	0.5	1.052685	1	1.077506	5	1.074199	15	1.085558	20	1.0749	25	1.110228
1,2,4-Trichlorobenzene	0.5	0.3086613	1	0.3071086	5	0.4028899	15	0.5969324	20	0.6508286	25	0.734871
1,1,1-Trichloroethane	0.5	1.477982	1	1.454127	5	1.488622	15	1.583151	20	1.582177	25	1.612225
1,1,2-Trichloroethane	0.5	0.3485603	1	0.3555114	5	0.3456406	15	0.3478955	20	0.3483291	25	0.3607145
Trichloroethene	0.5	0.36	1	0.3424867	5	0.3393253	15	0.3582163	20	0.3673096	25	0.3860001
Trichlorofluoromethane	0.5	2.28064	1	2.120655	5	1.949072	15	1.95597	20	1.934143	25	1.968264
1,2,3-Trichloropropane	0.5	0.3323168	1	0.3217844	5	0.3331128	15	0.3134959	20	0.3022466	25	0.294759
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.654364	1	1.60827	5	1.58612	15	1.571918	20	1.552899	25	1.586245
1,2,4-Trimethylbenzene	0.5	2.143671	1	2.098835	5	2.145627	15	2.224448	20	2.228873	25	2.263242
1,3,5-Trimethylbenzene	0.5	2.102916	1	2.080034	5	2.168972	15	2.148973	20	2.214338	25	2.165958
Vinyl acetate	0.5	1.914346	1	1.847175	5	2.125681	15	2.254052	20	2.281976	25	2.334926
Vinyl bromide	0.5	1.009967	1	0.9578159	5	0.8378247	15	0.8222736	20	0.7722327	25	0.8203087
Vinyl chloride	0.5	1.231048	1	1.152779	5	1.024852	15	0.9274905	20	0.8656751	25	0.8926263
p- & m-Xylenes	1	2.037934	2	2.040335	10	2.022867	30	2.095399	40	2.0756	50	2.095234

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	2.154929	1	2.108979	5	2.111766	15	2.207699	20	2.232106	25	2.269443
Total Xylenes	1.5	2.076933	3	2.063216	15	2.0525	45	2.132832	60	2.127769	75	2.153304
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	0.9630561	10	1.001102	10	1.05248	10	1.024042	10	0.9894493	10	0.9576819

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air

SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
Total Petroleum Hydrocarbons	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
4-Bromofluorobenzene (Surrogate)	10	~~1.143828~~	10	~~1.190717~~	10	~~1.260907~~	10	~~1.289156~~	10	~~1.306602~~	10	~~1.307584~~

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Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2037849
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.35416	12.15506	5.313667	2.920133E-02			30	
Acrylonitrile	0.4040217	2.658088	5.650667	6.545118E-02			30	
Allyl chloride	1.073815	3.255199	6.096833	7.339098E-02			30	
t-Amyl Methyl ether	0.5752153	19.24701	8.843833	2.518937E-02			30	
Benzene	2.765383	5.79788	8.516	4.709529E-02			30	
Benzyl chloride	1.074474	70.72554	12.47933	1.743702E-02		0.999	0.99	
Bromodichloromethane	0.8005675	6.368602	9.092167	5.085719E-02			30	
Bromoform	1.099773	21.17628	11.35217	2.677033E-02			30	
Bromomethane	0.9577811	15.53321	4.776333	0.0712533			30	
1,3-Butadiene	0.8688991	13.63719	4.573	6.105655E-02			30	
t-Butyl alcohol	1.094313	25.24168	5.926167	0.1445921			30	
Carbon disulfide	2.703689	4.720855	6.281167	5.327424E-02			30	
Carbon tetrachloride	1.454776	11.26284	8.607833	4.507276E-02			30	
Chlorobenzene	0.84432	3.35513	11.04017	3.106664E-02			30	
Chloroethane	0.6005614	14.5644	4.899333	8.015979E-02			30	
Chloroform	1.869029	6.227538	7.587167	7.696929E-02			30	
Chloromethane	0.6797098	16.24736	4.306833	7.037411E-02			30	
Cyclohexane	2.004777	36.06609	8.69	3.012126E-02	0.9997578		0.99	
Dibromochloromethane	0.6541537	13.78849	10.34867	3.809283E-02			30	
1,2-Dibromo-3-chloropropane	0.1180701	37.1841	13.01333	1.556892E-02	0.998239		0.99	
1,2-Dibromoethane	0.4781468	9.612159	10.47933	2.200011E-02			30	
Dibromomethane	0.1342412	7.212184	8.968667	6.445581E-02			30	
1,2-Dichlorobenzene	1.130988	9.003705	12.74217	1.411764E-02			30	
1,3-Dichlorobenzene	1.211305	18.32027	12.49867	2.031891E-02			30	
1,4-Dichlorobenzene	1.048992	20.14279	12.53333	2.101552E-02			30	
Dichlorodifluoromethane	2.092947	11.38565	4.182667	5.756722E-02			30	

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.471357	3.25229	6.838333	0.06664			30	
1,2-Dichloroethane	1.204454	8.362325	8.0655	7.505512E-02			30	
1,1-Dichloroethene	1.328236	2.463162	5.935833	5.194093E-02			30	
cis-1,2-Dichloroethene	1.11657	3.88367	7.394667	5.380595E-02			30	
trans-1,2-Dichloroethene	1.28934	4.452412	6.691333	5.981446E-02			30	
1,2-Dichloropropane	0.3111577	1.453114	8.991	2.764642E-02			30	
cis-1,3-Dichloropropene	0.3815768	24.7268	9.865333	3.855663E-02			30	
trans-1,3-Dichloropropene	0.4869158	17.7492	9.591	3.952982E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.653017	13.1489	4.379167	5.838789E-02			30	
1,1-Difluoroethane	1.098082	12.90092	4.0605	0.1041516			30	
Diisopropyl ether	0.6705967	3.804152	7.514	3.255447E-02			30	
1,4-Dioxane	0.1526062	9.647694	9.1085	0.0487053			30	
Ethanol	0.3232062	17.10975	4.953667	0.1669544			30	
Ethyl acetate	0.3044504	7.783328	7.503333	5.645944E-02			30	
Ethylbenzene	0.7537756	2.675952	11.21167	0.0204329			30	
1-Ethyl-4-methylbenzene	3.168324	7.330859	12.1265	2.357457E-02			30	
Ethyl t-butyl ether	1.571763	15.23835	7.86	3.121364E-02			30	
n-Heptane	0.320847	2.05827	9.275333	4.165405E-02			30	
Hexachlorobutadiene	1.357569	13.22833	14.3045	1.176188E-02			30	
Hexachloroethane	0.1427386	31.89068	13.173	2.173384E-02	0.9985021		0.99	
Hexane	1.515678	2.949409	7.540167	2.899198E-02			30	
2-Hexanone	0.5953603	12.93552	10.23617	9.97657E-04			30	
Isooctane	1.660449	2.46691	9.146333	0.0345877			30	
Isopropyl alcohol	0.8990552	20.87641	5.478	0.1072399			30	
Methylene chloride	0.835122	14.30627	5.997667	0.0769743			30	
Methyl ethyl ketone	1.781817	8.667307	7.081833	3.547638E-02			30	

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.8675081	4.312147	5.894	4.748018E-02			30	
Methyl isobutyl ketone	0.7696382	2.437656	9.601667	2.349494E-02			30	
Methyl t-butyl ether	2.615894	7.40049	6.867167	5.213428E-02			30	
Naphthalene	1.012718	42.6034	14.03833	9.325176E-03		0.9999223	0.99	
Propylene	0.6480759	20.72905	4.126167	8.099896E-02			30	
Styrene	1.318255	2.498209	11.46667	0.0256742			30	
1,1,1,2-Tetrachloroethane	0.2389174	15.20436	11.02933	2.330274E-02			30	
1,1,2,2-Tetrachloroethane	1.58216	4.865499	11.51267	3.275722E-02			30	
Tetrachloroethene	0.4672849	6.547415	10.707	2.202255E-02			30	
1,1,1,2-Tetrafluoroethane	1.09536	16.16691	4.002667	8.184233E-02			30	
Tetrahydrofuran	1.081503	7.671459	7.851833	3.215177E-02			30	
Toluene	1.079179	1.734772	10.126	2.760287E-02			30	
1,2,4-Trichlorobenzene	0.5002153	36.92267	13.928	2.284243E-02		0.9997169	0.99	
1,1,1-Trichloroethane	1.533047	4.368665	8.238833	4.190848E-02			30	
1,1,2-Trichloroethane	0.3511086	1.641568	9.969667	0.046184			30	
Trichloroethene	0.3588897	4.760305	9.1215	5.105107E-02			30	
Trichlorofluoromethane	2.034791	6.807286	5.471667	4.363204E-02			30	
1,2,3-Trichloropropane	0.3162859	4.976357	11.575	2.286987E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.593303	2.200033	6.204667	5.570172E-02			30	
1,2,4-Trimethylbenzene	2.184116	2.915985	12.39033	0.0268067			30	
1,3,5-Trimethylbenzene	2.146865	2.263605	12.16033	0.021142			30	
Vinyl acetate	2.126359	9.566998	6.899167	4.121454E-02			30	
Vinyl bromide	0.8700704	10.61413	5.1625	7.298668E-02			30	
Vinyl chloride	1.015745	14.64785	4.472833	7.579094E-02			30	
p- & m-Xylenes	2.061228	1.531344	11.29317	1.959545E-02			30	
o-Xylene	2.18082	3.028245	11.52	2.611785E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	2.101092	1.999502	11.52	2.611785E-02			30	
TPH - Gasoline	3.784361	4.390169	10.42317	4.413093			30	
Total Petroleum Hydrocarbons	3.784361	4.390169	10.42317	4.413093			30	
4-Bromofluorobenzene (Surrogate)	0.9979685	3.633829	11.73933	1.540554E-02			30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2037849
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW17A-01	12/22/20 09:07	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 17:58	13.00	30.00	
SG-VW17A-01	12/22/20 09:07	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 13:28	13.00	30.00	
SG-VW17B-01	12/22/20 08:56	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 18:34	13.00	30.00	
SG-VW17B-01	12/22/20 08:56	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 13:58	13.00	30.00	
SG-VW17B-02	12/22/20 08:56	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 19:10	13.00	30.00	
SG-VW17B-02	12/22/20 08:56	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 14:27	13.00	30.00	
SG-VW18A-01	12/22/20 10:09	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 19:46	13.00	30.00	
SG-VW18B-01	12/22/20 09:58	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 20:22	13.00	30.00	
SG-VW18B-01	12/22/20 09:58	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 15:26	13.00	30.00	
SG-VW52A-01	12/22/20 11:13	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 20:58	13.00	30.00	
SG-VW52B-01	12/22/20 11:02	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 21:34	13.00	30.00	
SG-VW44A-01	12/22/20 12:08	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 22:10	13.00	30.00	
SG-VW44A-01	12/22/20 12:08	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 16:53	13.00	30.00	
SG-VW44B-01	12/22/20 11:57	12/28/20 10:50	01/04/21 08:32	13.00	30.00	01/04/21 22:46	13.00	30.00	
SG-VW43A-01	12/22/20 13:08	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 12:42	14.00	30.00	
SG-VW43B-01	12/22/20 12:56	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 13:17	14.00	30.00	
SG-VW21A-01	12/22/20 14:17	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 13:53	14.00	30.00	
SG-VW21A-01	12/22/20 14:17	12/28/20 10:50	01/04/21 08:31	14.00	30.00	01/05/21 00:14	14.00	30.00	
SG-VW21A-02	12/22/20 14:17	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 14:29	14.00	30.00	

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SG-VW21A-02	12/22/20 14:17	12/28/20 10:50	01/04/21 08:31	14.00	30.00	01/05/21 00:44	14.00	30.00	
SG-VW21B-01	12/22/20 14:06	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 15:05	14.00	30.00	
SG-VW21B-01	12/22/20 14:06	12/28/20 10:50	01/04/21 08:31	14.00	30.00	01/05/21 01:14	14.00	30.00	
SG-VW22A-01	12/22/20 15:25	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 15:35	14.00	30.00	
SG-VW22A-01	12/22/20 15:25	12/28/20 10:50	01/04/21 08:31	14.00	30.00	01/05/21 01:43	14.00	30.00	
SG-VW22B-01	12/22/20 15:15	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/05/21 16:10	14.00	30.00	
SG-VW22B-01	12/22/20 15:15	12/28/20 10:50	01/04/21 08:31	14.00	30.00	01/05/21 02:13	14.00	30.00	
SG-VW45A-01	12/23/20 08:54	12/28/20 10:50	01/05/21 08:31	13.00	30.00	01/05/21 16:46	13.00	30.00	
SG-VW45A-01	12/23/20 08:54	12/28/20 10:50	01/04/21 08:31	13.00	30.00	01/05/21 02:43	13.00	30.00	
SG-VW45B-01	12/23/20 08:43	12/28/20 10:50	01/05/21 08:31	13.00	30.00	01/05/21 17:22	13.00	30.00	
SG-VW46A-01	12/23/20 09:59	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/06/21 04:02	14.00	30.00	
SG-VW46B-01	12/23/20 09:47	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/06/21 04:38	14.00	30.00	
SG-VW47A-01	12/23/20 10:49	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/06/21 05:14	14.00	30.00	
SG-VW47B-01	12/23/20 10:38	12/28/20 10:50	01/05/21 08:31	14.00	30.00	01/06/21 05:50	14.00	30.00	
SG-VW48A-01	12/23/20 12:07	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 01:04	15.00	30.00	
SG-VW48B-01	12/23/20 11:56	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 01:40	15.00	30.00	
SG-VW49A-01	12/23/20 12:59	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 02:17	15.00	30.00	
SG-VW49B-01	12/23/20 12:49	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 02:52	15.00	30.00	
SG-VW50A-01	12/23/20 13:55	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 03:29	15.00	30.00	
SG-VW50A-01	12/23/20 13:55	12/28/20 10:50	01/06/21 08:49	14.00	30.00	01/06/21 20:32	14.00	30.00	
SG-VW50A-02	12/23/20 13:55	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 04:04	15.00	30.00	
SG-VW50A-02	12/23/20 13:55	12/28/20 10:50	01/06/21 08:49	14.00	30.00	01/06/21 21:01	14.00	30.00	
SG-VW50B-01	12/23/20 13:43	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 04:41	15.00	30.00	
SG-VW50B-01	12/23/20 13:43	12/28/20 10:50	01/06/21 08:49	14.00	30.00	01/06/21 21:30	14.00	30.00	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SG-VW51A-01	12/23/20 15:07	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 05:17	15.00	30.00	
SG-VW51A-01	12/23/20 15:07	12/28/20 10:50	01/06/21 08:49	14.00	30.00	01/06/21 21:59	14.00	30.00	
SG-VW51B-01	12/23/20 14:55	12/28/20 10:50	01/06/21 08:49	15.00	30.00	01/07/21 05:54	15.00	30.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:30:11PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2100036

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2100036
COC Number:
Cooler 2 was received at 25 °C
Cooler 3 was received at 25 °C
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The internal standard on the sample was not within the control limits.

Lab Number	Method	Analyte
2100148-CAL7	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CAL8	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CAL9	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CALA	EPA-TO-15	Chlorobenzene-d5 (IS)
2100148-CALB	EPA-TO-15	Chlorobenzene-d5 (IS)

The Continuing Calibration Verification (CCV) recovery was not within established control limits.

Lab Number	Method	Analyte
2100368-CCV1	EPA-TO-15	t-Amyl Methyl ether
2100368-CCV1	EPA-TO-15	Ethyl t-butyl ether
2100446-CCV1	EPA-TO-15	Hexachlorobutadiene
2100448-CCV1	EPA-TO-15	Hexachlorobutadiene

LCS / LCSD

The LCS recoveries were within QC limits.

Discussion

Method TO-15 canister with sample ID 2100036-18 came into the lab at ambient pressure.

Lab Number	Receipt Pressure	Units
21-00036-01	13.2	PSIA
21-00036-02	13.1	PSIA
21-00036-03	12.5	PSIA
21-00036-04	12.7	PSIA
21-00036-05	13.1	PSIA
21-00036-06	12.6	PSIA
21-00036-07	12.5	PSIA
21-00036-08	12.9	PSIA
21-00036-09	12.6	PSIA
21-00036-10	12.9	PSIA
21-00036-11	12.2	PSIA
21-00036-12	12.5	PSIA
21-00036-13	12.8	PSIA
21-00036-14	13.0	PSIA
21-00036-15	12.8	PSIA
21-00036-16	12.7	PSIA
21-00036-17	13.2	PSIA
21-00036-18	14.3	PSIA
21-00036-19	12.8	PSIA
21-00036-20	12.6	PSIA
21-00036-21	13.1	PSIA
21-00036-22	13.2	PSIA
21-00036-23	12.8	PSIA
21-00036-24	12.1	PSIA

Chain of Custody and Cooler Receipt Form for 2100036 Page 1 of 5

CHAIN OF CUSTODY

AECOM 21-00036

Page 1 of 2

RUSH!

Lab: BC Laboratories

TAT: 6 Day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No.: 60632793.06

CHK BY | DISTRIBUTION
SUB OUT

Special instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send invoices to SMUD NO Divisions

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	USEPA Method TO-15	Analyses Requested	Sample Condition/Comments Intl vac	final vac	Can#	FR#	Preservative	Container Type
1	SG-VW23A-01	12/23/20	1557	AIR	1	x		-30	-5	2377	1335	N	1.4L Canister
2	SG-VW23B-01	12/23/20	1547	AIR	1	x		-30	-5	2402	1343	N	
3	SG-VW28A-01	12/24/20	0840	AIR	1	x		-26.5	-5	2665	1331	N	
4	SG-VW28B-01		0830	AIR	1	x		-26.5	-5	2087	1342	N	
5	SG-VW23A-01		0940	AIR	1	x		-30	-5	18524	1337	N	
6	SG-VW23B-01		0930	AIR	1	x		-30	-5	2923	1339	N	
7	SG-VW39A-01		1055	AIR	1	x		-30	-5	6394	1334	N	
8	SG-VW39B-01		1045	AIR	1	x		-28	-5	2644	1330	N	
9	SG-VW53A-01		1200	AIR	1	x		-30	-5	25817	1263	N	
10	SG-VW53A-02		1200	AIR	1	x		-30	-5	6936	1263	N	
11	SG-VW53B-01		1150	AIR	1	x		-30	-5	10396	1344	N	
12	SG-VW54A-01		1335	AIR	1	x		-26	-5	1935	1341	N	
13	SG-VW54B-01	✓	1325	AIR	1	x		-25	-5	1148	1338	N	

Collected by: Brian Weeks Date/Time 12/30/2020 1300
Relinquished by: [signature] Date/Time 12/30/2020 1535 Relinquished by: [signature] Date/Time 12/30/2020 635
Relinquished by: [signature] Date/Time 12/30/2020 1605 Relinquished by: [signature] Date/Time 12/30/2020 1730
Relinquished by: _____ Date/Time _____ Relinquished by: _____ Date/Time _____
Method of Shipment: _____ Sample Condition on Rcpt: _____

CHAIN OF CUSTODY

Page 2 of 2

RUSH!

AECOM 21-00036

Lab: BC Laboratories

TAT: 6 Day

Report results to:	Keegan George (Keegan.George@smud.org)
Name	Andy Shepard (andy.shepard@aecom.com)
Company	AECOM
Mailing Address	2020 L Street, Suite 400
City, State, Zip	Sacramento, CA 95811
Telephone No.	916.296.3943
Fax No.	916.414.5650

Project Information
Site Address: SMUD 59th Street SVM Sampling
AECOM No. 60632793.06

Special Instructions and/or specific regulatory requirements:

Full TO-15 analyte list including naphthalene.
CLP Report Requested
Send Invoices to SMUD No Dilutions

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cons.	Analyses Requested: USEPA Method TO-15	Sample Condition/Comments: intl vac	final vac	Can#	FR#	Preservative	Container Type
-14	SG-VW55A-01	12/29/20	1955	AIR	1	x	-29	-5	1935	1341	N	1.4L Canister
-15	SG-VW55B-01		1945	AIR	1	x	-29	-5	1148	1338	N	
-16	SG-VW33A-01		1600	AIR	1	x	-25	-5	2923	1333	N	
-17	SG-VW33B-01		1555	AIR	1	x	-30	-5	9481	1323	N	
-18	SG-VW19-01	12/30/20	0900	AIR	1	x	-30	-5	1134	1175	N	
-19	SG-VW15-01		1020	AIR	1	x	-30	-5	10257	1285	N	
-20	SG-VW57A-01		1140	AIR	1	x	-30	-5	9464	1228	N	
-21	SG-VW57B-01		1130	AIR	1	x	-30	-5	11024	1207	N	
-22	SG-VW57B-02		1130	AIR	1	x	-30	-5	10255	1207	N	
-23	SG-VW56A-01		1250	AIR	1	x	-30	-5	10326	1041	N	
-24	SG-VW56B-01		1240	AIR	1	x	-30	-5	5170	1092	N	
				AIR	1	x					N	
				AIR	1	x					N	

Collected by: Brian Weeks *Date/Time* 12/30/20 @ 1300

Relinquished by: [signature] Date/Time 12/30/2020 1535 *Relinquished by:* [signature] Date/Time 12/30/2020 1535

Relinquished by: [signature] Date/Time 12/30/2020 1615 *Relinquished by:* [signature] Date/Time 1-4-21 0930

Relinquished by: Date/Time *Relinquished by:* Date/Time

Method of Shipment: *Sample Condition on Rcpt:*

Chain of Custody and Cooler Receipt Form for 2100036 Page 3 of 5

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 3

Submission #: 21-00036

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) gls	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☐ No ☒

COC Received ☒ YES ☐ NO

Emissivity: — Container: Summa Thermometer ID: —

Temperature: (A) Room °C / (C) Temp °C

Date/Time ~~12/31~~ 1-4-21 ~~1000~~ 930

Analyst Init [illegible] TKD

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER 1.4L	A	A	A	A	A	A	A	A		

Comments: -20 sample "W57A-01" has no time on ~~canister label~~ canister label [illegible]

Sample Numbering Completed By: CAB Date/Time: 1/4/21 1110

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2100036 Page 4 of 5

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 3

Submission #: 21 - 00036

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☐ No ☒

COC Received ☒ YES ☐ NO

~~Emissivity:~~ Container: Summa Thermometer ID: Date/Time 1-4-21 930

Temperature: (A) room °C / (C) temp °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 9	10	11	12	13	14	15	16	17	18
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER 1.4L	AB CAB 1/4	~~A~~ A CAB 1/4	A	A	A	A	A	A	A	A

omments: ~~Two canisters are labeled "VW53A-01" & there is no "VW53A-02"~~ CAB 1/4

ample Numbering Completed By: CAB Date/Time: 1/4/21 1110

= Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2100036 Page 5 of 5

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 3

Submission #: 21-00036

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☐ None ☐ Box ☒	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS	Other ☐ (Specify)	W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☐ No ☒

COC Received ☒ YES ☐ NO

~~Emissivity:~~ Container: Summa Thermometer ID: Date/Time 1-4-21 930

Temperature: (A) room °C / (C) temp °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 19	20	21	22	23	24				
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER 1.4L	A	A	A	A	A	A				

Comments:

Sample Numbering Completed By: CAB Date/Time: 1/4/21 1115

A = Actual / C = Corrected

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2100036**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW27A-01	2100036-01
SG-VW27A-01	2100036-01RE1
SG-VW27B-01	2100036-02
SG-VW28A-01	2100036-03
SG-VW28A-01	2100036-03RE1
SG-VW28B-01	2100036-04
SG-VW23A-01	2100036-05
SG-VW23A-01	2100036-05RE1
SG-VW23B-01	2100036-06
SG-VW29A-01	2100036-07
SG-VW29A-01	2100036-07RE1
SG-VW29B-01	2100036-08
SG-VW29B-01	2100036-08RE1
SG-VW53A-01	2100036-09
SG-VW53A-02	2100036-10
SG-VW53B-01	2100036-11
SG-VW54A-01	2100036-12
SG-VW54A-01	2100036-12RE1
SG-VW54B-01	2100036-13
SG-VW55A-01	2100036-14
SG-VW55A-01	2100036-14RE1
SG-VW55B-01	2100036-15
SG-VW33A-01	2100036-16
SG-VW33B-01	2100036-17
SG-VW14-01	2100036-18
SG-VW14-01	2100036-18RE1
SG-VW15-01	2100036-19
SG-VW57A-01	2100036-20
SG-VW57B-01	2100036-21
SG-VW57B-01	2100036-21RE1
SG-VW57B-02	2100036-22
SG-VW57B-02	2100036-22RE1
SG-VW56A-01	2100036-23
SG-VW56A-01	2100036-23RE1

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SG-VW56B-01	2100036-24
SG-VW56B-01	2100036-24RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron Name: Sara Guron

Date: 01-20-2021 Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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Sacramento, CA 95811

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-01
File ID: 08JAN04.D
Sampled: 12/23/20 15:57
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 10:48
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	15.2	12	UD
67-64-1	Acetone	15.2	6.5	UD
107-13-1	Acrylonitrile	15.2	4.1	UD
107-05-1	Allyl chloride	15.2	4.3	UD
994-05-8	t-Amyl Methyl ether	15.2	4.7	UD
71-43-2	Benzene	15.2	39	D
100-44-7	Benzyl chloride	15.2	4.0	UD
75-27-4	Bromodichloromethane	15.2	6.8	UD
75-25-2	Bromoform	15.2	13	UD
74-83-9	Bromomethane	15.2	7.1	UD
106-99-0	1,3-Butadiene	15.2	3.3	UD
75-65-0	t-Butyl alcohol	15.2	11	UD
75-15-0	Carbon disulfide	15.2	28	JD
56-23-5	Carbon tetrachloride	15.2	6.8	UD
108-90-7	Chlorobenzene	15.2	6.1	UD
75-00-3	Chloroethane	15.2	8.1	UD
67-66-3	Chloroform	15.2	8.2	UD
74-87-3	Chloromethane	15.2	3.2	UD
110-82-7	Cyclohexane	15.2	5.8	UD
124-48-1	Dibromochloromethane	15.2	6.5	UD
96-12-8	1,2-Dibromo-3-chloropropane	15.2	26	UD
106-93-4	1,2-Dibromoethane	15.2	8.8	UD
74-95-3	Dibromomethane	15.2	8.7	UD
95-50-1	1,2-Dichlorobenzene	15.2	7.6	UD
541-73-1	1,3-Dichlorobenzene	15.2	4.7	UD
106-46-7	1,4-Dichlorobenzene	15.2	7.6	UD
75-71-8	Dichlorodifluoromethane	15.2	6.8	UD
75-34-3	1,1-Dichloroethane	15.2	3.5	UD
107-06-2	1,2-Dichloroethane	15.2	4.0	UD
75-35-4	1,1-Dichloroethene	15.2	4.7	UD
156-59-2	cis-1,2-Dichloroethene	15.2	4.9	UD
156-60-5	trans-1,2-Dichloroethene	15.2	4.1	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-01	File ID:	08JAN04.D
Sampled:	12/23/20 15:57	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 10:48
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	15.2	4.9	UD
10061-01-5	cis-1,3-Dichloropropene	15.2	4.6	UD
10061-02-6	trans-1,3-Dichloropropene	15.2	6.1	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	15.2	14	UD
75-37-6	1,1-Difluoroethane	15.2	30	UD
108-20-3	Diisopropyl ether	15.2	5.9	UD
123-91-1	1,4-Dioxane	15.2	5.0	UD
64-17-5	Ethanol	15.2	41	D
141-78-6	Ethyl acetate	15.2	5.0	UD
100-41-4	Ethylbenzene	15.2	19	JD
622-96-8	1-Ethyl-4-methylbenzene	15.2	4.6	UD
637-92-3	Ethyl t-butyl ether	15.2	5.0	UD
142-82-5	n-Heptane	15.2	29	JD
87-68-3	Hexachlorobutadiene	15.2	23	UD
67-72-1	Hexachloroethane	15.2	11	UD
110-54-3	Hexane	15.2	85	D
591-78-6	2-Hexanone	15.2	4.4	UD
540-84-1	Isooctane	15.2	17	JD
67-63-0	Isopropyl alcohol	15.2	4.9	UD
75-09-2	Methylene chloride	15.2	6.1	UD
78-93-3	Methyl ethyl ketone	15.2	24	JD
74-88-4	Methyl iodide	15.2	8.8	UD
108-10-1	Methyl isobutyl ketone	15.2	4.0	UD
1634-04-4	Methyl t-butyl ether	15.2	4.3	UD
91-20-3	Naphthalene	15.2	21	UD
115-07-1	Propylene	15.2	3.8	UD
100-42-5	Styrene	15.2	3.6	UD
630-20-6	1,1,1,2-Tetrachloroethane	15.2	9.3	UD
79-34-5	1,1,2,2-Tetrachloroethane	15.2	7.1	UD
127-18-4	Tetrachloroethene	15.2	7.6	UD
811-97-2	1,1,1,2-Tetrafluoroethane	15.2	10	UD
109-99-9	Tetrahydrofuran	15.2	4.1	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-01	File ID:	08JAN04.D
Sampled:	12/23/20 15:57	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 10:48
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	15.2	12	UD
71-55-6	1,1,1-Trichloroethane	15.2	5.9	UD
79-00-5	1,1,2-Trichloroethane	15.2	9.3	UD
79-01-6	Trichloroethene	15.2	8.2	UD
75-69-4	Trichlorofluoromethane	15.2	7.1	UD
96-18-4	1,2,3-Trichloropropane	15.2	7.3	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15.2	8.4	UD
95-63-6	1,2,4-Trimethylbenzene	15.2	20	JD
108-67-8	1,3,5-Trimethylbenzene	15.2	6.1	UD
108-05-4	Vinyl acetate	15.2	5.0	UD
593-60-2	Vinyl bromide	15.2	4.9	UD
75-01-4	Vinyl chloride	15.2	5.9	UD
179601-23-1	p- & m-Xylenes	15.2	64	JD
95-47-6	o-Xylene	15.2	21	JD
1330-20-7	Total Xylenes	15.2	85	JD
---	TPH - Gasoline	15.2	5400	D
---	Total Petroleum Hydrocarbons	15.2	5400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.3	103	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94977	7.502	96371	7.503	
Chlorobenzene-d5 (IS)	167987	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	276500	8.69	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-01RE1	File ID:	09JAN08.D
Sampled:	12/23/20 15:57	Prepared:	01/08/21 08:03	Analyzed:	01/09/21 19:06
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	152	2500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.0	110	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89719	7.498	96371	7.503	
Chlorobenzene-d5 (IS)	154139	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	268218	8.692	295787	8.697	

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-02
File ID: 08JAN13.D
Sampled: 12/23/20 15:47
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 15:24
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
67-64-1	Acetone	1.52	0.65	UD
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	7.6	D
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	9.5	D
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	2.3	JD
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	6.2	D
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	3.2	JD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	2.4	JD
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	4.4	JD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-02	File ID:	08JAN13.D
Sampled:	12/23/20 15:47	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 15:24
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.52	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	3.0	UD
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	1.8	JD
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	3.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.52	1.7	JD
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	5.2	D
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	20	D
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	3.8	JD
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
78-93-3	Methyl ethyl ketone	1.52	0.29	UD
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	0.40	UD
1634-04-4	Methyl t-butyl ether	1.52	0.43	UD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	110	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	0.41	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW27B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-02	File ID:	08JAN13.D
Sampled:	12/23/20 15:47	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 15:24
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.52	56	D
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.52	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	0.71	UD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	2.6	JD
108-67-8	1,3,5-Trimethylbenzene	1.52	0.61	UD
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	9.1	D
95-47-6	o-Xylene	1.52	3.3	JD
1330-20-7	Total Xylenes	1.52	12	JD
---	TPH - Gasoline	1.52	610	D
---	Total Petroleum Hydrocarbons	1.52	610	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.3	103	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94336	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	166153	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	277899	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-03
File ID: 08JAN06.D
Sampled: 12/29/20 08:40
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 11:47
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	15.4	13	UD
67-64-1	Acetone	15.4	6.6	UD
107-13-1	Acrylonitrile	15.4	4.2	UD
107-05-1	Allyl chloride	15.4	4.3	UD
994-05-8	t-Amyl Methyl ether	15.4	4.8	UD
71-43-2	Benzene	15.4	3.2	UD
100-44-7	Benzyl chloride	15.4	4.0	UD
75-27-4	Bromodichloromethane	15.4	6.9	UD
75-25-2	Bromoform	15.4	13	UD
74-83-9	Bromomethane	15.4	7.2	UD
106-99-0	1,3-Butadiene	15.4	3.4	UD
75-65-0	t-Butyl alcohol	15.4	11	UD
75-15-0	Carbon disulfide	15.4	26	JD
56-23-5	Carbon tetrachloride	15.4	6.9	UD
108-90-7	Chlorobenzene	15.4	6.2	UD
75-00-3	Chloroethane	15.4	8.2	UD
67-66-3	Chloroform	15.4	8.3	UD
74-87-3	Chloromethane	15.4	3.2	UD
110-82-7	Cyclohexane	15.4	5.9	UD
124-48-1	Dibromochloromethane	15.4	6.6	UD
96-12-8	1,2-Dibromo-3-chloropropane	15.4	26	UD
106-93-4	1,2-Dibromoethane	15.4	8.9	UD
74-95-3	Dibromomethane	15.4	8.8	UD
95-50-1	1,2-Dichlorobenzene	15.4	7.7	UD
541-73-1	1,3-Dichlorobenzene	15.4	4.8	UD
106-46-7	1,4-Dichlorobenzene	15.4	7.7	UD
75-71-8	Dichlorodifluoromethane	15.4	6.9	UD
75-34-3	1,1-Dichloroethane	15.4	3.5	UD
107-06-2	1,2-Dichloroethane	15.4	4.0	UD
75-35-4	1,1-Dichloroethene	15.4	4.8	UD
156-59-2	cis-1,2-Dichloroethene	15.4	4.9	UD
156-60-5	trans-1,2-Dichloroethene	15.4	4.2	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-03	File ID:	08JAN06.D
Sampled:	12/29/20 08:40	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 11:47
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	15.4	4.9	UD
10061-01-5	cis-1,3-Dichloropropene	15.4	4.6	UD
10061-02-6	trans-1,3-Dichloropropene	15.4	6.2	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	15.4	14	UD
75-37-6	1,1-Difluoroethane	15.4	31	UD
108-20-3	Diisopropyl ether	15.4	6.0	UD
123-91-1	1,4-Dioxane	15.4	5.1	UD
64-17-5	Ethanol	15.4	6.5	UD
141-78-6	Ethyl acetate	15.4	5.1	UD
100-41-4	Ethylbenzene	15.4	17	JD
622-96-8	1-Ethyl-4-methylbenzene	15.4	4.6	UD
637-92-3	Ethyl t-butyl ether	15.4	5.1	UD
142-82-5	n-Heptane	15.4	5.2	UD
87-68-3	Hexachlorobutadiene	15.4	23	UD
67-72-1	Hexachloroethane	15.4	11	UD
110-54-3	Hexane	15.4	3.1	UD
591-78-6	2-Hexanone	15.4	4.5	UD
540-84-1	Isooctane	15.4	5.4	UD
67-63-0	Isopropyl alcohol	15.4	4.9	UD
75-09-2	Methylene chloride	15.4	6.2	UD
78-93-3	Methyl ethyl ketone	15.4	2.9	UD
74-88-4	Methyl iodide	15.4	8.9	UD
108-10-1	Methyl isobutyl ketone	15.4	4.0	UD
1634-04-4	Methyl t-butyl ether	15.4	4.3	UD
91-20-3	Naphthalene	15.4	22	UD
115-07-1	Propylene	15.4	8.5	JD
100-42-5	Styrene	15.4	3.7	UD
630-20-6	1,1,1,2-Tetrachloroethane	15.4	9.4	UD
79-34-5	1,1,2,2-Tetrachloroethane	15.4	7.2	UD
127-18-4	Tetrachloroethene	15.4	89	D
811-97-2	1,1,1,2-Tetrafluoroethane	15.4	10	UD
109-99-9	Tetrahydrofuran	15.4	4.2	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-03	File ID:	08JAN06.D
Sampled:	12/29/20 08:40	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 11:47
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	15.4	13	UD
71-55-6	1,1,1-Trichloroethane	15.4	6.0	UD
79-00-5	1,1,2-Trichloroethane	15.4	9.4	UD
79-01-6	Trichloroethene	15.4	8.3	UD
75-69-4	Trichlorofluoromethane	15.4	7.2	UD
96-18-4	1,2,3-Trichloropropane	15.4	7.4	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15.4	8.5	UD
95-63-6	1,2,4-Trimethylbenzene	15.4	16	JD
108-67-8	1,3,5-Trimethylbenzene	15.4	6.2	UD
108-05-4	Vinyl acetate	15.4	5.1	UD
593-60-2	Vinyl bromide	15.4	4.9	UD
75-01-4	Vinyl chloride	15.4	6.0	UD
179601-23-1	p- & m-Xylenes	15.4	56	JD
95-47-6	o-Xylene	15.4	18	JD
1330-20-7	Total Xylenes	15.4	74	JD
---	TPH - Gasoline	15.4	6900	D
---	Total Petroleum Hydrocarbons	15.4	6900	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.4	104	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	93870	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	166357	11.019	169282	11.019	
1,4-Difluorobenzene (IS)	268450	8.696	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-03RE1	File ID:	09JAN09.D
Sampled:	12/29/20 08:40	Prepared:	01/08/21 08:03	Analyzed:	01/09/21 19:42
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	154	3500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.6	116	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	96628	7.498	96371	7.503	
Chlorobenzene-d5 (IS)	169237	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	294712	8.691	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-04
File ID: 08JAN14.D
Sampled: 12/29/20 08:30
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 16:00
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	27	D
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	0.33	UD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	1.1	UD
75-15-0	Carbon disulfide	1.59	1.1	JD
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	12	D
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	4.4	JD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-04
File ID: 08JAN14.D
Sampled: 12/29/20 08:30
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 16:00
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	100	D
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	1.4	JD
622-96-8	1-Ethyl-4-methylbenzene	1.59	0.48	UD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	42	D
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	69	D
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	4.8	JD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	4.4	JD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	180	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	4.7	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW28B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-04	File ID:	08JAN14.D
Sampled:	12/29/20 08:30	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 16:00
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	8.5	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	11	D
75-69-4	Trichlorofluoromethane	1.59	0.75	UD
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	1.8	JD
108-67-8	1,3,5-Trimethylbenzene	1.59	0.64	UD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	3.7	JD
95-47-6	o-Xylene	1.59	0.48	UD
1330-20-7	Total Xylenes	1.59	3.7	JD
---	TPH - Gasoline	1.59	870	D
---	Total Petroleum Hydrocarbons	1.59	870	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.0	110	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	104973	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	183652	11.016	169282	11.019	
1,4-Difluorobenzene (IS)	322017	8.693	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-05RE1	File ID:	08JAN08.D
Sampled:	12/29/20 09:40	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 12:49
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.3	100	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.0	100	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	93711	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	156516	11.019	169282	11.019	
1,4-Difluorobenzene (IS)	265843	8.696	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-05
File ID: 08JAN15.D
Sampled: 12/29/20 09:40
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 16:36
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	18	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	10	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	34	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	3.2	JD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	3.6	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-05
File ID: 08JAN15.D
Sampled: 12/29/20 09:40
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 16:36
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	2.6	JD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	15	D
622-96-8	1-Ethyl-4-methylbenzene	1.53	9.4	D
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	2.1	JD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	3.0	JD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	6.2	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	1.6	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	4.3	JD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	54	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	2.7	JD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-05	File ID:	08JAN15.D
Sampled:	12/29/20 09:40	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 16:36
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	6.8	JD
75-69-4	Trichlorofluoromethane	1.53	0.72	UD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	12	D
108-67-8	1,3,5-Trimethylbenzene	1.53	4.4	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	50	D
95-47-6	o-Xylene	1.53	16	D
1330-20-7	Total Xylenes	1.53	66	D
---	TPH - Gasoline	1.53	1400	D
---	Total Petroleum Hydrocarbons	1.53	1400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100600	7.498	96371	7.503	
Chlorobenzene-d5 (IS)	185886	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	304051	8.691	295787	8.697	

* Values outside of QC limits

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-06
File ID: 08JAN16.D
Sampled: 12/29/20 09:30
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 17:12
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	10	D
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	0.33	UD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	1.1	UD
75-15-0	Carbon disulfide	1.59	0.30	UD
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	2.9	JD
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	6.0	JD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-06
File ID: 08JAN16.D
Sampled: 12/29/20 09:30
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 17:12
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	51	D
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.59	0.48	UD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	0.51	UD
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	0.30	UD
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	0.41	UD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	2.2	UD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	210	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	0.43	UD

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW23B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-06	File ID:	08JAN16.D
Sampled:	12/29/20 09:30	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 17:12
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	3.2	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	2.2	JD
96-18-4	1,2,3-Trichloropropane	1.59	3.0	JD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	0.64	UD
108-67-8	1,3,5-Trimethylbenzene	1.59	0.64	UD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	1.5	JD
95-47-6	o-Xylene	1.59	0.48	UD
1330-20-7	Total Xylenes	1.59	1.5	JD
---	TPH - Gasoline	1.59	300	JD
---	Total Petroleum Hydrocarbons	1.59	300	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.3	103	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	104470	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	175321	11.012	169282	11.019	
1,4-Difluorobenzene (IS)	314260	8.689	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-07RE1	File ID:	08JAN10.D
Sampled:	12/29/20 10:55	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 13:48
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	16.1	120	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.0	100	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90348	7.5	96371	7.503	
Chlorobenzene-d5 (IS)	149772	11.016	169282	11.019	
1,4-Difluorobenzene (IS)	258605	8.693	295787	8.697	

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-07
File ID: 08JAN17.D
Sampled: 12/29/20 10:55
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 17:47
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.61	1.3	UD
67-64-1	Acetone	1.61	5.5	JD
107-13-1	Acrylonitrile	1.61	0.43	UD
107-05-1	Allyl chloride	1.61	0.45	UD
994-05-8	t-Amyl Methyl ether	1.61	0.50	UD
71-43-2	Benzene	1.61	9.4	D
100-44-7	Benzyl chloride	1.61	0.42	UD
75-27-4	Bromodichloromethane	1.61	0.72	UD
75-25-2	Bromoform	1.61	1.4	UD
74-83-9	Bromomethane	1.61	0.76	UD
106-99-0	1,3-Butadiene	1.61	0.35	UD
75-65-0	t-Butyl alcohol	1.61	1.1	UD
75-15-0	Carbon disulfide	1.61	37	D
56-23-5	Carbon tetrachloride	1.61	0.72	UD
108-90-7	Chlorobenzene	1.61	0.64	UD
75-00-3	Chloroethane	1.61	0.85	UD
67-66-3	Chloroform	1.61	4.1	JD
74-87-3	Chloromethane	1.61	0.34	UD
110-82-7	Cyclohexane	1.61	0.61	UD
124-48-1	Dibromochloromethane	1.61	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.61	2.7	UD
106-93-4	1,2-Dibromoethane	1.61	0.93	UD
74-95-3	Dibromomethane	1.61	0.92	UD
95-50-1	1,2-Dichlorobenzene	1.61	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.61	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.61	0.80	UD
75-71-8	Dichlorodifluoromethane	1.61	4.0	JD
75-34-3	1,1-Dichloroethane	1.61	0.37	UD
107-06-2	1,2-Dichloroethane	1.61	0.42	UD
75-35-4	1,1-Dichloroethene	1.61	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.61	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.61	0.43	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-07	File ID:	08JAN17.D
Sampled:	12/29/20 10:55	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 17:47
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.61	0.52	UD
10061-01-5	cis-1,3-Dichloropropene	1.61	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.61	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.61	1.5	UD
75-37-6	1,1-Difluoroethane	1.61	3.2	UD
108-20-3	Diisopropyl ether	1.61	0.63	UD
123-91-1	1,4-Dioxane	1.61	0.53	UD
64-17-5	Ethanol	1.61	0.68	UD
141-78-6	Ethyl acetate	1.61	0.53	UD
100-41-4	Ethylbenzene	1.61	22	D
622-96-8	1-Ethyl-4-methylbenzene	1.61	15	D
637-92-3	Ethyl t-butyl ether	1.61	0.53	UD
142-82-5	n-Heptane	1.61	0.55	UD
87-68-3	Hexachlorobutadiene	1.61	2.4	UD
67-72-1	Hexachloroethane	1.61	1.2	UD
110-54-3	Hexane	1.61	0.32	UD
591-78-6	2-Hexanone	1.61	0.47	UD
540-84-1	Isooctane	1.61	0.56	UD
67-63-0	Isopropyl alcohol	1.61	0.52	UD
75-09-2	Methylene chloride	1.61	0.64	UD
78-93-3	Methyl ethyl ketone	1.61	2.5	JD
74-88-4	Methyl iodide	1.61	0.93	UD
108-10-1	Methyl isobutyl ketone	1.61	0.42	UD
1634-04-4	Methyl t-butyl ether	1.61	0.45	UD
91-20-3	Naphthalene	1.61	2.3	UD
115-07-1	Propylene	1.61	0.40	UD
100-42-5	Styrene	1.61	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.61	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.61	0.76	UD
127-18-4	Tetrachloroethene	1.61	56	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.61	1.1	UD
109-99-9	Tetrahydrofuran	1.61	3.0	JD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-07	File ID:	08JAN17.D
Sampled:	12/29/20 10:55	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 17:47
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.61	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.61	0.63	UD
79-00-5	1,1,2-Trichloroethane	1.61	0.98	UD
79-01-6	Trichloroethene	1.61	0.87	UD
75-69-4	Trichlorofluoromethane	1.61	0.76	UD
96-18-4	1,2,3-Trichloropropane	1.61	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.61	0.89	UD
95-63-6	1,2,4-Trimethylbenzene	1.61	18	D
108-67-8	1,3,5-Trimethylbenzene	1.61	7.0	JD
108-05-4	Vinyl acetate	1.61	0.53	UD
593-60-2	Vinyl bromide	1.61	0.52	UD
75-01-4	Vinyl chloride	1.61	0.63	UD
179601-23-1	p- & m-Xylenes	1.61	75	D
95-47-6	o-Xylene	1.61	23	D
1330-20-7	Total Xylenes	1.61	98	D
---	TPH - Gasoline	1.61	1600	D
---	Total Petroleum Hydrocarbons	1.61	1600	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.0	110	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98941	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	177615	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	303473	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29B-01

Laboratory:	BC Laboratories		SDG:	2100036	
Client:	AECOM - Sacramento $AECS		Project:	SMUD 59th St. SVM Air Sampling-CLP III	
Matrix:	Air	Laboratory ID:	2100036-08RE1	File ID:	08JAN11.D
Sampled:	12/29/20 10:45	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 14:18
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
127-18-4	Tetrachloroethene	15.5	380	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.65	96.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	90437	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	146835	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	259870	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-08
File ID: 08JAN18.D
Sampled: 12/29/20 10:45
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 18:23
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	4.1	JD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	0.29	UD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	13	D
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	16	D
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-08
File ID: 08JAN18.D
Sampled: 12/29/20 10:45
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 18:23
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	0.65	UD
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.55	0.46	UD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	0.29	UD
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD
108-88-3	Toluene	1.55	4.8	D

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW29B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-08	File ID:	08JAN18.D
Sampled:	12/29/20 10:45	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 18:23
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	2.6	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	0.62	UD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	1.9	JD
95-47-6	o-Xylene	1.55	0.46	UD
1330-20-7	Total Xylenes	1.55	1.9	JD
---	TPH - Gasoline	1.55	710	D
---	Total Petroleum Hydrocarbons	1.55	710	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.1	101	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	101994	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	174000	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	312742	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-09
File ID: 08JAN19.D
Sampled: 12/29/20 12:00
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 18:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	13	D
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	0.34	UD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	0.72	UD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.1	UD
75-15-0	Carbon disulfide	1.6	11	D
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
67-66-3	Chloroform	1.6	0.86	UD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	26	D
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-09
File ID: 08JAN19.D
Sampled: 12/29/20 12:00
Prepared: 01/08/21 08:03
Analyzed: 01/08/21 18:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096783
Sequence: 2100368
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.6	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	6.1	D
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	4.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.6	4.9	JD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	0.51	UD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	6.8	D
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	42	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	1.8	JD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-09	File ID:	08JAN19.D
Sampled:	12/29/20 12:00	Prepared:	01/08/21 08:03	Analyzed:	01/08/21 18:58
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096783	Sequence:	2100368	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.6	13	D
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	0.86	UD
75-69-4	Trichlorofluoromethane	1.6	0.75	UD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	7.4	JD
108-67-8	1,3,5-Trimethylbenzene	1.6	2.3	JD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	15	D
95-47-6	o-Xylene	1.6	5.6	JD
1330-20-7	Total Xylenes	1.6	21	D
---	TPH - Gasoline	1.6	330	D
---	Total Petroleum Hydrocarbons	1.6	330	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98792	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	171431	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	302770	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-02

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-10
File ID: 09JAN10.D
Sampled: 12/29/20 12:00
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 20:17
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	34	D
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	1.7	JD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	12	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	28	D
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-02

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-10	File ID:	09JAN10.D
Sampled:	12/29/20 12:00	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 20:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	49	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	7.3	JD
622-96-8	1-Ethyl-4-methylbenzene	1.55	6.2	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	10	D
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	26	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	2.1	JD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	4.9	JD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	45	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	4.9	D

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53A-02

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-10	File ID:	09JAN10.D
Sampled:	12/29/20 12:00	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 20:17
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.55	22	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	1.9	JD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	9.1	D
108-67-8	1,3,5-Trimethylbenzene	1.55	2.8	JD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	22	D
95-47-6	o-Xylene	1.55	7.7	JD
1330-20-7	Total Xylenes	1.55	29	D
---	TPH - Gasoline	1.55	490	D
---	Total Petroleum Hydrocarbons	1.55	490	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.5	115	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97564	7.507	96371	7.503	
Chlorobenzene-d5 (IS)	170712	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	296042	8.695	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-11
File ID: 09JAN11.D
Sampled: 12/29/20 11:50
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 20:53
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.63	1.3	UD
67-64-1	Acetone	1.63	3.5	JD
107-13-1	Acrylonitrile	1.63	0.44	UD
107-05-1	Allyl chloride	1.63	0.46	UD
994-05-8	t-Amyl Methyl ether	1.63	0.51	UD
71-43-2	Benzene	1.63	0.34	UD
100-44-7	Benzyl chloride	1.63	0.42	UD
75-27-4	Bromodichloromethane	1.63	0.73	UD
75-25-2	Bromoform	1.63	1.4	UD
74-83-9	Bromomethane	1.63	0.77	UD
106-99-0	1,3-Butadiene	1.63	0.36	UD
75-65-0	t-Butyl alcohol	1.63	1.1	UD
75-15-0	Carbon disulfide	1.63	3.2	JD
56-23-5	Carbon tetrachloride	1.63	0.73	UD
108-90-7	Chlorobenzene	1.63	0.65	UD
75-00-3	Chloroethane	1.63	0.86	UD
67-66-3	Chloroform	1.63	2.8	JD
74-87-3	Chloromethane	1.63	0.34	UD
110-82-7	Cyclohexane	1.63	0.62	UD
124-48-1	Dibromochloromethane	1.63	0.70	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.63	2.8	UD
106-93-4	1,2-Dibromoethane	1.63	0.95	UD
74-95-3	Dibromomethane	1.63	0.93	UD
95-50-1	1,2-Dichlorobenzene	1.63	0.82	UD
541-73-1	1,3-Dichlorobenzene	1.63	0.51	UD
106-46-7	1,4-Dichlorobenzene	1.63	0.82	UD
75-71-8	Dichlorodifluoromethane	1.63	27	D
75-34-3	1,1-Dichloroethane	1.63	0.37	UD
107-06-2	1,2-Dichloroethane	1.63	0.42	UD
75-35-4	1,1-Dichloroethene	1.63	0.51	UD
156-59-2	cis-1,2-Dichloroethene	1.63	0.52	UD
156-60-5	trans-1,2-Dichloroethene	1.63	0.44	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-11	File ID:	09JAN11.D
Sampled:	12/29/20 11:50	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 20:53
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.63	0.52	UD
10061-01-5	cis-1,3-Dichloropropene	1.63	0.49	UD
10061-02-6	trans-1,3-Dichloropropene	1.63	0.65	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.63	1.5	UD
75-37-6	1,1-Difluoroethane	1.63	3.3	UD
108-20-3	Diisopropyl ether	1.63	0.64	UD
123-91-1	1,4-Dioxane	1.63	0.54	UD
64-17-5	Ethanol	1.63	0.68	UD
141-78-6	Ethyl acetate	1.63	0.54	UD
100-41-4	Ethylbenzene	1.63	0.52	UD
622-96-8	1-Ethyl-4-methylbenzene	1.63	0.49	UD
637-92-3	Ethyl t-butyl ether	1.63	0.54	UD
142-82-5	n-Heptane	1.63	0.55	UD
87-68-3	Hexachlorobutadiene	1.63	2.4	UD
67-72-1	Hexachloroethane	1.63	1.2	UD
110-54-3	Hexane	1.63	0.33	UD
591-78-6	2-Hexanone	1.63	0.47	UD
540-84-1	Isooctane	1.63	0.57	UD
67-63-0	Isopropyl alcohol	1.63	0.52	UD
75-09-2	Methylene chloride	1.63	0.65	UD
78-93-3	Methyl ethyl ketone	1.63	0.31	UD
74-88-4	Methyl iodide	1.63	0.95	UD
108-10-1	Methyl isobutyl ketone	1.63	0.42	UD
1634-04-4	Methyl t-butyl ether	1.63	0.46	UD
91-20-3	Naphthalene	1.63	2.3	UD
115-07-1	Propylene	1.63	0.41	UD
100-42-5	Styrene	1.63	0.39	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.63	0.99	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.63	0.77	UD
127-18-4	Tetrachloroethene	1.63	69	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.63	1.1	UD
109-99-9	Tetrahydrofuran	1.63	0.44	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW53B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-11	File ID:	09JAN11.D
Sampled:	12/29/20 11:50	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 20:53
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.63	0.44	UD
120-82-1	1,2,4-Trichlorobenzene	1.63	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.63	0.64	UD
79-00-5	1,1,2-Trichloroethane	1.63	0.99	UD
79-01-6	Trichloroethene	1.63	0.88	UD
75-69-4	Trichlorofluoromethane	1.63	2.0	JD
96-18-4	1,2,3-Trichloropropane	1.63	0.78	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.63	0.90	UD
95-63-6	1,2,4-Trimethylbenzene	1.63	0.65	UD
108-67-8	1,3,5-Trimethylbenzene	1.63	0.65	UD
108-05-4	Vinyl acetate	1.63	0.54	UD
593-60-2	Vinyl bromide	1.63	0.52	UD
75-01-4	Vinyl chloride	1.63	0.64	UD
179601-23-1	p- & m-Xylenes	1.63	0.99	UD
95-47-6	o-Xylene	1.63	0.49	UD
1330-20-7	Total Xylenes	1.63	1.5	UD
---	TPH - Gasoline	1.63	140	JD
---	Total Petroleum Hydrocarbons	1.63	140	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	94195	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	156546	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	284072	8.694	295787	8.697	

* Values outside of QC limits

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-12
File ID: 09JAN12.D
Sampled: 12/29/20 13:35
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 21:28
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	15	D
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	37	D
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	0.72	UD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.1	UD
75-15-0	Carbon disulfide	1.6	72	D
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
67-66-3	Chloroform	1.6	6.7	JD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	5.8	D
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	43	D
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	1.3	JD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-12	File ID:	09JAN12.D
Sampled:	12/29/20 13:35	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 21:28
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.6	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	0.67	UD
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	38	D
622-96-8	1-Ethyl-4-methylbenzene	1.6	32	D
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	9.2	D
67-63-0	Isopropyl alcohol	1.6	0.51	UD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	13	D
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	2.5	JD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	29	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	5.0	D
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-12
File ID: 09JAN12.D
Sampled: 12/29/20 13:35
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 21:28
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	0.86	UD
75-69-4	Trichlorofluoromethane	1.6	2.5	JD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	41	D
108-67-8	1,3,5-Trimethylbenzene	1.6	14	D
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	150	D
95-47-6	o-Xylene	1.6	42	D
1330-20-7	Total Xylenes	1.6	190	D
---	TPH - Gasoline	1.6	3000	D
---	Total Petroleum Hydrocarbons	1.6	3000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.8	108	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95837	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	179649	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	299792	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-12RE1	File ID:	09JAN16.D
Sampled:	12/29/20 13:35	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 23:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
				Instrument:	MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
115-07-1	Propylene	16	100	D
108-88-3	Toluene	16	280	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	91686	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	157842	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	265740	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-13
File ID: 09JAN13.D
Sampled: 12/29/20 13:25
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 22:03
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.57	1.3	UD
67-64-1	Acetone	1.57	3.6	JD
107-13-1	Acrylonitrile	1.57	0.42	UD
107-05-1	Allyl chloride	1.57	0.44	UD
994-05-8	t-Amyl Methyl ether	1.57	0.49	UD
71-43-2	Benzene	1.57	0.33	UD
100-44-7	Benzyl chloride	1.57	0.41	UD
75-27-4	Bromodichloromethane	1.57	0.71	UD
75-25-2	Bromoform	1.57	1.4	UD
74-83-9	Bromomethane	1.57	0.74	UD
106-99-0	1,3-Butadiene	1.57	0.35	UD
75-65-0	t-Butyl alcohol	1.57	1.1	UD
75-15-0	Carbon disulfide	1.57	1.2	JD
56-23-5	Carbon tetrachloride	1.57	0.71	UD
108-90-7	Chlorobenzene	1.57	0.63	UD
75-00-3	Chloroethane	1.57	0.83	UD
67-66-3	Chloroform	1.57	3.8	JD
74-87-3	Chloromethane	1.57	0.33	UD
110-82-7	Cyclohexane	1.57	0.60	UD
124-48-1	Dibromochloromethane	1.57	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.57	2.7	UD
106-93-4	1,2-Dibromoethane	1.57	0.91	UD
74-95-3	Dibromomethane	1.57	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.57	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.57	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.57	0.78	UD
75-71-8	Dichlorodifluoromethane	1.57	41	D
75-34-3	1,1-Dichloroethane	1.57	0.36	UD
107-06-2	1,2-Dichloroethane	1.57	0.41	UD
75-35-4	1,1-Dichloroethene	1.57	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.57	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.57	0.42	UD

AECOM - Sacramento
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-13
File ID: 09JAN13.D
Sampled: 12/29/20 13:25
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 22:03
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.57	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.57	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.57	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.57	1.4	UD
75-37-6	1,1-Difluoroethane	1.57	3.1	UD
108-20-3	Diisopropyl ether	1.57	0.61	UD
123-91-1	1,4-Dioxane	1.57	0.52	UD
64-17-5	Ethanol	1.57	0.66	UD
141-78-6	Ethyl acetate	1.57	0.52	UD
100-41-4	Ethylbenzene	1.57	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.57	0.47	UD
637-92-3	Ethyl t-butyl ether	1.57	0.52	UD
142-82-5	n-Heptane	1.57	0.53	UD
87-68-3	Hexachlorobutadiene	1.57	2.4	UD
67-72-1	Hexachloroethane	1.57	1.1	UD
110-54-3	Hexane	1.57	0.31	UD
591-78-6	2-Hexanone	1.57	0.46	UD
540-84-1	Isooctane	1.57	0.55	UD
67-63-0	Isopropyl alcohol	1.57	0.50	UD
75-09-2	Methylene chloride	1.57	0.63	UD
78-93-3	Methyl ethyl ketone	1.57	0.30	UD
74-88-4	Methyl iodide	1.57	0.91	UD
108-10-1	Methyl isobutyl ketone	1.57	0.41	UD
1634-04-4	Methyl t-butyl ether	1.57	0.44	UD
91-20-3	Naphthalene	1.57	2.2	UD
115-07-1	Propylene	1.57	0.39	UD
100-42-5	Styrene	1.57	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.57	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.57	0.74	UD
127-18-4	Tetrachloroethene	1.57	53	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.57	1.1	UD
109-99-9	Tetrahydrofuran	1.57	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW54B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-13	File ID:	09JAN13.D
Sampled:	12/29/20 13:25	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 22:03
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.57	0.42	UD
120-82-1	1,2,4-Trichlorobenzene	1.57	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.57	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.57	0.96	UD
79-01-6	Trichloroethene	1.57	0.85	UD
75-69-4	Trichlorofluoromethane	1.57	2.4	JD
96-18-4	1,2,3-Trichloropropane	1.57	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.57	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.57	0.63	UD
108-67-8	1,3,5-Trimethylbenzene	1.57	0.63	UD
108-05-4	Vinyl acetate	1.57	0.52	UD
593-60-2	Vinyl bromide	1.57	0.50	UD
75-01-4	Vinyl chloride	1.57	0.61	UD
179601-23-1	p- & m-Xylenes	1.57	0.96	UD
95-47-6	o-Xylene	1.57	0.47	UD
1330-20-7	Total Xylenes	1.57	1.4	UD
---	TPH - Gasoline	1.57	94	JD
---	Total Petroleum Hydrocarbons	1.57	94	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.0	100	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97383	7.509	96371	7.503	
Chlorobenzene-d5 (IS)	166562	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	303783	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-14	File ID:	09JAN14.D
Sampled:	12/29/20 14:55	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 22:39
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	5.2	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	0.69	UD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	7.4	D
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	0.83	UD
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	0.76	UD
75-71-8	Dichlorodifluoromethane	1.53	2.8	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD
78-87-5	1,2-Dichloropropane	1.53	0.49	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-14
File ID: 09JAN14.D
Sampled: 12/29/20 14:55
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 22:39
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
64-17-5	Ethanol	1.53	2.1	JD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	6.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.53	6.1	JD
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	0.52	UD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	0.49	UD
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	100	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	4.7	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	2.1	UD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	0.76	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	7.8	D
108-88-3	Toluene	1.53	46	D

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-14	File ID:	09JAN14.D
Sampled:	12/29/20 14:55	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 22:39
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	0.83	UD
75-69-4	Trichlorofluoromethane	1.53	0.72	UD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	9.3	D
108-67-8	1,3,5-Trimethylbenzene	1.53	2.8	JD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	26	D
95-47-6	o-Xylene	1.53	8.6	D
1330-20-7	Total Xylenes	1.53	34	D
---	TPH - Gasoline	1.53	610	D
---	Total Petroleum Hydrocarbons	1.53	610	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.7	107	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	96425	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	166432	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	294180	8.697	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-14RE1	File ID:	09JAN17.D
Sampled:	12/29/20 14:55	Prepared:	01/09/21 12:01	Analyzed:	01/10/21 15:19
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-64-1	Acetone	15.3	180	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.7	107	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	88792	7.494	96371	7.503	
Chlorobenzene-d5 (IS)	147935	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	260116	8.687	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-15
File ID: 09JAN15.D
Sampled: 12/29/20 14:45
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 23:14
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	7.3	JD
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	0.33	UD
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	2.5	JD
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	4.4	JD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-15
File ID: 09JAN15.D
Sampled: 12/29/20 14:45
Prepared: 01/09/21 12:01
Analyzed: 01/09/21 23:14
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096924
Sequence: 2100446
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	0.65	UD
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	0.50	UD
622-96-8	1-Ethyl-4-methylbenzene	1.55	0.46	UD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	3.2	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	0.40	UD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	11	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	0.42	UD

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW55B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-15	File ID:	09JAN15.D
Sampled:	12/29/20 14:45	Prepared:	01/09/21 12:01	Analyzed:	01/09/21 23:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096924	Sequence:	2100446	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.55	3.0	JD
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	2.1	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	0.62	UD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	3.6	JD
95-47-6	o-Xylene	1.55	1.5	JD
1330-20-7	Total Xylenes	1.55	5.1	JD
---	TPH - Gasoline	1.55	96	JD
---	Total Petroleum Hydrocarbons	1.55	96	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95482	7.508	96371	7.503	
Chlorobenzene-d5 (IS)	161437	11.019	169282	11.019	
1,4-Difluorobenzene (IS)	291476	8.696	295787	8.697	

* Values outside of QC limits

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-16
File ID: 10JAN17.D
Sampled: 12/29/20 16:00
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 09:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.55	1.3	UD
67-64-1	Acetone	1.55	64	D
107-13-1	Acrylonitrile	1.55	0.42	UD
107-05-1	Allyl chloride	1.55	0.43	UD
994-05-8	t-Amyl Methyl ether	1.55	0.48	UD
71-43-2	Benzene	1.55	4.3	D
100-44-7	Benzyl chloride	1.55	0.40	UD
75-27-4	Bromodichloromethane	1.55	0.70	UD
75-25-2	Bromoform	1.55	1.3	UD
74-83-9	Bromomethane	1.55	0.73	UD
106-99-0	1,3-Butadiene	1.55	0.34	UD
75-65-0	t-Butyl alcohol	1.55	1.1	UD
75-15-0	Carbon disulfide	1.55	11	D
56-23-5	Carbon tetrachloride	1.55	0.70	UD
108-90-7	Chlorobenzene	1.55	0.62	UD
75-00-3	Chloroethane	1.55	0.82	UD
67-66-3	Chloroform	1.55	0.84	UD
74-87-3	Chloromethane	1.55	0.33	UD
110-82-7	Cyclohexane	1.55	0.59	UD
124-48-1	Dibromochloromethane	1.55	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.55	2.6	UD
106-93-4	1,2-Dibromoethane	1.55	0.90	UD
74-95-3	Dibromomethane	1.55	0.88	UD
95-50-1	1,2-Dichlorobenzene	1.55	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.55	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.55	0.78	UD
75-71-8	Dichlorodifluoromethane	1.55	2.8	JD
75-34-3	1,1-Dichloroethane	1.55	0.36	UD
107-06-2	1,2-Dichloroethane	1.55	0.40	UD
75-35-4	1,1-Dichloroethene	1.55	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.55	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.55	0.42	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-16	File ID:	10JAN17.D
Sampled:	12/29/20 16:00	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 09:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.55	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.55	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.55	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.55	1.4	UD
75-37-6	1,1-Difluoroethane	1.55	3.1	UD
108-20-3	Diisopropyl ether	1.55	0.60	UD
123-91-1	1,4-Dioxane	1.55	0.51	UD
64-17-5	Ethanol	1.55	5.2	D
141-78-6	Ethyl acetate	1.55	0.51	UD
100-41-4	Ethylbenzene	1.55	6.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.55	5.2	JD
637-92-3	Ethyl t-butyl ether	1.55	0.51	UD
142-82-5	n-Heptane	1.55	0.53	UD
87-68-3	Hexachlorobutadiene	1.55	2.3	UD
67-72-1	Hexachloroethane	1.55	1.1	UD
110-54-3	Hexane	1.55	0.31	UD
591-78-6	2-Hexanone	1.55	0.45	UD
540-84-1	Isooctane	1.55	0.54	UD
67-63-0	Isopropyl alcohol	1.55	0.50	UD
75-09-2	Methylene chloride	1.55	0.62	UD
78-93-3	Methyl ethyl ketone	1.55	37	D
74-88-4	Methyl iodide	1.55	0.90	UD
108-10-1	Methyl isobutyl ketone	1.55	3.3	JD
1634-04-4	Methyl t-butyl ether	1.55	0.43	UD
91-20-3	Naphthalene	1.55	2.2	UD
115-07-1	Propylene	1.55	0.39	UD
100-42-5	Styrene	1.55	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.55	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.55	0.73	UD
127-18-4	Tetrachloroethene	1.55	2.9	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.55	1.0	UD
109-99-9	Tetrahydrofuran	1.55	4.1	D

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-16	File ID:	10JAN17.D
Sampled:	12/29/20 16:00	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 09:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.55	42	D
120-82-1	1,2,4-Trichlorobenzene	1.55	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.55	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.55	0.95	UD
79-01-6	Trichloroethene	1.55	0.84	UD
75-69-4	Trichlorofluoromethane	1.55	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.55	0.74	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.55	0.85	UD
95-63-6	1,2,4-Trimethylbenzene	1.55	7.0	JD
108-67-8	1,3,5-Trimethylbenzene	1.55	2.2	JD
108-05-4	Vinyl acetate	1.55	0.51	UD
593-60-2	Vinyl bromide	1.55	0.50	UD
75-01-4	Vinyl chloride	1.55	0.60	UD
179601-23-1	p- & m-Xylenes	1.55	22	D
95-47-6	o-Xylene	1.55	7.3	JD
1330-20-7	Total Xylenes	1.55	30	D
---	TPH - Gasoline	1.55	380	D
---	Total Petroleum Hydrocarbons	1.55	380	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.0	110	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	109078	7.495	96371	7.503	
Chlorobenzene-d5 (IS)	190199	11.011	169282	11.019	
1,4-Difluorobenzene (IS)	354979	8.688	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-17
File ID: 10JAN18.D
Sampled: 12/29/20 15:55
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 09:57
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
67-64-1	Acetone	1.52	2.8	JD
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	0.32	UD
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	0.29	UD
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	22	D
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	0.58	UD
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	0.88	UD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	9.9	D
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	0.40	UD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-17	File ID:	10JAN18.D
Sampled:	12/29/20 15:55	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 09:57
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.52	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	3.0	UD
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	2.6	JD
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	0.49	UD
622-96-8	1-Ethyl-4-methylbenzene	1.52	0.46	UD
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	0.52	UD
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	0.30	UD
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	0.53	UD
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
78-93-3	Methyl ethyl ketone	1.52	0.29	UD
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	0.40	UD
1634-04-4	Methyl t-butyl ether	1.52	0.43	UD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	100	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW33B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-17	File ID:	10JAN18.D
Sampled:	12/29/20 15:55	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 09:57
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.52	2.5	JD
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.52	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	1.7	JD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	0.61	UD
108-67-8	1,3,5-Trimethylbenzene	1.52	0.61	UD
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	0.93	UD
95-47-6	o-Xylene	1.52	0.46	UD
1330-20-7	Total Xylenes	1.52	1.4	UD
---	TPH - Gasoline	1.52	190	JD
---	Total Petroleum Hydrocarbons	1.52	190	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	110739	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	192542	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	365789	8.693	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW14-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-18RE1	File ID:	10JAN10.D
Sampled:	12/30/20 09:00	Prepared:	01/10/21 12:26	Analyzed:	01/10/21 20:28
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
142-82-5	n-Heptane	14	160	D
127-18-4	Tetrachloroethene	14	880	D
108-88-3	Toluene	14	210	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.78	97.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	88270	7.504	96371	7.503	
Chlorobenzene-d5 (IS)	145894	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	247707	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW14-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-18	File ID:	10JAN19.D
Sampled:	12/30/20 09:00	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 10:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.4	1.1	UD
67-64-1	Acetone	1.4	23	D
107-13-1	Acrylonitrile	1.4	0.38	UD
107-05-1	Allyl chloride	1.4	0.39	UD
994-05-8	t-Amyl Methyl ether	1.4	0.43	UD
71-43-2	Benzene	1.4	0.29	UD
100-44-7	Benzyl chloride	1.4	0.36	UD
75-27-4	Bromodichloromethane	1.4	0.63	UD
75-25-2	Bromoform	1.4	1.2	UD
74-83-9	Bromomethane	1.4	0.66	UD
106-99-0	1,3-Butadiene	1.4	0.31	UD
75-65-0	t-Butyl alcohol	1.4	0.98	UD
75-15-0	Carbon disulfide	1.4	3.4	D
56-23-5	Carbon tetrachloride	1.4	0.63	UD
108-90-7	Chlorobenzene	1.4	0.56	UD
75-00-3	Chloroethane	1.4	0.74	UD
67-66-3	Chloroform	1.4	10	D
74-87-3	Chloromethane	1.4	0.29	UD
110-82-7	Cyclohexane	1.4	0.53	UD
124-48-1	Dibromochloromethane	1.4	0.60	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.4	2.4	UD
106-93-4	1,2-Dibromoethane	1.4	0.81	UD
74-95-3	Dibromomethane	1.4	0.80	UD
95-50-1	1,2-Dichlorobenzene	1.4	0.70	UD
541-73-1	1,3-Dichlorobenzene	1.4	0.43	UD
106-46-7	1,4-Dichlorobenzene	1.4	0.70	UD
75-71-8	Dichlorodifluoromethane	1.4	4.4	JD
75-34-3	1,1-Dichloroethane	1.4	0.32	UD
107-06-2	1,2-Dichloroethane	1.4	4.6	JD
75-35-4	1,1-Dichloroethene	1.4	0.43	UD
156-59-2	cis-1,2-Dichloroethene	1.4	4.3	D
156-60-5	trans-1,2-Dichloroethene	1.4	0.38	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW14-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-18	File ID:	10JAN19.D
Sampled:	12/30/20 09:00	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 10:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.4	0.45	UD
10061-01-5	cis-1,3-Dichloropropene	1.4	0.42	UD
10061-02-6	trans-1,3-Dichloropropene	1.4	0.56	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.4	1.3	UD
75-37-6	1,1-Difluoroethane	1.4	2.8	UD
108-20-3	Diisopropyl ether	1.4	0.55	UD
123-91-1	1,4-Dioxane	1.4	0.46	UD
64-17-5	Ethanol	1.4	13	D
141-78-6	Ethyl acetate	1.4	0.46	UD
100-41-4	Ethylbenzene	1.4	2.7	JD
622-96-8	1-Ethyl-4-methylbenzene	1.4	0.42	UD
637-92-3	Ethyl t-butyl ether	1.4	0.46	UD
87-68-3	Hexachlorobutadiene	1.4	2.1	UD
67-72-1	Hexachloroethane	1.4	1.0	UD
110-54-3	Hexane	1.4	7.9	D
591-78-6	2-Hexanone	1.4	0.41	UD
540-84-1	Isooctane	1.4	0.49	UD
67-63-0	Isopropyl alcohol	1.4	0.45	UD
75-09-2	Methylene chloride	1.4	0.56	UD
78-93-3	Methyl ethyl ketone	1.4	0.27	UD
74-88-4	Methyl iodide	1.4	0.81	UD
108-10-1	Methyl isobutyl ketone	1.4	0.36	UD
1634-04-4	Methyl t-butyl ether	1.4	0.39	UD
91-20-3	Naphthalene	1.4	2.0	UD
115-07-1	Propylene	1.4	0.35	UD
100-42-5	Styrene	1.4	0.34	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.4	0.85	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.4	0.66	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.4	0.94	UD
109-99-9	Tetrahydrofuran	1.4	7.1	D
120-82-1	1,2,4-Trichlorobenzene	1.4	1.1	UD
71-55-6	1,1,1-Trichloroethane	1.4	1.6	JD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW14-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-18	File ID:	10JAN19.D
Sampled:	12/30/20 09:00	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 10:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
79-00-5	1,1,2-Trichloroethane	1.4	0.85	UD
79-01-6	Trichloroethene	1.4	23	D
75-69-4	Trichlorofluoromethane	1.4	1.9	JD
96-18-4	1,2,3-Trichloropropane	1.4	0.67	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	0.77	UD
95-63-6	1,2,4-Trimethylbenzene	1.4	0.56	UD
108-67-8	1,3,5-Trimethylbenzene	1.4	0.56	UD
108-05-4	Vinyl acetate	1.4	0.46	UD
593-60-2	Vinyl bromide	1.4	0.45	UD
75-01-4	Vinyl chloride	1.4	0.55	UD
179601-23-1	p- & m-Xylenes	1.4	8.6	D
95-47-6	o-Xylene	1.4	2.7	JD
1330-20-7	Total Xylenes	1.4	11	JD
---	TPH - Gasoline	1.4	2100	D
---	Total Petroleum Hydrocarbons	1.4	2100	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.1	111	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	109917	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	194374	11.014	169282	11.019	
1,4-Difluorobenzene (IS)	360933	8.691	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW15-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-19
File ID: 10JAN11.D
Sampled: 12/30/20 10:20
Prepared: 01/10/21 12:26
Analyzed: 01/10/21 20:57
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	15.6	13	UD
67-64-1	Acetone	15.6	6.7	UD
107-13-1	Acrylonitrile	15.6	4.2	UD
107-05-1	Allyl chloride	15.6	4.4	UD
994-05-8	t-Amyl Methyl ether	15.6	4.8	UD
71-43-2	Benzene	15.6	12	JD
100-44-7	Benzyl chloride	15.6	4.1	UD
75-27-4	Bromodichloromethane	15.6	7.0	UD
75-25-2	Bromoform	15.6	13	UD
74-83-9	Bromomethane	15.6	7.3	UD
106-99-0	1,3-Butadiene	15.6	3.4	UD
75-65-0	t-Butyl alcohol	15.6	11	UD
75-15-0	Carbon disulfide	15.6	38	D
56-23-5	Carbon tetrachloride	15.6	7.0	UD
108-90-7	Chlorobenzene	15.6	6.2	UD
75-00-3	Chloroethane	15.6	8.3	UD
67-66-3	Chloroform	15.6	8.4	UD
74-87-3	Chloromethane	15.6	3.3	UD
110-82-7	Cyclohexane	15.6	5.9	UD
124-48-1	Dibromochloromethane	15.6	6.7	UD
96-12-8	1,2-Dibromo-3-chloropropane	15.6	27	UD
106-93-4	1,2-Dibromoethane	15.6	9.0	UD
74-95-3	Dibromomethane	15.6	8.9	UD
95-50-1	1,2-Dichlorobenzene	15.6	7.8	UD
541-73-1	1,3-Dichlorobenzene	15.6	4.8	UD
106-46-7	1,4-Dichlorobenzene	15.6	7.8	UD
75-71-8	Dichlorodifluoromethane	15.6	7.0	UD
75-34-3	1,1-Dichloroethane	15.6	3.6	UD
107-06-2	1,2-Dichloroethane	15.6	4.1	UD
75-35-4	1,1-Dichloroethene	15.6	4.8	UD
156-59-2	cis-1,2-Dichloroethene	15.6	5.0	UD
156-60-5	trans-1,2-Dichloroethene	15.6	4.2	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW15-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-19	File ID:	10JAN11.D
Sampled:	12/30/20 10:20	Prepared:	01/10/21 12:26	Analyzed:	01/10/21 20:57
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	15.6	5.0	UD
10061-01-5	cis-1,3-Dichloropropene	15.6	4.7	UD
10061-02-6	trans-1,3-Dichloropropene	15.6	6.2	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	15.6	14	UD
75-37-6	1,1-Difluoroethane	15.6	31	UD
108-20-3	Diisopropyl ether	15.6	6.1	UD
123-91-1	1,4-Dioxane	15.6	5.1	UD
64-17-5	Ethanol	15.6	6.6	UD
141-78-6	Ethyl acetate	15.6	5.1	UD
100-41-4	Ethylbenzene	15.6	5.0	UD
622-96-8	1-Ethyl-4-methylbenzene	15.6	4.7	UD
637-92-3	Ethyl t-butyl ether	15.6	5.1	UD
142-82-5	n-Heptane	15.6	5.3	UD
87-68-3	Hexachlorobutadiene	15.6	23	UD
67-72-1	Hexachloroethane	15.6	11	UD
110-54-3	Hexane	15.6	25	JD
591-78-6	2-Hexanone	15.6	4.5	UD
540-84-1	Isooctane	15.6	33	JD
67-63-0	Isopropyl alcohol	15.6	5.0	UD
75-09-2	Methylene chloride	15.6	6.2	UD
78-93-3	Methyl ethyl ketone	15.6	3.0	UD
74-88-4	Methyl iodide	15.6	9.0	UD
108-10-1	Methyl isobutyl ketone	15.6	4.1	UD
1634-04-4	Methyl t-butyl ether	15.6	4.4	UD
91-20-3	Naphthalene	15.6	22	UD
115-07-1	Propylene	15.6	3.9	UD
100-42-5	Styrene	15.6	3.7	UD
630-20-6	1,1,1,2-Tetrachloroethane	15.6	9.5	UD
79-34-5	1,1,2,2-Tetrachloroethane	15.6	7.3	UD
127-18-4	Tetrachloroethene	15.6	7.8	UD
811-97-2	1,1,1,2-Tetrafluoroethane	15.6	10	UD
109-99-9	Tetrahydrofuran	15.6	4.2	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW15-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-19	File ID:	10JAN11.D
Sampled:	12/30/20 10:20	Prepared:	01/10/21 12:26	Analyzed:	01/10/21 20:57
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	15.6	92	D
120-82-1	1,2,4-Trichlorobenzene	15.6	13	UD
71-55-6	1,1,1-Trichloroethane	15.6	6.1	UD
79-00-5	1,1,2-Trichloroethane	15.6	9.5	UD
79-01-6	Trichloroethene	15.6	8.4	UD
75-69-4	Trichlorofluoromethane	15.6	7.3	UD
96-18-4	1,2,3-Trichloropropane	15.6	7.5	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	15.6	8.6	UD
95-63-6	1,2,4-Trimethylbenzene	15.6	6.2	UD
108-67-8	1,3,5-Trimethylbenzene	15.6	6.2	UD
108-05-4	Vinyl acetate	15.6	5.1	UD
593-60-2	Vinyl bromide	15.6	5.0	UD
75-01-4	Vinyl chloride	15.6	6.1	UD
179601-23-1	p- & m-Xylenes	15.6	27	JD
95-47-6	o-Xylene	15.6	4.7	UD
1330-20-7	Total Xylenes	15.6	27	JD
---	TPH - Gasoline	15.6	1600	JD
---	Total Petroleum Hydrocarbons	15.6	1600	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.68	96.8	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	86677	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	144710	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	245864	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-20
File ID: 10JAN20.D
Sampled: 12/30/20 11:40
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 11:19
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.56	1.3	UD
67-64-1	Acetone	1.56	9.1	D
107-13-1	Acrylonitrile	1.56	0.42	UD
107-05-1	Allyl chloride	1.56	0.44	UD
994-05-8	t-Amyl Methyl ether	1.56	0.48	UD
71-43-2	Benzene	1.56	2.0	JD
100-44-7	Benzyl chloride	1.56	0.41	UD
75-27-4	Bromodichloromethane	1.56	0.70	UD
75-25-2	Bromoform	1.56	1.3	UD
74-83-9	Bromomethane	1.56	0.73	UD
106-99-0	1,3-Butadiene	1.56	0.34	UD
75-65-0	t-Butyl alcohol	1.56	1.1	UD
75-15-0	Carbon disulfide	1.56	4.9	D
56-23-5	Carbon tetrachloride	1.56	0.70	UD
108-90-7	Chlorobenzene	1.56	0.62	UD
75-00-3	Chloroethane	1.56	0.83	UD
67-66-3	Chloroform	1.56	0.84	UD
74-87-3	Chloromethane	1.56	0.33	UD
110-82-7	Cyclohexane	1.56	9.8	D
124-48-1	Dibromochloromethane	1.56	0.67	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.56	2.7	UD
106-93-4	1,2-Dibromoethane	1.56	0.90	UD
74-95-3	Dibromomethane	1.56	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.56	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.56	0.48	UD
106-46-7	1,4-Dichlorobenzene	1.56	0.78	UD
75-71-8	Dichlorodifluoromethane	1.56	0.70	UD
75-34-3	1,1-Dichloroethane	1.56	0.36	UD
107-06-2	1,2-Dichloroethane	1.56	0.41	UD
75-35-4	1,1-Dichloroethene	1.56	0.48	UD
156-59-2	cis-1,2-Dichloroethene	1.56	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.56	0.42	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-20	File ID:	10JAN20.D
Sampled:	12/30/20 11:40	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 11:19
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.56	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.56	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.56	0.62	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.56	1.4	UD
75-37-6	1,1-Difluoroethane	1.56	3.1	UD
108-20-3	Diisopropyl ether	1.56	0.61	UD
123-91-1	1,4-Dioxane	1.56	0.51	UD
64-17-5	Ethanol	1.56	13	D
141-78-6	Ethyl acetate	1.56	0.51	UD
100-41-4	Ethylbenzene	1.56	5.0	JD
622-96-8	1-Ethyl-4-methylbenzene	1.56	3.1	JD
637-92-3	Ethyl t-butyl ether	1.56	0.51	UD
142-82-5	n-Heptane	1.56	1.8	JD
87-68-3	Hexachlorobutadiene	1.56	2.3	UD
67-72-1	Hexachloroethane	1.56	1.1	UD
110-54-3	Hexane	1.56	7.0	JD
591-78-6	2-Hexanone	1.56	0.45	UD
540-84-1	Isooctane	1.56	0.55	UD
67-63-0	Isopropyl alcohol	1.56	0.50	UD
75-09-2	Methylene chloride	1.56	0.62	UD
78-93-3	Methyl ethyl ketone	1.56	6.9	D
74-88-4	Methyl iodide	1.56	0.90	UD
108-10-1	Methyl isobutyl ketone	1.56	0.41	UD
1634-04-4	Methyl t-butyl ether	1.56	0.44	UD
91-20-3	Naphthalene	1.56	2.2	UD
115-07-1	Propylene	1.56	0.39	UD
100-42-5	Styrene	1.56	0.37	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.56	0.95	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.56	0.73	UD
127-18-4	Tetrachloroethene	1.56	18	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.56	1.0	UD
109-99-9	Tetrahydrofuran	1.56	1.2	JD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-20	File ID:	10JAN20.D
Sampled:	12/30/20 11:40	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 11:19
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.56	13	D
120-82-1	1,2,4-Trichlorobenzene	1.56	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.56	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.56	0.95	UD
79-01-6	Trichloroethene	1.56	0.84	UD
75-69-4	Trichlorofluoromethane	1.56	0.73	UD
96-18-4	1,2,3-Trichloropropane	1.56	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.56	0.86	UD
95-63-6	1,2,4-Trimethylbenzene	1.56	4.0	JD
108-67-8	1,3,5-Trimethylbenzene	1.56	0.62	UD
108-05-4	Vinyl acetate	1.56	0.51	UD
593-60-2	Vinyl bromide	1.56	0.50	UD
75-01-4	Vinyl chloride	1.56	0.61	UD
179601-23-1	p- & m-Xylenes	1.56	13	D
95-47-6	o-Xylene	1.56	4.1	JD
1330-20-7	Total Xylenes	1.56	17	D
---	TPH - Gasoline	1.56	400	D
---	Total Petroleum Hydrocarbons	1.56	400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	111046	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	191819	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	363389	8.693	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-21
File ID: 10JAN23.D
Sampled: 12/30/20 11:30
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 13:07
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	149	120	UD
67-64-1	Acetone	149	64	UD
107-13-1	Acrylonitrile	149	40	UD
107-05-1	Allyl chloride	149	42	UD
994-05-8	t-Amyl Methyl ether	149	46	UD
71-43-2	Benzene	149	2100	D
100-44-7	Benzyl chloride	149	39	UD
75-27-4	Bromodichloromethane	149	67	UD
75-25-2	Bromoform	149	130	UD
74-83-9	Bromomethane	149	70	UD
106-99-0	1,3-Butadiene	149	33	UD
75-65-0	t-Butyl alcohol	149	100	UD
75-15-0	Carbon disulfide	149	28	UD
56-23-5	Carbon tetrachloride	149	67	UD
108-90-7	Chlorobenzene	149	60	UD
75-00-3	Chloroethane	149	79	UD
67-66-3	Chloroform	149	80	UD
74-87-3	Chloromethane	149	31	UD
124-48-1	Dibromochloromethane	149	64	UD
96-12-8	1,2-Dibromo-3-chloropropane	149	250	UD
106-93-4	1,2-Dibromoethane	149	86	UD
74-95-3	Dibromomethane	149	85	UD
95-50-1	1,2-Dichlorobenzene	149	74	UD
541-73-1	1,3-Dichlorobenzene	149	46	UD
106-46-7	1,4-Dichlorobenzene	149	74	UD
75-71-8	Dichlorodifluoromethane	149	67	UD
75-34-3	1,1-Dichloroethane	149	34	UD
107-06-2	1,2-Dichloroethane	149	39	UD
75-35-4	1,1-Dichloroethene	149	46	UD
156-59-2	cis-1,2-Dichloroethene	149	48	UD
156-60-5	trans-1,2-Dichloroethene	149	40	UD
78-87-5	1,2-Dichloropropane	149	48	UD

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-21
File ID: 10JAN23.D
Sampled: 12/30/20 11:30
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 13:07
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	149	45	UD
10061-02-6	trans-1,3-Dichloropropene	149	60	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	149	140	UD
75-37-6	1,1-Difluoroethane	149	300	UD
108-20-3	Diisopropyl ether	149	58	UD
123-91-1	1,4-Dioxane	149	49	UD
64-17-5	Ethanol	149	63	UD
141-78-6	Ethyl acetate	149	49	UD
100-41-4	Ethylbenzene	149	180	JD
622-96-8	1-Ethyl-4-methylbenzene	149	45	UD
637-92-3	Ethyl t-butyl ether	149	49	UD
142-82-5	n-Heptane	149	13000	D
87-68-3	Hexachlorobutadiene	149	220	UD
67-72-1	Hexachloroethane	149	110	UD
591-78-6	2-Hexanone	149	43	UD
540-84-1	Isooctane	149	52	UD
67-63-0	Isopropyl alcohol	149	48	UD
75-09-2	Methylene chloride	149	60	UD
78-93-3	Methyl ethyl ketone	149	28	UD
74-88-4	Methyl iodide	149	86	UD
108-10-1	Methyl isobutyl ketone	149	39	UD
1634-04-4	Methyl t-butyl ether	149	42	UD
91-20-3	Naphthalene	149	210	UD
115-07-1	Propylene	149	37	UD
100-42-5	Styrene	149	36	UD
630-20-6	1,1,1,2-Tetrachloroethane	149	91	UD
79-34-5	1,1,2,2-Tetrachloroethane	149	70	UD
127-18-4	Tetrachloroethene	149	74	UD
811-97-2	1,1,1,2-Tetrafluoroethane	149	100	UD
109-99-9	Tetrahydrofuran	149	40	UD
108-88-3	Toluene	149	8200	D
120-82-1	1,2,4-Trichlorobenzene	149	120	UD

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-21	File ID:	10JAN23.D
Sampled:	12/30/20 11:30	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 13:07
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	149	58	UD
79-00-5	1,1,2-Trichloroethane	149	91	UD
79-01-6	Trichloroethene	149	80	UD
75-69-4	Trichlorofluoromethane	149	70	UD
96-18-4	1,2,3-Trichloropropane	149	72	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	149	82	UD
95-63-6	1,2,4-Trimethylbenzene	149	60	UD
108-67-8	1,3,5-Trimethylbenzene	149	60	UD
108-05-4	Vinyl acetate	149	49	UD
593-60-2	Vinyl bromide	149	48	UD
75-01-4	Vinyl chloride	149	58	UD
179601-23-1	p- & m-Xylenes	149	340	JD
95-47-6	o-Xylene	149	45	UD
1330-20-7	Total Xylenes	149	340	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.4	104	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	124761	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	233730	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	481201	8.695	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-21RE1	File ID:	10JAN25.D
Sampled:	12/30/20 11:30	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 14:14
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
110-82-7	Cyclohexane	1490	100000	D
110-54-3	Hexane	1490	64000	D
---	TPH - Gasoline	1490	1500000	D
---	Total Petroleum Hydrocarbons	1490	1500000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.9	109	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	116111	7.499	96371	7.503	
Chlorobenzene-d5 (IS)	210986	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	399976	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-02

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-22
File ID: 10JAN24.D
Sampled: 12/30/20 11:30
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 13:43
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	147	120	UD
67-64-1	Acetone	147	63	UD
107-13-1	Acrylonitrile	147	40	UD
107-05-1	Allyl chloride	147	41	UD
994-05-8	t-Amyl Methyl ether	147	46	UD
71-43-2	Benzene	147	2500	D
100-44-7	Benzyl chloride	147	38	UD
75-27-4	Bromodichloromethane	147	66	UD
75-25-2	Bromoform	147	130	UD
74-83-9	Bromomethane	147	69	UD
106-99-0	1,3-Butadiene	147	32	UD
75-65-0	t-Butyl alcohol	147	100	UD
75-15-0	Carbon disulfide	147	28	UD
56-23-5	Carbon tetrachloride	147	66	UD
108-90-7	Chlorobenzene	147	59	UD
75-00-3	Chloroethane	147	78	UD
67-66-3	Chloroform	147	79	UD
74-87-3	Chloromethane	147	31	UD
124-48-1	Dibromochloromethane	147	63	UD
96-12-8	1,2-Dibromo-3-chloropropane	147	250	UD
106-93-4	1,2-Dibromoethane	147	85	UD
74-95-3	Dibromomethane	147	84	UD
95-50-1	1,2-Dichlorobenzene	147	74	UD
541-73-1	1,3-Dichlorobenzene	147	46	UD
106-46-7	1,4-Dichlorobenzene	147	74	UD
75-71-8	Dichlorodifluoromethane	147	66	UD
75-34-3	1,1-Dichloroethane	147	34	UD
107-06-2	1,2-Dichloroethane	147	38	UD
75-35-4	1,1-Dichloroethene	147	46	UD
156-59-2	cis-1,2-Dichloroethene	147	47	UD
156-60-5	trans-1,2-Dichloroethene	147	40	UD
78-87-5	1,2-Dichloropropane	147	47	UD

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-02

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-22	File ID:	10JAN24.D
Sampled:	12/30/20 11:30	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 13:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	147	44	UD
10061-02-6	trans-1,3-Dichloropropene	147	59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	147	130	UD
75-37-6	1,1-Difluoroethane	147	290	UD
108-20-3	Diisopropyl ether	147	57	UD
123-91-1	1,4-Dioxane	147	49	UD
64-17-5	Ethanol	147	62	UD
141-78-6	Ethyl acetate	147	49	UD
100-41-4	Ethylbenzene	147	220	JD
622-96-8	1-Ethyl-4-methylbenzene	147	44	UD
637-92-3	Ethyl t-butyl ether	147	49	UD
87-68-3	Hexachlorobutadiene	147	220	UD
67-72-1	Hexachloroethane	147	110	UD
591-78-6	2-Hexanone	147	43	UD
540-84-1	Isooctane	147	51	UD
67-63-0	Isopropyl alcohol	147	47	UD
75-09-2	Methylene chloride	147	59	UD
78-93-3	Methyl ethyl ketone	147	28	UD
74-88-4	Methyl iodide	147	85	UD
108-10-1	Methyl isobutyl ketone	147	38	UD
1634-04-4	Methyl t-butyl ether	147	41	UD
91-20-3	Naphthalene	147	210	UD
115-07-1	Propylene	147	37	UD
100-42-5	Styrene	147	35	UD
630-20-6	1,1,1,2-Tetrachloroethane	147	90	UD
79-34-5	1,1,2,2-Tetrachloroethane	147	69	UD
127-18-4	Tetrachloroethene	147	74	UD
811-97-2	1,1,1,2-Tetrafluoroethane	147	98	UD
109-99-9	Tetrahydrofuran	147	40	UD
108-88-3	Toluene	147	11000	D
120-82-1	1,2,4-Trichlorobenzene	147	120	UD
71-55-6	1,1,1-Trichloroethane	147	57	UD

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-02

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-22	File ID:	10JAN24.D
Sampled:	12/30/20 11:30	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 13:43
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
79-00-5	1,1,2-Trichloroethane	147	90	UD
79-01-6	Trichloroethene	147	79	UD
75-69-4	Trichlorofluoromethane	147	69	UD
96-18-4	1,2,3-Trichloropropane	147	71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	147	81	UD
95-63-6	1,2,4-Trimethylbenzene	147	59	UD
108-67-8	1,3,5-Trimethylbenzene	147	59	UD
108-05-4	Vinyl acetate	147	49	UD
593-60-2	Vinyl bromide	147	47	UD
75-01-4	Vinyl chloride	147	57	UD
179601-23-1	p- & m-Xylenes	147	420	JD
95-47-6	o-Xylene	147	44	UD
1330-20-7	Total Xylenes	147	420	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.1	111	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	129338	7.505	96371	7.503	
Chlorobenzene-d5 (IS)	237655	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	474167	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-02

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-22RE1	File ID:	10JAN26.D
Sampled:	12/30/20 11:30	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 14:44
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
110-82-7	Cyclohexane	1470	120000	D
142-82-5	n-Heptane	1470	16000	D
110-54-3	Hexane	1470	76000	D
---	TPH - Gasoline	1470	1900000	D
---	Total Petroleum Hydrocarbons	1470	1900000	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.6	106	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	114469	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	206721	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	396016	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-23RE1	File ID:	10JAN15.D
Sampled:	12/30/20 12:50	Prepared:	01/10/21 12:26	Analyzed:	01/10/21 22:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-63-0	Isopropyl alcohol	15.3	94	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.2	102	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	127439	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	215122	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	416859	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56A-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-23
File ID: 10JAN21.D
Sampled: 12/30/20 12:50
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 11:55
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.47	1.2	UD
67-64-1	Acetone	1.47	5.9	JD
107-13-1	Acrylonitrile	1.47	0.40	UD
107-05-1	Allyl chloride	1.47	0.41	UD
994-05-8	t-Amyl Methyl ether	1.47	0.46	UD
71-43-2	Benzene	1.47	13	D
100-44-7	Benzyl chloride	1.47	0.38	UD
75-27-4	Bromodichloromethane	1.47	0.66	UD
75-25-2	Bromoform	1.47	1.3	UD
74-83-9	Bromomethane	1.47	0.69	UD
106-99-0	1,3-Butadiene	1.47	0.32	UD
75-65-0	t-Butyl alcohol	1.47	1.0	UD
75-15-0	Carbon disulfide	1.47	3.4	D
56-23-5	Carbon tetrachloride	1.47	0.66	UD
108-90-7	Chlorobenzene	1.47	0.59	UD
75-00-3	Chloroethane	1.47	0.78	UD
67-66-3	Chloroform	1.47	0.79	UD
74-87-3	Chloromethane	1.47	0.31	UD
110-82-7	Cyclohexane	1.47	0.56	UD
124-48-1	Dibromochloromethane	1.47	0.63	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.47	2.5	UD
106-93-4	1,2-Dibromoethane	1.47	0.85	UD
74-95-3	Dibromomethane	1.47	0.84	UD
95-50-1	1,2-Dichlorobenzene	1.47	0.74	UD
541-73-1	1,3-Dichlorobenzene	1.47	0.46	UD
106-46-7	1,4-Dichlorobenzene	1.47	0.74	UD
75-71-8	Dichlorodifluoromethane	1.47	3.1	JD
75-34-3	1,1-Dichloroethane	1.47	0.34	UD
107-06-2	1,2-Dichloroethane	1.47	0.38	UD
75-35-4	1,1-Dichloroethene	1.47	0.46	UD
156-59-2	cis-1,2-Dichloroethene	1.47	0.47	UD
156-60-5	trans-1,2-Dichloroethene	1.47	0.40	UD

AECOM - Sacramento
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-23	File ID:	10JAN21.D
Sampled:	12/30/20 12:50	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 11:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.47	0.47	UD
10061-01-5	cis-1,3-Dichloropropene	1.47	0.44	UD
10061-02-6	trans-1,3-Dichloropropene	1.47	0.59	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.47	1.3	UD
75-37-6	1,1-Difluoroethane	1.47	2.9	UD
108-20-3	Diisopropyl ether	1.47	0.57	UD
123-91-1	1,4-Dioxane	1.47	0.49	UD
64-17-5	Ethanol	1.47	3.5	D
141-78-6	Ethyl acetate	1.47	0.49	UD
100-41-4	Ethylbenzene	1.47	9.7	D
622-96-8	1-Ethyl-4-methylbenzene	1.47	1.9	JD
637-92-3	Ethyl t-butyl ether	1.47	0.49	UD
142-82-5	n-Heptane	1.47	3.8	D
87-68-3	Hexachlorobutadiene	1.47	2.2	UD
67-72-1	Hexachloroethane	1.47	1.1	UD
110-54-3	Hexane	1.47	0.29	UD
591-78-6	2-Hexanone	1.47	0.43	UD
540-84-1	Isooctane	1.47	0.51	UD
75-09-2	Methylene chloride	1.47	0.59	UD
78-93-3	Methyl ethyl ketone	1.47	1.7	JD
74-88-4	Methyl iodide	1.47	0.85	UD
108-10-1	Methyl isobutyl ketone	1.47	0.38	UD
1634-04-4	Methyl t-butyl ether	1.47	0.41	UD
91-20-3	Naphthalene	1.47	2.1	UD
115-07-1	Propylene	1.47	0.37	UD
100-42-5	Styrene	1.47	0.35	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.47	0.90	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.47	0.69	UD
127-18-4	Tetrachloroethene	1.47	8.6	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.47	0.98	UD
109-99-9	Tetrahydrofuran	1.47	0.40	UD
108-88-3	Toluene	1.47	14	D

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Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56A-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-23	File ID:	10JAN21.D
Sampled:	12/30/20 12:50	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 11:55
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.47	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.47	0.57	UD
79-00-5	1,1,2-Trichloroethane	1.47	0.90	UD
79-01-6	Trichloroethene	1.47	0.79	UD
75-69-4	Trichlorofluoromethane	1.47	0.69	UD
96-18-4	1,2,3-Trichloropropane	1.47	0.71	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.47	0.81	UD
95-63-6	1,2,4-Trimethylbenzene	1.47	2.7	JD
108-67-8	1,3,5-Trimethylbenzene	1.47	0.59	UD
108-05-4	Vinyl acetate	1.47	0.49	UD
593-60-2	Vinyl bromide	1.47	0.47	UD
75-01-4	Vinyl chloride	1.47	0.57	UD
179601-23-1	p- & m-Xylenes	1.47	14	D
95-47-6	o-Xylene	1.47	3.3	JD
1330-20-7	Total Xylenes	1.47	17	D
---	TPH - Gasoline	1.47	200	JD
---	Total Petroleum Hydrocarbons	1.47	200	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.7	107	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	109006	7.501	96371	7.503	
Chlorobenzene-d5 (IS)	189197	11.012	169282	11.019	
1,4-Difluorobenzene (IS)	354749	8.69	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-24RE1	File ID:	10JAN16.D
Sampled:	12/30/20 12:40	Prepared:	01/10/21 12:26	Analyzed:	01/10/21 23:24
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
64-17-5	Ethanol	16.2	160	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.5	105	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	118969	7.506	96371	7.503	
Chlorobenzene-d5 (IS)	206551	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	394954	8.694	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56B-01

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2100036-24
File ID: 10JAN22.D
Sampled: 12/30/20 12:40
Prepared: 01/10/21 12:26
Analyzed: 01/11/21 12:31
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B096926
Sequence: 2100448
Calibration: 2101002
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.53	1.3	UD
67-64-1	Acetone	1.53	22	D
107-13-1	Acrylonitrile	1.53	0.41	UD
107-05-1	Allyl chloride	1.53	0.43	UD
994-05-8	t-Amyl Methyl ether	1.53	0.47	UD
71-43-2	Benzene	1.53	8.0	D
100-44-7	Benzyl chloride	1.53	0.40	UD
75-27-4	Bromodichloromethane	1.53	2.6	JD
75-25-2	Bromoform	1.53	1.3	UD
74-83-9	Bromomethane	1.53	0.72	UD
106-99-0	1,3-Butadiene	1.53	0.34	UD
75-65-0	t-Butyl alcohol	1.53	1.1	UD
75-15-0	Carbon disulfide	1.53	2.3	JD
56-23-5	Carbon tetrachloride	1.53	0.69	UD
108-90-7	Chlorobenzene	1.53	0.61	UD
75-00-3	Chloroethane	1.53	0.81	UD
67-66-3	Chloroform	1.53	33	D
74-87-3	Chloromethane	1.53	0.32	UD
110-82-7	Cyclohexane	1.53	0.58	UD
124-48-1	Dibromochloromethane	1.53	0.66	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.53	2.6	UD
106-93-4	1,2-Dibromoethane	1.53	0.89	UD
74-95-3	Dibromomethane	1.53	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.53	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.53	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.53	2.6	JD
75-71-8	Dichlorodifluoromethane	1.53	2.6	JD
75-34-3	1,1-Dichloroethane	1.53	0.35	UD
107-06-2	1,2-Dichloroethane	1.53	0.40	UD
75-35-4	1,1-Dichloroethene	1.53	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.53	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.53	0.41	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-24	File ID:	10JAN22.D
Sampled:	12/30/20 12:40	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 12:31
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.53	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.53	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.53	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.53	1.4	UD
75-37-6	1,1-Difluoroethane	1.53	3.1	UD
108-20-3	Diisopropyl ether	1.53	0.60	UD
123-91-1	1,4-Dioxane	1.53	0.50	UD
141-78-6	Ethyl acetate	1.53	0.50	UD
100-41-4	Ethylbenzene	1.53	8.6	D
622-96-8	1-Ethyl-4-methylbenzene	1.53	2.4	JD
637-92-3	Ethyl t-butyl ether	1.53	0.50	UD
142-82-5	n-Heptane	1.53	1.6	JD
87-68-3	Hexachlorobutadiene	1.53	2.3	UD
67-72-1	Hexachloroethane	1.53	1.1	UD
110-54-3	Hexane	1.53	0.31	UD
591-78-6	2-Hexanone	1.53	0.44	UD
540-84-1	Isooctane	1.53	0.54	UD
67-63-0	Isopropyl alcohol	1.53	20	D
75-09-2	Methylene chloride	1.53	0.61	UD
78-93-3	Methyl ethyl ketone	1.53	32	D
74-88-4	Methyl iodide	1.53	0.89	UD
108-10-1	Methyl isobutyl ketone	1.53	3.2	JD
1634-04-4	Methyl t-butyl ether	1.53	0.43	UD
91-20-3	Naphthalene	1.53	10	JD
115-07-1	Propylene	1.53	0.38	UD
100-42-5	Styrene	1.53	1.7	JD
630-20-6	1,1,1,2-Tetrachloroethane	1.53	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.53	0.72	UD
127-18-4	Tetrachloroethene	1.53	12	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.53	1.0	UD
109-99-9	Tetrahydrofuran	1.53	4.1	D
108-88-3	Toluene	1.53	16	D

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW56B-01

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2100036-24	File ID:	10JAN22.D
Sampled:	12/30/20 12:40	Prepared:	01/10/21 12:26	Analyzed:	01/11/21 12:31
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B096926	Sequence:	2100448	Calibration:	2101002
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.53	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.53	0.60	UD
79-00-5	1,1,2-Trichloroethane	1.53	0.93	UD
79-01-6	Trichloroethene	1.53	0.83	UD
75-69-4	Trichlorofluoromethane	1.53	0.72	UD
96-18-4	1,2,3-Trichloropropane	1.53	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.53	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.53	4.1	JD
108-67-8	1,3,5-Trimethylbenzene	1.53	0.61	UD
108-05-4	Vinyl acetate	1.53	0.50	UD
593-60-2	Vinyl bromide	1.53	0.49	UD
75-01-4	Vinyl chloride	1.53	0.60	UD
179601-23-1	p- & m-Xylenes	1.53	14	D
95-47-6	o-Xylene	1.53	3.8	JD
1330-20-7	Total Xylenes	1.53	18	D
---	TPH - Gasoline	1.53	500	D
---	Total Petroleum Hydrocarbons	1.53	500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	11.2	112	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	109248	7.503	96371	7.503	
Chlorobenzene-d5 (IS)	192652	11.015	169282	11.019	
1,4-Difluorobenzene (IS)	354612	8.692	295787	8.697	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096783 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW27A-01	2100036-01	08JAN04.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW27B-01	2100036-02	08JAN13.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW28A-01	2100036-03	08JAN06.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW28B-01	2100036-04	08JAN14.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW23A-01	2100036-05	08JAN15.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW23A-01	2100036-05RE1	08JAN08.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW23B-01	2100036-06	08JAN16.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW29A-01	2100036-07	08JAN17.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW29A-01	2100036-07RE1	08JAN10.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW29B-01	2100036-08	08JAN18.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW29B-01	2100036-08RE1	08JAN11.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW53A-01	2100036-09	08JAN19.D	01/08/21 08:03	FULL Customized List-All Table 8
Blank	B096783-BLK1	08JAN03.D	01/08/21 08:03	
LCS	B096783-BS1	08JAN01.D	01/08/21 08:03	
LCS Dup	B096783-BSD1	08JAN02.D	01/08/21 08:03	

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096924 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW27A-01	2100036-01RE1	09JAN08.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW28A-01	2100036-03RE1	09JAN09.D	01/08/21 08:03	FULL Customized List-All Table 8
SG-VW53A-02	2100036-10	09JAN10.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW53B-01	2100036-11	09JAN11.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW54A-01	2100036-12	09JAN12.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW54A-01	2100036-12RE1	09JAN16.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW54B-01	2100036-13	09JAN13.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW55A-01	2100036-14	09JAN14.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW55A-01	2100036-14RE1	09JAN17.D	01/09/21 12:01	FULL Customized List-All Table 8
SG-VW55B-01	2100036-15	09JAN15.D	01/09/21 12:01	FULL Customized List-All Table 8
Blank	B096924-BLK1	09JAN07.D	01/09/21 12:01	
LCS	B096924-BS1	09JAN05.D	01/09/21 12:01	
LCS Dup	B096924-BSD1	09JAN06.D	01/09/21 12:01	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B096926 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW33A-01	2100036-16	10JAN17.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW33B-01	2100036-17	10JAN18.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW14-01	2100036-18	10JAN19.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW14-01	2100036-18RE1	10JAN10.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW15-01	2100036-19	10JAN11.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW57A-01	2100036-20	10JAN20.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW57B-01	2100036-21	10JAN23.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW57B-01	2100036-21RE1	10JAN25.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW57B-02	2100036-22	10JAN24.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW57B-02	2100036-22RE1	10JAN26.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW56A-01	2100036-23	10JAN21.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW56A-01	2100036-23RE1	10JAN15.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW56B-01	2100036-24	10JAN22.D	01/10/21 12:26	FULL Customized List-All Table 8
SG-VW56B-01	2100036-24RE1	10JAN16.D	01/10/21 12:26	FULL Customized List-All Table 8
Blank	B096926-BLK1	10JAN07.D	01/10/21 12:26	
LCS	B096926-BS1	10JAN05.D	01/10/21 12:26	
LCS Dup	B096926-BSD1	10JAN06.D	01/10/21 12:26	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096783-BLK1	File ID:	08JAN03.D
Prepared:	01/08/21 08:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/08/21 10:17	Instrument:	MS-A1		
Batch:	B096783	Sequence:	2100368	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096783-BLK1	File ID:	08JAN03.D
Prepared:	01/08/21 08:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/08/21 10:17	Instrument:	MS-A1		
Batch:	B096783	Sequence:	2100368	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096783-BLK1	File ID:	08JAN03.D
Prepared:	01/08/21 08:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/08/21 10:17	Instrument:	MS-A1		
Batch:	B096783	Sequence:	2100368	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096783-BLK1	File ID:	08JAN03.D
Prepared:	01/08/21 08:03	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/08/21 10:17	Instrument:	MS-A1		
Batch:	B096783	Sequence:	2100368	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.87	98.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	92433	7.497	96371	7.503	
Chlorobenzene-d5 (IS)	151742	11.013	169282	11.019	
1,4-Difluorobenzene (IS)	265078	8.69	295787	8.697	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096924-BLK1	File ID:	09JAN07.D
Prepared:	01/09/21 12:01	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/09/21 18:31	Instrument:	MS-A1		
Batch:	B096924	Sequence:	2100446	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096924-BLK1	File ID:	09JAN07.D
Prepared:	01/09/21 12:01	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/09/21 18:31	Instrument:	MS-A1		
Batch:	B096924	Sequence:	2100446	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096924-BLK1	File ID:	09JAN07.D
Prepared:	01/09/21 12:01	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/09/21 18:31	Instrument:	MS-A1		
Batch:	B096924	Sequence:	2100446	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096924-BLK1	File ID:	09JAN07.D
Prepared:	01/09/21 12:01	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/09/21 18:31	Instrument:	MS-A1		
Batch:	B096924	Sequence:	2100446	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.59	95.9	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89663	7.496	96371	7.503	
Chlorobenzene-d5 (IS)	145770	11.017	169282	11.019	
1,4-Difluorobenzene (IS)	264295	8.689	295787	8.697	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096926-BLK1	File ID:	10JAN07.D
Prepared:	01/10/21 12:26	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/10/21 19:00	Instrument:	MS-A1		
Batch:	B096926	Sequence:	2100448	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096926-BLK1	File ID:	10JAN07.D
Prepared:	01/10/21 12:26	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/10/21 19:00	Instrument:	MS-A1		
Batch:	B096926	Sequence:	2100448	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096926-BLK1	File ID:	10JAN07.D
Prepared:	01/10/21 12:26	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/10/21 19:00	Instrument:	MS-A1		
Batch:	B096926	Sequence:	2100448	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2100036
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B096926-BLK1	File ID:	10JAN07.D
Prepared:	01/10/21 12:26	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	01/10/21 19:00	Instrument:	MS-A1		
Batch:	B096926	Sequence:	2100448	Calibration:	2101002

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.85	98.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	93371	7.5	96371	7.503	
Chlorobenzene-d5 (IS)	154156	11.011	169282	11.019	
1,4-Difluorobenzene (IS)	276574	8.689	295787	8.697	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096783
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096783-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	13.693	85.7	70 - 130
Chloroform	24.413	21.058	86.3	70 - 130
Ethylbenzene	21.711	19.540	90.0	70 - 130
Tetrachloroethene	33.913	28.616	84.4	70 - 130
Toluene	18.842	17.448	92.6	70 - 130
Trichloroethene	26.869	23.198	86.3	70 - 130
Trichlorofluoromethane	28.092	23.934	85.2	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	32.226	84.1	70 - 130
p- & m-Xylenes	43.421	39.800	91.7	70 - 130
o-Xylene	21.711	19.687	90.7	70 - 130
Total Xylenes	65.132	59.487	91.3	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	13.677	85.6	0.117	30	70 - 130
Chloroform	24.413	20.746	85.0	1.50	30	70 - 130
Ethylbenzene	21.711	18.328	84.4	6.40	30	70 - 130
Tetrachloroethene	33.913	27.381	80.7	4.41	30	70 - 130
Toluene	18.842	16.167	85.8	7.62	30	70 - 130
Trichloroethene	26.869	22.237	82.8	4.23	30	70 - 130
Trichlorofluoromethane	28.092	22.940	81.7	4.24	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	31.773	82.9	1.41	30	70 - 130
p- & m-Xylenes	43.421	36.248	83.5	9.34	30	70 - 130
o-Xylene	21.711	17.738	81.7	10.4	30	70 - 130

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096783
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096783-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	53.986	82.9	9.70	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096924
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096924-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	13.434	84.1	70 - 130
Chloroform	24.413	20.414	83.6	70 - 130
Ethylbenzene	21.711	17.455	80.4	70 - 130
Tetrachloroethene	33.913	26.432	77.9	70 - 130
Toluene	18.842	15.515	82.3	70 - 130
Trichloroethene	26.869	21.570	80.3	70 - 130
Trichlorofluoromethane	28.092	23.355	83.1	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	31.996	83.5	70 - 130
p- & m-Xylenes	43.421	34.181	78.7	70 - 130
o-Xylene	21.711	16.878	77.7	70 - 130
Total Xylenes	65.132	51.059	78.4	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	13.297	83.2	1.03	30	70 - 130
Chloroform	24.413	20.145	82.5	1.32	30	70 - 130
Ethylbenzene	21.711	17.451	80.4	0.0249	30	70 - 130
Tetrachloroethene	33.913	26.459	78.0	0.103	30	70 - 130
Toluene	18.842	15.703	83.3	1.21	30	70 - 130
Trichloroethene	26.869	21.662	80.6	0.423	30	70 - 130
Trichlorofluoromethane	28.092	23.872	85.0	2.19	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	32.241	84.1	0.764	30	70 - 130
p- & m-Xylenes	43.421	34.394	79.2	0.621	30	70 - 130
o-Xylene	21.711	17.199	79.2	1.89	30	70 - 130

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Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096924
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096924-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	51.593	79.2	1.04	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096926
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096926-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	12.948	81.1	70 - 130
Chloroform	24.413	19.691	80.7	70 - 130
Ethylbenzene	21.711	17.021	78.4	70 - 130
Tetrachloroethene	33.913	25.977	76.6	70 - 130
Toluene	18.842	15.134	80.3	70 - 130
Trichloroethene	26.869	20.522	76.4	70 - 130
Trichlorofluoromethane	28.092	23.136	82.4	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	31.513	82.2	70 - 130
p- & m-Xylenes	43.421	33.473	77.1	70 - 130
o-Xylene	21.711	16.548	76.2	70 - 130
Total Xylenes	65.132	50.021	76.8	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	12.900	80.8	0.371	30	70 - 130
Chloroform	24.413	19.408	79.5	1.45	30	70 - 130
Ethylbenzene	21.711	16.722	77.0	1.78	30	70 - 130
Tetrachloroethene	33.913	25.428	75.0	2.14	30	70 - 130
Toluene	18.842	14.976	79.5	1.05	30	70 - 130
Trichloroethene	26.869	20.474	76.2	0.236	30	70 - 130
Trichlorofluoromethane	28.092	22.968	81.8	0.731	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	31.206	81.4	0.978	30	70 - 130
p- & m-Xylenes	43.421	32.991	76.0	1.45	30	70 - 130
o-Xylene	21.711	16.157	74.4	2.39	30	70 - 130

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B096926
Preparation: EPA TO-15

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B096926-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	49.149	75.5	1.76	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100148-TUN2	16OCT09.D	10/16/20 13:36
Cal Standard	2100148-CAL7	16OCT10.D	10/16/20 14:05
Cal Standard	2100148-CAL8	16OCT11.D	10/16/20 14:34
Cal Standard	2100148-CAL9	16OCT12.D	10/16/20 15:03
Cal Standard	2100148-CALA	16OCT13.D	10/16/20 15:34
Cal Standard	2100148-CALB	16OCT14.D	10/16/20 16:05
Cal Standard	2100148-CALC	16OCT15.D	10/16/20 16:41
MS Tune	2100148-TUN1	28DEC10.D	12/28/20 17:12
Cal Standard	2100148-CAL1	28DEC11.D	12/28/20 17:41
Cal Standard	2100148-CAL2	28DEC12.D	12/28/20 18:10
Cal Standard	2100148-CAL3	28DEC13.D	12/28/20 18:42
Cal Standard	2100148-CAL4	28DEC14.D	12/28/20 19:21
Cal Standard	2100148-CAL5	28DEC15.D	12/28/20 20:03
Cal Standard	2100148-CAL6	28DEC16.D	12/28/20 20:49

AECOM - Sacramento
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100368-TUN1	07JAN20.D	01/07/21 20:52
Calibration Check	2100368-CCV1	07JAN21.D	01/07/21 21:24
Calibration Check	2100368-CCV2	07JAN22.D	01/07/21 21:56
Calibration Blank	2100368-CCB1	07JAN23.D	01/07/21 22:24
LCS	B096783-BS1	08JAN01.D	01/08/21 09:17
LCS Dup	B096783-BSD1	08JAN02.D	01/08/21 09:49
Blank	B096783-BLK1	08JAN03.D	01/08/21 10:17
SG-VW27A-01	2100036-01	08JAN04.D	01/08/21 10:48
SG-VW28A-01	2100036-03	08JAN06.D	01/08/21 11:47
SG-VW23A-01	2100036-05RE1	08JAN08.D	01/08/21 12:49
SG-VW29A-01	2100036-07RE1	08JAN10.D	01/08/21 13:48
SG-VW29B-01	2100036-08RE1	08JAN11.D	01/08/21 14:18
SG-VW27B-01	2100036-02	08JAN13.D	01/08/21 15:24
SG-VW28B-01	2100036-04	08JAN14.D	01/08/21 16:00
SG-VW23A-01	2100036-05	08JAN15.D	01/08/21 16:36
SG-VW23B-01	2100036-06	08JAN16.D	01/08/21 17:12
SG-VW29A-01	2100036-07	08JAN17.D	01/08/21 17:47
SG-VW29B-01	2100036-08	08JAN18.D	01/08/21 18:23
SG-VW53A-01	2100036-09	08JAN19.D	01/08/21 18:58
Initial Cal Check	2100368-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100368-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2100368-ICV1	28DEC17.D	12/28/20 21:20
Initial Cal Blank	2100368-ICB1	28DEC19.D	12/28/20 22:19

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100446-TUN1	09JAN01.D	01/09/21 15:27
Calibration Check	2100446-CCV1	09JAN02.D	01/09/21 15:59
Calibration Check	2100446-CCV2	09JAN03.D	01/09/21 16:31
Calibration Blank	2100446-CCB1	09JAN04.D	01/09/21 16:58
LCS	B096924-BS1	09JAN05.D	01/09/21 17:31
LCS Dup	B096924-BSD1	09JAN06.D	01/09/21 18:03
Blank	B096924-BLK1	09JAN07.D	01/09/21 18:31
SG-VW27A-01	2100036-01RE1	09JAN08.D	01/09/21 19:06
SG-VW28A-01	2100036-03RE1	09JAN09.D	01/09/21 19:42
SG-VW53A-02	2100036-10	09JAN10.D	01/09/21 20:17
SG-VW53B-01	2100036-11	09JAN11.D	01/09/21 20:53
SG-VW54A-01	2100036-12	09JAN12.D	01/09/21 21:28
SG-VW54B-01	2100036-13	09JAN13.D	01/09/21 22:03
SG-VW55A-01	2100036-14	09JAN14.D	01/09/21 22:39
SG-VW55B-01	2100036-15	09JAN15.D	01/09/21 23:14
SG-VW54A-01	2100036-12RE1	09JAN16.D	01/09/21 23:43
SG-VW55A-01	2100036-14RE1	09JAN17.D	01/10/21 15:19
Initial Cal Check	2100446-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100446-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2100446-ICV1	28DEC17.D	12/28/20 21:20
Initial Cal Blank	2100446-ICB1	28DEC19.D	12/28/20 22:19

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Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2100448-TUN1	10JAN01.D	01/10/21 15:56
Calibration Check	2100448-CCV1	10JAN02.D	01/10/21 16:28
Calibration Check	2100448-CCV2	10JAN03.D	01/10/21 17:01
Calibration Blank	2100448-CCB1	10JAN04.D	01/10/21 17:29
LCS	B096926-BS1	10JAN05.D	01/10/21 18:01
LCS Dup	B096926-BSD1	10JAN06.D	01/10/21 18:33
Blank	B096926-BLK1	10JAN07.D	01/10/21 19:00
SG-VW14-01	2100036-18RE1	10JAN10.D	01/10/21 20:28
SG-VW15-01	2100036-19	10JAN11.D	01/10/21 20:57
SG-VW56A-01	2100036-23RE1	10JAN15.D	01/10/21 22:55
SG-VW56B-01	2100036-24RE1	10JAN16.D	01/10/21 23:24
SG-VW33A-01	2100036-16	10JAN17.D	01/11/21 09:22
SG-VW33B-01	2100036-17	10JAN18.D	01/11/21 09:57
SG-VW14-01	2100036-18	10JAN19.D	01/11/21 10:43
SG-VW57A-01	2100036-20	10JAN20.D	01/11/21 11:19
SG-VW56A-01	2100036-23	10JAN21.D	01/11/21 11:55
SG-VW56B-01	2100036-24	10JAN22.D	01/11/21 12:31
SG-VW57B-01	2100036-21	10JAN23.D	01/11/21 13:07
SG-VW57B-02	2100036-22	10JAN24.D	01/11/21 13:43
SG-VW57B-01	2100036-21RE1	10JAN25.D	01/11/21 14:14
SG-VW57B-02	2100036-22RE1	10JAN26.D	01/11/21 14:44
Initial Cal Check	2100448-ICV2	16OCT16.D	10/16/20 17:12
Initial Cal Blank	2100448-ICB2	16OCT17.D	10/16/20 17:40
Initial Cal Check	2100448-ICV1	28DEC17.D	12/28/20 21:20
Initial Cal Blank	2100448-ICB1	28DEC19.D	12/28/20 22:19

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	28DEC10.D	Injection Date:	12/28/20
Instrument ID:	MS-A1	Injection Time:	17:12
Sequence:	2100148	Lab Sample ID:	2100148-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.6	PASS
Mass 75	30 - 66% of Mass 95	56.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.89	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	76	PASS
Mass 175	4 - 9% of Mass 174	7.55	PASS
Mass 176	93 - 101% of Mass 174	96.5	PASS
Mass 177	5 - 9% of Mass 176	6.96	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	16OCT09.D	Injection Date:	10/16/20
Instrument ID:	MS-A1	Injection Time:	13:36
Sequence:	2100148	Lab Sample ID:	2100148-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	28	PASS
Mass 75	30 - 66% of Mass 95	54.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.88	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	73.7	PASS
Mass 175	4 - 9% of Mass 174	7.82	PASS
Mass 176	93 - 101% of Mass 174	97.7	PASS
Mass 177	5 - 9% of Mass 176	6.13	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	07JAN20.D	Injection Date:	01/07/21
Instrument ID:	MS-A1	Injection Time:	20:52
Sequence:	2100368	Lab Sample ID:	2100368-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	19.5	PASS
Mass 75	30 - 66% of Mass 95	57.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.5	PASS
Mass 173	Less than 2% of Mass 174	1.02	PASS
Mass 174	50 - 120% of Mass 95	67.2	PASS
Mass 175	4 - 9% of Mass 174	7.77	PASS
Mass 176	93 - 101% of Mass 174	97.5	PASS
Mass 177	5 - 9% of Mass 176	6.65	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	09JAN01.D	Injection Date:	01/09/21
Instrument ID:	MS-A1	Injection Time:	15:27
Sequence:	2100446	Lab Sample ID:	2100446-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.4	PASS
Mass 75	30 - 66% of Mass 95	55.1	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.39	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	70.6	PASS
Mass 175	4 - 9% of Mass 174	7.6	PASS
Mass 176	93 - 101% of Mass 174	95.9	PASS
Mass 177	5 - 9% of Mass 176	6.75	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	10JAN01.D	Injection Date:	01/10/21
Instrument ID:	MS-A1	Injection Time:	15:56
Sequence:	2100448	Lab Sample ID:	2100448-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	18.8	PASS
Mass 75	30 - 66% of Mass 95	56.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.83	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	70.9	PASS
Mass 175	4 - 9% of Mass 174	7.57	PASS
Mass 176	93 - 101% of Mass 174	97.1	PASS
Mass 177	5 - 9% of Mass 176	6.64	PASS

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	07JAN21.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	01/07/21
Lab Sample ID:	2100368-CCV1	Injection Time:	21:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	5.0000	5.1400	1.35416	1.392181		2.8	30	
Acrylonitrile	A	5.0000	5.1120	0.4040217	0.4130437		2.2	30	
Allyl chloride	A	5.0000	4.8220	1.073815	1.035532		-3.6	30	
t-Amyl Methyl ether	A	5.0000	6.8490	0.5752153	0.7879862		37.0	30	*
Benzene	A	5.0000	5.0690	2.765383	2.803701		1.4	30	
Benzyl chloride	Q	5.0000	5.2430	1.074474	1.072063		4.9	30	
Bromodichloromethane	A	5.0000	5.0980	0.8005675	0.8161949		2.0	30	
Bromoform	A	5.0000	5.2280	1.099773	1.149995		4.6	30	
Bromomethane	A	5.0000	5.0120	0.9577811	0.9600451		0.2	30	
1,3-Butadiene	A	5.0000	5.1410	0.8688991	0.8934725		2.8	30	
t-Butyl alcohol	A	10.000	12.308	1.094313	1.346877		23.1	30	
Carbon disulfide	A	5.0000	4.8980	2.703689	2.648801		-2.0	30	
Carbon tetrachloride	A	5.0000	5.5750	1.454776	1.622003		11.5	30	
Chlorobenzene	A	5.0000	4.9680	0.84432	0.8388876		-0.6	30	
Chloroethane	A	5.0000	5.2390	0.6005614	0.6292355		4.8	30	
Chloroform	A	5.0000	4.9720	1.869029	1.858731		-0.6	30	
Chloromethane	A	5.0000	5.4830	0.6797098	0.7454104		9.7	30	
Cyclohexane	L	5.0000	5.3180	2.004777	1.773924		6.4	30	
Dibromochloromethane	A	5.0000	5.2070	0.6541537	0.6812044		4.1	30	
1,2-Dibromo-3-chloropropane	L	5.0000	5.0680	0.1180701	0.1383556		1.4	30	
1,2-Dibromoethane	A	5.0000	5.4240	0.4781468	0.5186728		8.5	30	
Dibromomethane	A	5.0000	5.0580	0.1342412	0.1358036		1.2	30	
1,2-Dichlorobenzene	A	5.0000	4.9120	1.130988	1.11097		-1.8	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	07JAN21.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	01/07/21
Lab Sample ID:	2100368-CCV1	Injection Time:	21:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	4.9830	1.211305	1.207259		-0.3	30	
1,4-Dichlorobenzene	A	5.0000	4.7400	1.048992	0.9943402		-5.2	30	
Dichlorodifluoromethane	A	5.0000	5.1580	2.092947	2.15903		3.2	30	
1,1-Dichloroethane	A	5.0000	5.2210	1.471357	1.536248		4.4	30	
1,2-Dichloroethane	A	5.0000	5.0530	1.204454	1.217173		1.1	30	
1,1-Dichloroethene	A	5.0000	5.0020	1.328236	1.328858		0.05	30	
cis-1,2-Dichloroethene	A	5.0000	5.0780	1.11657	1.133946		1.6	30	
trans-1,2-Dichloroethene	A	5.0000	4.9680	1.28934	1.281128		-0.6	30	
1,2-Dichloropropane	A	5.0000	5.4280	0.3111577	0.3378213		8.6	30	
cis-1,3-Dichloropropene	A	5.0000	6.1800	0.3815768	0.4716456		23.6	30	
trans-1,3-Dichloropropene	A	5.0000	5.5870	0.4869158	0.544066		11.7	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.9340	2.653017	2.617817		-1.3	30	
1,1-Difluoroethane	A	5.0000	5.4380	1.098082	1.194291		8.8	30	
Diisopropyl ether	A	5.0000	5.0560	0.6705967	0.6781382		1.1	30	
1,4-Dioxane	A	5.0000	4.9670	0.1526062	0.1515919		-0.7	30	
Ethanol	A	10.000	10.900	0.3232062	0.3523047		9.0	30	
Ethyl acetate	A	5.0000	5.5330	0.3044504	0.3368801		10.7	30	
Ethylbenzene	A	5.0000	4.9670	0.7537756	0.7487678		-0.7	30	
1-Ethyl-4-methylbenzene	A	5.0000	5.0510	3.168324	3.20047		1.0	30	
Ethyl t-butyl ether	A	5.0000	7.2520	1.571763	2.279786		45.0	30	*
n-Heptane	A	5.0000	5.2850	0.320847	0.3391101		5.7	30	
Hexachlorobutadiene	A	5.0000	3.8350	1.357569	1.041225		-23.3	30	
Hexachloroethane	L	5.0000	5.5990	0.1427386	0.184052		12.0	30	

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Project Number: 60632793.06
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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	07JAN21.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	01/07/21
Lab Sample ID:	2100368-CCV1	Injection Time:	21:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.1700	1.515678	1.567278		3.4	30
2-Hexanone	A	5.0000	5.2610	0.5953603	0.6264365		5.2	30
Isooctane	A	5.0000	5.3400	1.660449	1.773448		6.8	30
Isopropyl alcohol	A	5.0000	6.4360	0.8990552	1.157281		28.7	30
Methylene chloride	A	5.0000	4.9030	0.835122	0.8188434		-1.9	30
Methyl ethyl ketone	A	5.0000	5.2470	1.781817	1.869834		4.9	30
Methyl iodide	A	5.0000	4.6550	0.8675081	0.8076728		-6.9	30
Methyl isobutyl ketone	A	5.0000	5.1250	0.7696382	0.7888224		2.5	30
Methyl t-butyl ether	A	5.0000	5.7540	2.615894	3.010257		15.1	30
Naphthalene	Q	5.0000	4.9540	1.012718	0.9727845		-0.9	30
Propylene	A	5.0000	5.1600	0.6480759	0.6687729		3.2	30
Styrene	A	5.0000	4.9870	1.318255	1.314933		-0.3	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.3710	0.2389174	0.2566398		7.4	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9480	1.58216	1.56561		-1.0	30
Tetrachloroethene	A	5.0000	4.8150	0.4672849	0.4500345		-3.7	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.2710	1.09536	1.154753		5.4	30
Tetrahydrofuran	A	5.0000	5.2100	1.081503	1.126838		4.2	30
Toluene	A	5.0000	5.1560	1.079179	1.112773		3.1	30
1,2,4-Trichlorobenzene	Q	5.0000	4.6910	0.5002153	0.3952867		-6.2	30
1,1,1-Trichloroethane	A	5.0000	5.3560	1.533047	1.642336		7.1	30
1,1,2-Trichloroethane	A	5.0000	5.1460	0.3511086	0.3613809		2.9	30
Trichloroethene	A	5.0000	4.9480	0.3588897	0.3551438		-1.0	30
Trichlorofluoromethane	A	5.0000	4.8340	2.034791	1.967346		-3.3	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	07JAN21.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	01/07/21
Lab Sample ID:	2100368-CCV1	Injection Time:	21:24

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.5160	0.3162859	0.3489245		10.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.6750	1.593303	1.489896		-6.5	30
1,2,4-Trimethylbenzene	A	5.0000	4.9590	2.184116	2.166204		-0.8	30
1,3,5-Trimethylbenzene	A	5.0000	4.9470	2.146865	2.123955		-1.1	30
Vinyl acetate	A	5.0000	5.5730	2.126359	2.369963		11.5	30
Vinyl bromide	A	5.0000	5.1130	0.8700704	0.8897038		2.3	30
Vinyl chloride	A	5.0000	5.3410	1.015745	1.085044		6.8	30
p- & m-Xylenes	A	10.000	9.8340	2.061228	2.026922		-1.7	30
o-Xylene	A	5.0000	4.8850	2.18082	2.13047		-2.3	30
Total Xylenes	A	15.000	14.719	2.101092	2.061438		-1.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	07JAN22.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	01/07/21
Lab Sample ID:	2100368-CCV2	Injection Time:	21:56

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	414.89	3.784361	3.140221		-17.0	30
Total Petroleum Hydrocarbons	A	500.00	414.89	3.784361	3.140221		-17.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	10/16/20
Lab Sample ID:	2100368-ICV2	Injection Time:	17:12

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	12/28/20
Lab Sample ID:	2100368-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	12/28/20
Lab Sample ID:	2100368-ICV1	Injection Time:	21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 28DEC17.D
Sequence: 2100368
Lab Sample ID: 2100368-ICV1

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Calibration Date: 10/16/20 14:05
Injection Date: 12/28/20
Injection Time: 21:20

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100368	Injection Date:	12/28/20
Lab Sample ID:	2100368-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	09JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	01/09/21
Lab Sample ID:	2100446-CCV1	Injection Time:	15:59

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.2650	1.35416	1.155128		-14.7	30
Acrylonitrile	A	5.0000	4.2550	0.4040217	0.3438017		-14.9	30
Allyl chloride	A	5.0000	4.2260	1.073815	0.9076399		-15.5	30
t-Amyl Methyl ether	A	5.0000	5.3720	0.5752153	0.6179757		7.4	30
Benzene	A	5.0000	4.1410	2.765383	2.290479		-17.2	30
Benzyl chloride	Q	5.0000	4.6650	1.074474	0.9124137		-6.7	30
Bromodichloromethane	A	5.0000	4.1190	0.8005675	0.6595592		-17.6	30
Bromoform	A	5.0000	4.2460	1.099773	0.9338418		-15.1	30
Bromomethane	A	5.0000	3.8810	0.9577811	0.7434349		-22.4	30
1,3-Butadiene	A	5.0000	4.1020	0.8688991	0.7128204		-18.0	30
t-Butyl alcohol	A	10.000	9.7420	1.094313	1.066089		-2.6	30
Carbon disulfide	A	5.0000	4.2060	2.703689	2.274076		-15.9	30
Carbon tetrachloride	A	5.0000	4.6020	1.454776	1.339089		-8.0	30
Chlorobenzene	A	5.0000	3.9630	0.84432	0.6691873		-20.7	30
Chloroethane	A	5.0000	4.0390	0.6005614	0.4851724		-19.2	30
Chloroform	A	5.0000	4.1540	1.869029	1.552758		-16.9	30
Chloromethane	A	5.0000	4.5220	0.6797098	0.614778		-9.6	30
Cyclohexane	L	5.0000	4.3600	2.004777	1.493026		-12.8	30
Dibromochloromethane	A	5.0000	4.2530	0.6541537	0.5564332		-14.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.1240	0.1180701	0.1079455		-17.5	30
1,2-Dibromoethane	A	5.0000	4.2870	0.4781468	0.4099809		-14.3	30
Dibromomethane	A	5.0000	4.1100	0.1342412	0.1103365		-17.8	30
1,2-Dichlorobenzene	A	5.0000	3.9760	1.130988	0.8992853		-20.5	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 09JAN02.D
Sequence: 2100446
Lab Sample ID: 2100446-CCV1

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Calibration Date: 10/16/20 14:05
Injection Date: 01/09/21
Injection Time: 15:59

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	3.9220	1.211305	0.9502492		-21.6	30
1,4-Dichlorobenzene	A	5.0000	4.0420	1.048992	0.8480332		-19.2	30
Dichlorodifluoromethane	A	5.0000	4.2110	2.092947	1.762485		-15.8	30
1,1-Dichloroethane	A	5.0000	4.3810	1.471357	1.289309		-12.4	30
1,2-Dichloroethane	A	5.0000	4.0620	1.204454	0.9785467		-18.8	30
1,1-Dichloroethene	A	5.0000	4.1020	1.328236	1.089556		-18.0	30
cis-1,2-Dichloroethene	A	5.0000	4.3110	1.11657	0.9627545		-13.8	30
trans-1,2-Dichloroethene	A	5.0000	4.1660	1.28934	1.074249		-16.7	30
1,2-Dichloropropane	A	5.0000	4.3900	0.3111577	0.2732199		-12.2	30
cis-1,3-Dichloropropene	A	5.0000	4.9600	0.3815768	0.3785034		-0.8	30
trans-1,3-Dichloropropene	A	5.0000	4.4780	0.4869158	0.4360681		-10.4	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	3.9670	2.653017	2.104642		-20.7	30
1,1-Difluoroethane	A	5.0000	4.4370	1.098082	0.9744563		-11.3	30
Diisopropyl ether	A	5.0000	4.1070	0.6705967	0.5508924		-17.9	30
1,4-Dioxane	A	5.0000	3.8290	0.1526062	0.1168794		-23.4	30
Ethanol	A	10.000	8.4990	0.3232062	0.2746977		-15.0	30
Ethyl acetate	A	5.0000	4.6600	0.3044504	0.2837534		-6.8	30
Ethylbenzene	A	5.0000	3.9970	0.7537756	0.6025464		-20.1	30
1-Ethyl-4-methylbenzene	A	5.0000	4.1350	3.168324	2.619951		-17.3	30
Ethyl t-butyl ether	A	5.0000	5.8680	1.571763	1.844608		17.4	30
n-Heptane	A	5.0000	4.2580	0.320847	0.2732199		-14.8	30
Hexachlorobutadiene	A	5.0000	3.0050	1.357569	0.815999		-39.9	30 *
Hexachloroethane	L	5.0000	4.7460	0.1427386	0.1520269		-5.1	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	09JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	01/09/21
Lab Sample ID:	2100446-CCV1	Injection Time:	15:59

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.3050	1.515678	1.304869		-13.9	30
2-Hexanone	A	5.0000	4.1960	0.5953603	0.4996135		-16.1	30
Isooctane	A	5.0000	4.3280	1.660449	1.437382		-13.4	30
Isopropyl alcohol	A	5.0000	5.0610	0.8990552	0.9099803		1.2	30
Methylene chloride	A	5.0000	4.0420	0.835122	0.6750582		-19.2	30
Methyl ethyl ketone	A	5.0000	4.3300	1.781817	1.542891		-13.4	30
Methyl iodide	A	5.0000	3.8830	0.8675081	0.6736667		-22.3	30
Methyl isobutyl ketone	A	5.0000	4.0550	0.7696382	0.6241742		-18.9	30
Methyl t-butyl ether	A	5.0000	4.7210	2.615894	2.469844		-5.6	30
Naphthalene	Q	5.0000	4.2260	1.012718	0.8049366		-15.5	30
Propylene	A	5.0000	4.2910	0.6480759	0.5561635		-14.2	30
Styrene	A	5.0000	4.0760	1.318255	1.074566		-18.5	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.3740	0.2389174	0.2089928		-12.5	30
1,1,2,2-Tetrachloroethane	A	5.0000	3.9760	1.58216	1.258183		-20.5	30
Tetrachloroethene	A	5.0000	3.8740	0.4672849	0.3620232		-22.5	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.1980	1.09536	0.9197213		-16.0	30
Tetrahydrofuran	A	5.0000	4.3120	1.081503	0.932646		-13.8	30
Toluene	A	5.0000	4.1600	1.079179	0.8978439		-16.8	30
1,2,4-Trichlorobenzene	Q	5.0000	3.9080	0.5002153	0.3175545		-21.8	30
1,1,1-Trichloroethane	A	5.0000	4.4810	1.533047	1.373921		-10.4	30
1,1,2-Trichloroethane	A	5.0000	4.1640	0.3511086	0.2923987		-16.7	30
Trichloroethene	A	5.0000	3.9140	0.3588897	0.2809504		-21.7	30
Trichlorofluoromethane	A	5.0000	3.9750	2.034791	1.617508		-20.5	30

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2020 L St, Suite 400
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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	09JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	01/09/21
Lab Sample ID:	2100446-CCV1	Injection Time:	15:59

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	4.4740	0.3162859	0.282998		-10.5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.0470	1.593303	1.28971		-19.1	30
1,2,4-Trimethylbenzene	A	5.0000	3.9540	2.184116	1.727043		-20.9	30
1,3,5-Trimethylbenzene	A	5.0000	3.8620	2.146865	1.658351		-22.8	30
Vinyl acetate	A	5.0000	4.4290	2.126359	1.883488		-11.4	30
Vinyl bromide	A	5.0000	4.0500	0.8700704	0.7046818		-19.0	30
Vinyl chloride	A	5.0000	4.2250	1.015745	0.8582603		-15.5	30
p- & m-Xylenes	A	10.000	7.8570	2.061228	1.619554		-21.4	30
o-Xylene	A	5.0000	3.8650	2.18082	1.685821		-22.7	30
Total Xylenes	A	15.000	11.722	2.101092	1.641643		-21.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	09JAN03.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	01/09/21
Lab Sample ID:	2100446-CCV2	Injection Time:	16:31

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	415.12	3.784361	3.141905		-17.0	30
Total Petroleum Hydrocarbons	A	500.00	415.12	3.784361	3.141905		-17.0	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	10/16/20
Lab Sample ID:	2100446-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	12/28/20
Lab Sample ID:	2100446-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	12/28/20
Lab Sample ID:	2100446-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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CONTINUING CALIBRATION CHECK

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Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	12/28/20
Lab Sample ID:	2100446-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100446	Injection Date:	12/28/20
Lab Sample ID:	2100446-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	10JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	01/10/21
Lab Sample ID:	2100448-CCV1	Injection Time:	16:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	4.3000	1.35416	1.164626		-14.0	30
Acrylonitrile	A	5.0000	4.1440	0.4040217	0.3348681		-17.1	30
Allyl chloride	A	5.0000	4.2760	1.073815	0.9183718		-14.5	30
t-Amyl Methyl ether	A	5.0000	5.3110	0.5752153	0.6109448		6.2	30
Benzene	A	5.0000	4.1030	2.765383	2.269216		-17.9	30
Benzyl chloride	Q	5.0000	4.5510	1.074474	0.8816724		-9.0	30
Bromodichloromethane	A	5.0000	4.0070	0.8005675	0.6416081		-19.9	30
Bromoform	A	5.0000	4.1470	1.099773	0.9122415		-17.1	30
Bromomethane	A	5.0000	4.0660	0.9577811	0.778812		-18.7	30
1,3-Butadiene	A	5.0000	4.1840	0.8688991	0.7270923		-16.3	30
t-Butyl alcohol	A	10.000	10.093	1.094313	1.104501		0.9	30
Carbon disulfide	A	5.0000	4.2330	2.703689	2.289122		-15.3	30
Carbon tetrachloride	A	5.0000	4.6010	1.454776	1.338778		-8.0	30
Chlorobenzene	A	5.0000	3.8560	0.84432	0.6510814		-22.9	30
Chloroethane	A	5.0000	4.2620	0.6005614	0.5119178		-14.8	30
Chloroform	A	5.0000	4.0560	1.869029	1.516105		-18.9	30
Chloromethane	A	5.0000	4.3860	0.6797098	0.5962054		-12.3	30
Cyclohexane	L	5.0000	4.2950	2.004777	1.473932		-14.1	30
Dibromochloromethane	A	5.0000	4.1300	0.6541537	0.5403269		-17.4	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.1180	0.1180701	0.1077336		-17.6	30
1,2-Dibromoethane	A	5.0000	4.1920	0.4781468	0.4008466		-16.2	30
Dibromomethane	A	5.0000	3.9080	0.1342412	0.1049353		-21.8	30
1,2-Dichlorobenzene	A	5.0000	3.8130	1.130988	0.8624339		-23.7	30

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EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	10JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	01/10/21
Lab Sample ID:	2100448-CCV1	Injection Time:	16:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,3-Dichlorobenzene	A	5.0000	3.9180	1.211305	0.9491347		-21.6	30	
1,4-Dichlorobenzene	A	5.0000	3.6970	1.048992	0.7756777		-26.1	30	
Dichlorodifluoromethane	A	5.0000	4.2480	2.092947	1.778157		-15.0	30	
1,1-Dichloroethane	A	5.0000	4.2730	1.471357	1.257566		-14.5	30	
1,2-Dichloroethane	A	5.0000	4.0840	1.204454	0.9837855		-18.3	30	
1,1-Dichloroethene	A	5.0000	4.1240	1.328236	1.095461		-17.5	30	
cis-1,2-Dichloroethene	A	5.0000	4.2090	1.11657	0.9398853		-15.8	30	
trans-1,2-Dichloroethene	A	5.0000	4.1380	1.28934	1.06712		-17.2	30	
1,2-Dichloropropane	A	5.0000	4.2460	0.3111577	0.2642141		-15.1	30	
cis-1,3-Dichloropropene	A	5.0000	4.8340	0.3815768	0.3689219		-3.3	30	
trans-1,3-Dichloropropene	A	5.0000	4.3860	0.4869158	0.427134		-12.3	30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	4.0520	2.653017	2.14986		-19.0	30	
1,1-Difluoroethane	A	5.0000	4.3870	1.098082	0.9634231		-12.3	30	
Diisopropyl ether	A	5.0000	4.1370	0.6705967	0.5548256		-17.3	30	
1,4-Dioxane	A	5.0000	3.8970	0.1526062	0.1189536		-22.1	30	
Ethanol	A	10.000	8.8040	0.3232062	0.2845575		-12.0	30	
Ethyl acetate	A	5.0000	4.5400	0.3044504	0.2764205		-9.2	30	
Ethylbenzene	A	5.0000	3.8660	0.7537756	0.5827717		-22.7	30	
1-Ethyl-4-methylbenzene	A	5.0000	3.8930	3.168324	2.466853		-22.1	30	
Ethyl t-butyl ether	A	5.0000	5.8340	1.571763	1.834025		16.7	30	
n-Heptane	A	5.0000	4.0920	0.320847	0.2625496		-18.2	30	
Hexachlorobutadiene	A	5.0000	2.8870	1.357569	0.783918		-42.3	30	*
Hexachloroethane	L	5.0000	4.6230	0.1427386	0.1473847		-7.5	30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	10JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	01/10/21
Lab Sample ID:	2100448-CCV1	Injection Time:	16:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	4.1350	1.515678	1.253617		-17.3	30
2-Hexanone	A	5.0000	4.0110	0.5953603	0.4775568		-19.8	30
Isooctane	A	5.0000	4.1610	1.660449	1.38176		-16.8	30
Isopropyl alcohol	A	5.0000	5.1980	0.8990552	0.9347054		4.0	30
Methylene chloride	A	5.0000	4.0330	0.835122	0.673646		-19.3	30
Methyl ethyl ketone	A	5.0000	4.2380	1.781817	1.510271		-15.2	30
Methyl iodide	A	5.0000	3.8990	0.8675081	0.676484		-22.0	30
Methyl isobutyl ketone	A	5.0000	3.9840	0.7696382	0.613214		-20.3	30
Methyl t-butyl ether	A	5.0000	4.7620	2.615894	2.491536		-4.8	30
Naphthalene	Q	5.0000	3.9780	1.012718	0.7488744		-20.4	30
Propylene	A	5.0000	4.2040	0.6480759	0.5449421		-15.9	30
Styrene	A	5.0000	3.9290	1.318255	1.035869		-21.4	30
1,1,1,2-Tetrachloroethane	A	5.0000	4.2540	0.2389174	0.2032646		-14.9	30
1,1,2,2-Tetrachloroethane	A	5.0000	3.7870	1.58216	1.198294		-24.3	30
Tetrachloroethene	A	5.0000	3.7380	0.4672849	0.3493835		-25.2	30
1,1,1,2-Tetrafluoroethane	A	5.0000	4.2310	1.09536	0.9268661		-15.4	30
Tetrahydrofuran	A	5.0000	4.2330	1.081503	0.915633		-15.3	30
Toluene	A	5.0000	4.0190	1.079179	0.8675126		-19.6	30
1,2,4-Trichlorobenzene	Q	5.0000	3.8120	0.5002153	0.3082597		-23.8	30
1,1,1-Trichloroethane	A	5.0000	4.4950	1.533047	1.378193		-10.1	30
1,1,2-Trichloroethane	A	5.0000	4.0040	0.3511086	0.2811843		-19.9	30
Trichloroethene	A	5.0000	3.8500	0.3588897	0.2763208		-23.0	30
Trichlorofluoromethane	A	5.0000	4.0090	2.034791	1.631492		-19.8	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	10JAN02.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	01/10/21
Lab Sample ID:	2100448-CCV1	Injection Time:	16:28

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	4.2660	0.3162859	0.2698602		-14.7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	4.0500	1.593303	1.290551		-19.0	30
1,2,4-Trimethylbenzene	A	5.0000	3.7890	2.184116	1.655102		-24.2	30
1,3,5-Trimethylbenzene	A	5.0000	3.8440	2.146865	1.650516		-23.1	30
Vinyl acetate	A	5.0000	4.3760	2.126359	1.861115		-12.5	30
Vinyl bromide	A	5.0000	4.2090	0.8700704	0.7324707		-15.8	30
Vinyl chloride	A	5.0000	4.3390	1.015745	0.881398		-13.2	30
p- & m-Xylenes	A	10.000	7.6040	2.061228	1.567393		-24.0	30
o-Xylene	A	5.0000	3.7060	2.18082	1.616359		-25.9	30
Total Xylenes	A	15.000	11.310	2.101092	1.583715		-24.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	10JAN03.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	01/10/21
Lab Sample ID:	2100448-CCV2	Injection Time:	17:01

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	423.25	3.784361	3.203471		-15.3	30
Total Petroleum Hydrocarbons	A	500.00	423.25	3.784361	3.203471		-15.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	16OCT16.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	10/16/20
Lab Sample ID:	2100448-ICV2	Injection Time:	17:12

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	507.47	3.784361	3.840871		1.5	30
Total Petroleum Hydrocarbons	A	500.00	507.47	3.784361	3.840871		1.5	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	12/28/20
Lab Sample ID:	2100448-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.4190	1.35416	1.467701		8.4	30
Acrylonitrile	A	5.0000	5.6390	0.4040217	0.4556384		12.8	30
Allyl chloride	A	5.0000	5.4980	1.073815	1.18068		10.0	30
t-Amyl Methyl ether	A	5.0000	6.0400	0.5752153	0.6948413		20.8	30
Benzene	A	5.0000	5.2470	2.765383	2.901873		4.9	30
Benzyl chloride	Q	5.0000	4.9490	1.074474	0.9901759		-1.0	30
Bromodichloromethane	A	5.0000	4.9930	0.8005675	0.7994358		-0.1	30
Bromoform	A	5.0000	5.3270	1.099773	1.171716		6.5	30
Bromomethane	A	5.0000	5.2920	0.9577811	1.01367		5.8	30
1,3-Butadiene	A	5.0000	5.3290	0.8688991	0.9259979		6.6	30
t-Butyl alcohol	A	10.000	12.771	1.094313	1.397498		27.7	30
Carbon disulfide	A	5.0000	5.4350	2.703689	2.938834		8.7	30
Carbon tetrachloride	A	5.0000	5.7310	1.454776	1.667447		14.6	30
Chlorobenzene	A	5.0000	4.9070	0.84432	0.8286226		-1.9	30
Chloroethane	A	5.0000	5.3480	0.6005614	0.6423498		7.0	30
Chloroform	A	5.0000	5.3110	1.869029	1.9851		6.2	30
Chloromethane	A	5.0000	5.4000	0.6797098	0.7341084		8.0	30
Cyclohexane	L	5.0000	5.3820	2.004777	1.792735		7.6	30
Dibromochloromethane	A	5.0000	5.1960	0.6541537	0.6798548		3.9	30
1,2-Dibromo-3-chloropropane	L	5.0000	4.8800	0.1180701	0.1322785		-2.4	30
1,2-Dibromoethane	A	5.0000	5.3340	0.4781468	0.5101035		6.7	30
Dibromomethane	A	5.0000	4.9390	0.1342412	0.1326085		-1.2	30
1,2-Dichlorobenzene	A	5.0000	5.1330	1.130988	1.160961		2.7	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	12/28/20
Lab Sample ID:	2100448-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.1150	1.211305	1.239046		2.3	30
1,4-Dichlorobenzene	A	5.0000	4.8900	1.048992	1.026019		-2.2	30
Dichlorodifluoromethane	A	5.0000	5.5400	2.092947	2.319161		10.8	30
1,1-Dichloroethane	A	5.0000	5.4860	1.471357	1.614277		9.7	30
1,2-Dichloroethane	A	5.0000	5.2900	1.204454	1.274204		5.8	30
1,1-Dichloroethene	A	5.0000	5.2590	1.328236	1.397032		5.2	30
cis-1,2-Dichloroethene	A	5.0000	5.3980	1.11657	1.205559		8.0	30
trans-1,2-Dichloroethene	A	5.0000	5.4160	1.28934	1.396516		8.3	30
1,2-Dichloropropane	A	5.0000	5.1230	0.3111577	0.318798		2.5	30
cis-1,3-Dichloropropene	A	5.0000	5.7170	0.3815768	0.4362743		14.3	30
trans-1,3-Dichloropropene	A	5.0000	5.3420	0.4869158	0.5201895		6.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.2340	2.653017	2.777061		4.7	30
1,1-Difluoroethane	A	5.0000	5.5050	1.098082	1.208952		10.1	30
Diisopropyl ether	A	5.0000	5.2840	0.6705967	0.7086541		5.7	30
1,4-Dioxane	A	5.0000	5.1470	0.1526062	0.1570851		2.9	30
Ethanol	A	10.000	10.894	0.3232062	0.3520852		8.9	30
Ethyl acetate	A	5.0000	5.4460	0.3044504	0.3315808		8.9	30
Ethylbenzene	A	5.0000	5.1490	0.7537756	0.7762122		3.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.1470	3.168324	3.261549		2.9	30
Ethyl t-butyl ether	A	5.0000	6.3540	1.571763	1.997421		27.1	30
n-Heptane	A	5.0000	5.0460	0.320847	0.3238252		0.9	30
Hexachlorobutadiene	A	5.0000	4.3780	1.357569	1.188554		-12.4	30
Hexachloroethane	L	5.0000	5.0070	0.1427386	0.1618242		0.1	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	12/28/20
Lab Sample ID:	2100448-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2550	1.515678	1.593088		5.1	30
2-Hexanone	A	5.0000	5.1740	0.5953603	0.616042		3.5	30
Isooctane	A	5.0000	5.0860	1.660449	1.688917		1.7	30
Isopropyl alcohol	A	5.0000	6.2940	0.8990552	1.131775		25.9	30
Methylene chloride	A	5.0000	5.1580	0.835122	0.8615189		3.2	30
Methyl ethyl ketone	A	5.0000	5.4530	1.781817	1.943358		9.1	30
Methyl iodide	A	5.0000	5.5540	0.8675081	0.9635545		11.1	30
Methyl isobutyl ketone	A	5.0000	5.0410	0.7696382	0.7759164		0.8	30
Methyl t-butyl ether	A	5.0000	5.9730	2.615894	3.125069		19.5	30
Naphthalene	Q	5.0000	5.2260	1.012718	1.036673		4.5	30
Propylene	A	5.0000	5.2300	0.6480759	0.6778232		4.6	30
Styrene	A	5.0000	5.3040	1.318255	1.398489		6.1	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.2580	0.2389174	0.2512322		5.2	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9620	1.58216	1.570109		-0.8	30
Tetrachloroethene	A	5.0000	4.9330	0.4672849	0.4610679		-1.3	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.4780	1.09536	1.200004		9.6	30
Tetrahydrofuran	A	5.0000	5.3200	1.081503	1.150702		6.4	30
Toluene	A	5.0000	5.1090	1.079179	1.102721		2.2	30
1,2,4-Trichlorobenzene	Q	5.0000	5.0770	0.5002153	0.4349583		1.5	30
1,1,1-Trichloroethane	A	5.0000	5.7420	1.533047	1.760535		14.8	30
1,1,2-Trichloroethane	A	5.0000	5.1340	0.3511086	0.3605496		2.7	30
Trichloroethene	A	5.0000	4.9260	0.3588897	0.3535953		-1.5	30
Trichlorofluoromethane	A	5.0000	5.4230	2.034791	2.206829		8.5	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2100036
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2101002
Lab File ID:	28DEC17.D	Calibration Date:	10/16/20 14:05
Sequence:	2100448	Injection Date:	12/28/20
Lab Sample ID:	2100448-ICV1	Injection Time:	21:20

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.4200	0.3162859	0.3428226		8.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.3140	1.593303	1.693516		6.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.1570	2.184116	2.252888		3.1	30
1,3,5-Trimethylbenzene	A	5.0000	5.2480	2.146865	2.253283		5.0	30
Vinyl acetate	A	5.0000	5.9880	2.126359	2.546425		19.8	30
Vinyl bromide	A	5.0000	5.5260	0.8700704	0.9615705		10.5	30
Vinyl chloride	A	5.0000	5.3930	1.015745	1.095508		7.9	30
p- & m-Xylenes	A	10.000	10.121	2.061228	2.086137		1.2	30
o-Xylene	A	5.0000	4.9670	2.18082	2.166406		-0.7	30
Total Xylenes	A	15.000	15.088	2.101092	2.112894		0.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL1)			Lab File ID: 28DEC11.D		Analyzed: 12/28/20 17:41			
4-Bromofluorobenzene (Surrogate)	10.000	93.4		11.735	11.73933	-0.0043	+/-1.0	
Cal Standard (2100148-CAL2)			Lab File ID: 28DEC12.D		Analyzed: 12/28/20 18:10			
4-Bromofluorobenzene (Surrogate)	10.000	97.1		11.74	11.73933	0.0007	+/-1.0	
Cal Standard (2100148-CAL3)			Lab File ID: 28DEC13.D		Analyzed: 12/28/20 18:42			
4-Bromofluorobenzene (Surrogate)	10.000	102		11.739	11.73933	-0.0003	+/-1.0	
Cal Standard (2100148-CAL4)			Lab File ID: 28DEC14.D		Analyzed: 12/28/20 19:21			
4-Bromofluorobenzene (Surrogate)	10.000	99.3		11.742	11.73933	0.0027	+/-1.0	
Cal Standard (2100148-CAL5)			Lab File ID: 28DEC15.D		Analyzed: 12/28/20 20:03			
4-Bromofluorobenzene (Surrogate)	10.000	96.0		11.74	11.73933	0.0007	+/-1.0	
Cal Standard (2100148-CAL6)			Lab File ID: 28DEC16.D		Analyzed: 12/28/20 20:49			
4-Bromofluorobenzene (Surrogate)	10.000	92.9		11.74	11.73933	0.0007	+/-1.0	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100368-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100368-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100368-CCV1)			Lab File ID: 07JAN21.D		Analyzed: 01/07/21 21:24			
4-Bromofluorobenzene (Surrogate)	10.000	114	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
Calibration Blank (2100368-CCB1)			Lab File ID: 07JAN23.D		Analyzed: 01/07/21 22:24			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
LCS (B096783-BS1)			Lab File ID: 08JAN01.D		Analyzed: 01/08/21 09:17			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.734	11.73933	-0.0053	+/-1.0	
LCS Dup (B096783-BSD1)			Lab File ID: 08JAN02.D		Analyzed: 01/08/21 09:49			
4-Bromofluorobenzene (Surrogate)	10.000	114	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
Blank (B096783-BLK1)			Lab File ID: 08JAN03.D		Analyzed: 01/08/21 10:17			
4-Bromofluorobenzene (Surrogate)	10.000	98.7	70 - 130	11.733	11.73933	-0.0063	+/-1.0	
SG-VW27A-01 (2100036-01)			Lab File ID: 08JAN04.D		Analyzed: 01/08/21 10:48			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW28A-01 (2100036-03)			Lab File ID: 08JAN06.D		Analyzed: 01/08/21 11:47			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW23A-01 (2100036-05RE1)			Lab File ID: 08JAN08.D		Analyzed: 01/08/21 12:49			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW29A-01 (2100036-07RE1)			Lab File ID: 08JAN10.D		Analyzed: 01/08/21 13:48			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.736	11.73933	-0.0033	+/-1.0	
SG-VW29B-01 (2100036-08RE1)			Lab File ID: 08JAN11.D		Analyzed: 01/08/21 14:18			
4-Bromofluorobenzene (Surrogate)	10.000	96.5	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW27B-01 (2100036-02)			Lab File ID: 08JAN13.D		Analyzed: 01/08/21 15:24			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW28B-01 (2100036-04)			Lab File ID: 08JAN14.D		Analyzed: 01/08/21 16:00			
4-Bromofluorobenzene (Surrogate)	10.000	110	70 - 130	11.736	11.73933	-0.0033	+/-1.0	
SG-VW23A-01 (2100036-05)			Lab File ID: 08JAN15.D		Analyzed: 01/08/21 16:36			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW23B-01 (2100036-06)			Lab File ID: 08JAN16.D		Analyzed: 01/08/21 17:12			
4-Bromofluorobenzene (Surrogate)	10.000	103	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW29A-01 (2100036-07)			Lab File ID: 08JAN17.D		Analyzed: 01/08/21 17:47			
4-Bromofluorobenzene (Surrogate)	10.000	110	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW29B-01 (2100036-08)			Lab File ID: 08JAN18.D		Analyzed: 01/08/21 18:23			
4-Bromofluorobenzene (Surrogate)	10.000	101	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW53A-01 (2100036-09)			Lab File ID: 08JAN19.D		Analyzed: 01/08/21 18:58			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100446-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100446-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100446-CCV1)			Lab File ID: 09JAN02.D		Analyzed: 01/09/21 15:59			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Blank (2100446-CCB1)			Lab File ID: 09JAN04.D		Analyzed: 01/09/21 16:58			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
LCS (B096924-BS1)			Lab File ID: 09JAN05.D		Analyzed: 01/09/21 17:31			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
LCS Dup (B096924-BSD1)			Lab File ID: 09JAN06.D		Analyzed: 01/09/21 18:03			
4-Bromofluorobenzene (Surrogate)	10.000	112	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Blank (B096924-BLK1)			Lab File ID: 09JAN07.D		Analyzed: 01/09/21 18:31			
4-Bromofluorobenzene (Surrogate)	10.000	95.9	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW27A-01 (2100036-01RE1)			Lab File ID: 09JAN08.D		Analyzed: 01/09/21 19:06			
4-Bromofluorobenzene (Surrogate)	10.000	110	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW28A-01 (2100036-03RE1)			Lab File ID: 09JAN09.D		Analyzed: 01/09/21 19:42			
4-Bromofluorobenzene (Surrogate)	10.000	116	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW53A-02 (2100036-10)			Lab File ID: 09JAN10.D		Analyzed: 01/09/21 20:17			
4-Bromofluorobenzene (Surrogate)	10.000	115	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
SG-VW53B-01 (2100036-11)			Lab File ID: 09JAN11.D		Analyzed: 01/09/21 20:53			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW54A-01 (2100036-12)			Lab File ID: 09JAN12.D		Analyzed: 01/09/21 21:28			
4-Bromofluorobenzene (Surrogate)	10.000	108	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW54B-01 (2100036-13)			Lab File ID: 09JAN13.D		Analyzed: 01/09/21 22:03			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.74	11.73933	0.0007	+/-1.0	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW55A-01 (2100036-14)			Lab File ID: 09JAN14.D		Analyzed: 01/09/21 22:39			
4-Bromofluorobenzene (Surrogate)	10.000	107	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW55B-01 (2100036-15)			Lab File ID: 09JAN15.D		Analyzed: 01/09/21 23:14			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW54A-01 (2100036-12RE1)			Lab File ID: 09JAN16.D		Analyzed: 01/09/21 23:43			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW55A-01 (2100036-14RE1)			Lab File ID: 09JAN17.D		Analyzed: 01/10/21 15:19			
4-Bromofluorobenzene (Surrogate)	10.000	107	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100448-ICV1)			Lab File ID: 28DEC17.D		Analyzed: 12/28/20 21:20			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
Initial Cal Blank (2100448-ICB1)			Lab File ID: 28DEC19.D		Analyzed: 12/28/20 22:19			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.74	11.73933	0.0007	+/-1.0	
Calibration Check (2100448-CCV1)			Lab File ID: 10JAN02.D		Analyzed: 01/10/21 16:28			
4-Bromofluorobenzene (Surrogate)	10.000	114	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
Calibration Blank (2100448-CCB1)			Lab File ID: 10JAN04.D		Analyzed: 01/10/21 17:29			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.734	11.73933	-0.0053	+/-1.0	
LCS (B096926-BS1)			Lab File ID: 10JAN05.D		Analyzed: 01/10/21 18:01			
4-Bromofluorobenzene (Surrogate)	10.000	115	70 - 130	11.738	11.73933	-0.0013	+/-1.0	
LCS Dup (B096926-BSD1)			Lab File ID: 10JAN06.D		Analyzed: 01/10/21 18:33			
4-Bromofluorobenzene (Surrogate)	10.000	113	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
Blank (B096926-BLK1)			Lab File ID: 10JAN07.D		Analyzed: 01/10/21 19:00			
4-Bromofluorobenzene (Surrogate)	10.000	98.5	70 - 130	11.736	11.73933	-0.0033	+/-1.0	
SG-VW14-01 (2100036-18RE1)			Lab File ID: 10JAN10.D		Analyzed: 01/10/21 20:28			
4-Bromofluorobenzene (Surrogate)	10.000	97.8	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW15-01 (2100036-19)			Lab File ID: 10JAN11.D		Analyzed: 01/10/21 20:57			
4-Bromofluorobenzene (Surrogate)	10.000	96.8	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW56A-01 (2100036-23RE1)			Lab File ID: 10JAN15.D		Analyzed: 01/10/21 22:55			
4-Bromofluorobenzene (Surrogate)	10.000	102	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW56B-01 (2100036-24RE1)			Lab File ID: 10JAN16.D		Analyzed: 01/10/21 23:24			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW33A-01 (2100036-16)			Lab File ID: 10JAN17.D		Analyzed: 01/11/21 09:22			
4-Bromofluorobenzene (Surrogate)	10.000	110	70 - 130	11.736	11.73933	-0.0033	+/-1.0	
SG-VW33B-01 (2100036-17)			Lab File ID: 10JAN18.D		Analyzed: 01/11/21 09:57			
4-Bromofluorobenzene (Surrogate)	10.000	105	70 - 130	11.735	11.73933	-0.0043	+/-1.0	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW14-01 (2100036-18)			Lab File ID: 10JAN19.D		Analyzed: 01/11/21 10:43			
4-Bromofluorobenzene (Surrogate)	10.000	111	70 - 130	11.739	11.73933	-0.0003	+/-1.0	
SG-VW57A-01 (2100036-20)			Lab File ID: 10JAN20.D		Analyzed: 01/11/21 11:19			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW56A-01 (2100036-23)			Lab File ID: 10JAN21.D		Analyzed: 01/11/21 11:55			
4-Bromofluorobenzene (Surrogate)	10.000	107	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW56B-01 (2100036-24)			Lab File ID: 10JAN22.D		Analyzed: 01/11/21 12:31			
4-Bromofluorobenzene (Surrogate)	10.000	112	70 - 130	11.74	11.73933	0.0007	+/-1.0	
SG-VW57B-01 (2100036-21)			Lab File ID: 10JAN23.D		Analyzed: 01/11/21 13:07			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW57B-02 (2100036-22)			Lab File ID: 10JAN24.D		Analyzed: 01/11/21 13:43			
4-Bromofluorobenzene (Surrogate)	10.000	111	70 - 130	11.737	11.73933	-0.0023	+/-1.0	
SG-VW57B-01 (2100036-21RE1)			Lab File ID: 10JAN25.D		Analyzed: 01/11/21 14:14			
4-Bromofluorobenzene (Surrogate)	10.000	109	70 - 130	11.735	11.73933	-0.0043	+/-1.0	
SG-VW57B-02 (2100036-22RE1)			Lab File ID: 10JAN26.D		Analyzed: 01/11/21 14:44			
4-Bromofluorobenzene (Surrogate)	10.000	106	70 - 130	11.737	11.73933	-0.0023	+/-1.0	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL7)			Lab File ID: 16OCT10.D			Analyzed: 10/16/20 14:05			
Chlorobenzene-d5 (IS)	64445	11.017	169282	11.019	38	50 - 200	-0.0020	+/-0.50	*
Cal Standard (2100148-CAL8)			Lab File ID: 16OCT11.D			Analyzed: 10/16/20 14:34			
Chlorobenzene-d5 (IS)	65904	11.017	169282	11.019	39	50 - 200	-0.0020	+/-0.50	*
Cal Standard (2100148-CAL9)			Lab File ID: 16OCT12.D			Analyzed: 10/16/20 15:03			
Chlorobenzene-d5 (IS)	71033	11.018	169282	11.019	42	50 - 200	-0.0010	+/-0.50	*
Cal Standard (2100148-CALA)			Lab File ID: 16OCT13.D			Analyzed: 10/16/20 15:34			
Chlorobenzene-d5 (IS)	75959	11.016	169282	11.019	45	50 - 200	-0.0030	+/-0.50	*
Cal Standard (2100148-CALB)			Lab File ID: 16OCT14.D			Analyzed: 10/16/20 16:05			
Chlorobenzene-d5 (IS)	81415	11.016	169282	11.019	48	50 - 200	-0.0030	+/-0.50	*
Cal Standard (2100148-CALC)			Lab File ID: 16OCT15.D			Analyzed: 10/16/20 16:41			
Chlorobenzene-d5 (IS)	92664	11.021	169282	11.019	55	50 - 200	0.0020	+/-0.50	
Cal Standard (2100148-CAL1)			Lab File ID: 28DEC11.D			Analyzed: 12/28/20 17:41			
Bromochloromethane (IS)	82775	7.499	96371	7.503	86	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	140348	11.015	169282	11.019	83	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	257000	8.692	295787	8.697	87	50 - 200	-0.0050	+/-0.50	
Cal Standard (2100148-CAL2)			Lab File ID: 28DEC12.D			Analyzed: 12/28/20 18:10			
Bromochloromethane (IS)	86478	7.499	96371	7.503	90	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	147863	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	267952	8.692	295787	8.697	91	50 - 200	-0.0050	+/-0.50	
Cal Standard (2100148-CAL3)			Lab File ID: 28DEC13.D			Analyzed: 12/28/20 18:42			
Bromochloromethane (IS)	96371	7.503	96371	7.503	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	169282	11.019	169282	11.019	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	295787	8.697	295787	8.697	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2100148-CAL4)			Lab File ID: 28DEC14.D			Analyzed: 12/28/20 19:21			
Bromochloromethane (IS)	108487	7.511	96371	7.503	113	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	192330	11.022	169282	11.019	114	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	323166	8.699	295787	8.697	109	50 - 200	0.0020	+/-0.50	

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2100148-CAL5)			Lab File ID: 28DEC15.D			Analyzed: 12/28/20 20:03			
Bromochloromethane (IS)	117923	7.509	96371	7.503	122	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	209559	11.02	169282	11.019	124	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	346276	8.702	295787	8.697	117	50 - 200	0.0050	+/-0.50	
Cal Standard (2100148-CAL6)			Lab File ID: 28DEC16.D			Analyzed: 12/28/20 20:49			
Bromochloromethane (IS)	121879	7.509	96371	7.503	126	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	219386	11.02	169282	11.019	130	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	353230	8.698	295787	8.697	119	50 - 200	0.0010	+/-0.50	

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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100368-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100368-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100368-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100368-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100368-CCV1)			Lab File ID: 07JAN21.D			Analyzed: 01/07/21 21:24			
Bromochloromethane (IS)	88625	7.503	96371	7.503	92	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	153185	11.019	169282	11.019	90	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	260700	8.696	295787	8.697	88	50 - 200	-0.0010	+/-0.50	
Calibration Check (2100368-CCV2)			Lab File ID: 07JAN22.D			Analyzed: 01/07/21 21:56			
Chlorobenzene-d5 (IS)	156392	11.019	169282	11.019	92	50 - 200	0.0000	+/-0.50	
Calibration Blank (2100368-CCB1)			Lab File ID: 07JAN23.D			Analyzed: 01/07/21 22:24			
Bromochloromethane (IS)	78839	7.503	96371	7.503	82	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	132085	11.014	169282	11.019	78	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	229898	8.696	295787	8.697	78	50 - 200	-0.0010	+/-0.50	
LCS (B096783-BS1)			Lab File ID: 08JAN01.D			Analyzed: 01/08/21 09:17			
Bromochloromethane (IS)	89710	7.498	96371	7.503	93	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	144634	11.014	169282	11.019	85	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	249682	8.687	295787	8.697	84	50 - 200	-0.0100	+/-0.50	
LCS Dup (B096783-BSD1)			Lab File ID: 08JAN02.D			Analyzed: 01/08/21 09:49			
Bromochloromethane (IS)	95860	7.498	96371	7.503	99	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	164978	11.015	169282	11.019	97	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	283508	8.692	295787	8.697	96	50 - 200	-0.0050	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096783-BLK1)			Lab File ID: 08JAN03.D			Analyzed: 01/08/21 10:17			
Bromochloromethane (IS)	92433	7.497	96371	7.503	96	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	151742	11.013	169282	11.019	90	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	265078	8.69	295787	8.697	90	50 - 200	-0.0070	+/-0.50	
SG-VW27A-01 (2100036-01)			Lab File ID: 08JAN04.D			Analyzed: 01/08/21 10:48			
Bromochloromethane (IS)	94977	7.502	96371	7.503	99	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	167987	11.013	169282	11.019	99	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	276500	8.69	295787	8.697	93	50 - 200	-0.0070	+/-0.50	
SG-VW28A-01 (2100036-03)			Lab File ID: 08JAN06.D			Analyzed: 01/08/21 11:47			
Bromochloromethane (IS)	93870	7.503	96371	7.503	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	166357	11.019	169282	11.019	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	268450	8.696	295787	8.697	91	50 - 200	-0.0010	+/-0.50	
SG-VW23A-01 (2100036-05RE1)			Lab File ID: 08JAN08.D			Analyzed: 01/08/21 12:49			
Bromochloromethane (IS)	93711	7.503	96371	7.503	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	156516	11.019	169282	11.019	92	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	265843	8.696	295787	8.697	90	50 - 200	-0.0010	+/-0.50	
SG-VW29A-01 (2100036-07RE1)			Lab File ID: 08JAN10.D			Analyzed: 01/08/21 13:48			
Bromochloromethane (IS)	90348	7.5	96371	7.503	94	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	149772	11.016	169282	11.019	88	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	258605	8.693	295787	8.697	87	50 - 200	-0.0040	+/-0.50	
SG-VW29B-01 (2100036-08RE1)			Lab File ID: 08JAN11.D			Analyzed: 01/08/21 14:18			
Bromochloromethane (IS)	90437	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	146835	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	259870	8.692	295787	8.697	88	50 - 200	-0.0050	+/-0.50	
SG-VW27B-01 (2100036-02)			Lab File ID: 08JAN13.D			Analyzed: 01/08/21 15:24			
Bromochloromethane (IS)	94336	7.509	96371	7.503	98	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	166153	11.015	169282	11.019	98	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	277899	8.692	295787	8.697	94	50 - 200	-0.0050	+/-0.50	

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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100368
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW28B-01 (2100036-04)			Lab File ID: 08JAN14.D			Analyzed: 01/08/21 16:00			
Bromochloromethane (IS)	104973	7.499	96371	7.503	109	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	183652	11.016	169282	11.019	108	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	322017	8.693	295787	8.697	109	50 - 200	-0.0040	+/-0.50	
SG-VW23A-01 (2100036-05)			Lab File ID: 08JAN15.D			Analyzed: 01/08/21 16:36			
Bromochloromethane (IS)	100600	7.498	96371	7.503	104	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	185886	11.014	169282	11.019	110	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	304051	8.691	295787	8.697	103	50 - 200	-0.0060	+/-0.50	
SG-VW23B-01 (2100036-06)			Lab File ID: 08JAN16.D			Analyzed: 01/08/21 17:12			
Bromochloromethane (IS)	104470	7.501	96371	7.503	108	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	175321	11.012	169282	11.019	104	50 - 200	-0.0070	+/-0.50	
1,4-Difluorobenzene (IS)	314260	8.689	295787	8.697	106	50 - 200	-0.0080	+/-0.50	
SG-VW29A-01 (2100036-07)			Lab File ID: 08JAN17.D			Analyzed: 01/08/21 17:47			
Bromochloromethane (IS)	98941	7.499	96371	7.503	103	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	177615	11.015	169282	11.019	105	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	303473	8.692	295787	8.697	103	50 - 200	-0.0050	+/-0.50	
SG-VW29B-01 (2100036-08)			Lab File ID: 08JAN18.D			Analyzed: 01/08/21 18:23			
Bromochloromethane (IS)	101994	7.503	96371	7.503	106	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	174000	11.015	169282	11.019	103	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	312742	8.692	295787	8.697	106	50 - 200	-0.0050	+/-0.50	
SG-VW53A-01 (2100036-09)			Lab File ID: 08JAN19.D			Analyzed: 01/08/21 18:58			
Bromochloromethane (IS)	98792	7.503	96371	7.503	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	171431	11.015	169282	11.019	101	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	302770	8.692	295787	8.697	102	50 - 200	-0.0050	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100446-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100446-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100446-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100446-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100446-CCV1)			Lab File ID: 09JAN02.D			Analyzed: 01/09/21 15:59			
Bromochloromethane (IS)	94857	7.498	96371	7.503	98	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	166510	11.015	169282	11.019	98	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	284584	8.692	295787	8.697	96	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100446-CCV2)			Lab File ID: 09JAN03.D			Analyzed: 01/09/21 16:31			
Chlorobenzene-d5 (IS)	169642	11.015	169282	11.019	100	50 - 200	-0.0040	+/-0.50	
Calibration Blank (2100446-CCB1)			Lab File ID: 09JAN04.D			Analyzed: 01/09/21 16:58			
Bromochloromethane (IS)	91062	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	155154	11.015	169282	11.019	92	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	272355	8.692	295787	8.697	92	50 - 200	-0.0050	+/-0.50	
LCS (B096924-BS1)			Lab File ID: 09JAN05.D			Analyzed: 01/09/21 17:31			
Bromochloromethane (IS)	99182	7.498	96371	7.503	103	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	175254	11.014	169282	11.019	104	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	297092	8.692	295787	8.697	100	50 - 200	-0.0050	+/-0.50	
LCS Dup (B096924-BSD1)			Lab File ID: 09JAN06.D			Analyzed: 01/09/21 18:03			
Bromochloromethane (IS)	101717	7.499	96371	7.503	106	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	177089	11.015	169282	11.019	105	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	301905	8.692	295787	8.697	102	50 - 200	-0.0050	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096924-BLK1)			Lab File ID: 09JAN07.D			Analyzed: 01/09/21 18:31			
Bromochloromethane (IS)	89663	7.496	96371	7.503	93	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	145770	11.017	169282	11.019	86	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	264295	8.689	295787	8.697	89	50 - 200	-0.0080	+/-0.50	
SG-VW27A-01 (2100036-01RE1)			Lab File ID: 09JAN08.D			Analyzed: 01/09/21 19:06			
Bromochloromethane (IS)	89719	7.498	96371	7.503	93	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	154139	11.015	169282	11.019	91	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	268218	8.692	295787	8.697	91	50 - 200	-0.0050	+/-0.50	
SG-VW28A-01 (2100036-03RE1)			Lab File ID: 09JAN09.D			Analyzed: 01/09/21 19:42			
Bromochloromethane (IS)	96628	7.498	96371	7.503	100	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	169237	11.014	169282	11.019	100	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	294712	8.691	295787	8.697	100	50 - 200	-0.0060	+/-0.50	
SG-VW53A-02 (2100036-10)			Lab File ID: 09JAN10.D			Analyzed: 01/09/21 20:17			
Bromochloromethane (IS)	97564	7.507	96371	7.503	101	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	170712	11.013	169282	11.019	101	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	296042	8.695	295787	8.697	100	50 - 200	-0.0020	+/-0.50	
SG-VW53B-01 (2100036-11)			Lab File ID: 09JAN11.D			Analyzed: 01/09/21 20:53			
Bromochloromethane (IS)	94195	7.506	96371	7.503	98	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	156546	11.017	169282	11.019	92	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	284072	8.694	295787	8.697	96	50 - 200	-0.0030	+/-0.50	
SG-VW54A-01 (2100036-12)			Lab File ID: 09JAN12.D			Analyzed: 01/09/21 21:28			
Bromochloromethane (IS)	95837	7.503	96371	7.503	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	179649	11.015	169282	11.019	106	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	299792	8.692	295787	8.697	101	50 - 200	-0.0050	+/-0.50	
SG-VW54B-01 (2100036-13)			Lab File ID: 09JAN13.D			Analyzed: 01/09/21 22:03			
Bromochloromethane (IS)	97383	7.509	96371	7.503	101	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	166562	11.015	169282	11.019	98	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	303783	8.697	295787	8.697	103	50 - 200	0.0000	+/-0.50	

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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100446
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW55A-01 (2100036-14)			Lab File ID: 09JAN14.D			Analyzed: 01/09/21 22:39			
Bromochloromethane (IS)	96425	7.503	96371	7.503	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	166432	11.014	169282	11.019	98	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	294180	8.697	295787	8.697	99	50 - 200	0.0000	+/-0.50	
SG-VW55B-01 (2100036-15)			Lab File ID: 09JAN15.D			Analyzed: 01/09/21 23:14			
Bromochloromethane (IS)	95482	7.508	96371	7.503	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	161437	11.019	169282	11.019	95	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	291476	8.696	295787	8.697	99	50 - 200	-0.0010	+/-0.50	
SG-VW54A-01 (2100036-12RE1)			Lab File ID: 09JAN16.D			Analyzed: 01/09/21 23:43			
Bromochloromethane (IS)	91686	7.504	96371	7.503	95	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	157842	11.015	169282	11.019	93	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	265740	8.692	295787	8.697	90	50 - 200	-0.0050	+/-0.50	
SG-VW55A-01 (2100036-14RE1)			Lab File ID: 09JAN17.D			Analyzed: 01/10/21 15:19			
Bromochloromethane (IS)	88792	7.494	96371	7.503	92	50 - 200	-0.0090	+/-0.50	
Chlorobenzene-d5 (IS)	147935	11.015	169282	11.019	87	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	260116	8.687	295787	8.697	88	50 - 200	-0.0100	+/-0.50	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2100448-ICV2)			Lab File ID: 16OCT16.D			Analyzed: 10/16/20 17:12			
Chlorobenzene-d5 (IS)	102210	11.02	169282	11.019	60	50 - 200	0.0010	+/-0.50	
Initial Cal Blank (2100448-ICB2)			Lab File ID: 16OCT17.D			Analyzed: 10/16/20 17:40			
Chlorobenzene-d5 (IS)	97773	11.017	169282	11.019	58	50 - 200	-0.0020	+/-0.50	
Initial Cal Check (2100448-ICV1)			Lab File ID: 28DEC17.D			Analyzed: 12/28/20 21:20			
Bromochloromethane (IS)	100808	7.502	96371	7.503	105	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	177217	11.018	169282	11.019	105	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	315485	8.695	295787	8.697	107	50 - 200	-0.0020	+/-0.50	
Initial Cal Blank (2100448-ICB1)			Lab File ID: 28DEC19.D			Analyzed: 12/28/20 22:19			
Bromochloromethane (IS)	90571	7.499	96371	7.503	94	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	149586	11.015	169282	11.019	88	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	281343	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
Calibration Check (2100448-CCV1)			Lab File ID: 10JAN02.D			Analyzed: 01/10/21 16:28			
Bromochloromethane (IS)	100774	7.496	96371	7.503	105	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	180575	11.017	169282	11.019	107	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	307599	8.689	295787	8.697	104	50 - 200	-0.0080	+/-0.50	
Calibration Check (2100448-CCV2)			Lab File ID: 10JAN03.D			Analyzed: 01/10/21 17:01			
Chlorobenzene-d5 (IS)	177148	11.014	169282	11.019	105	50 - 200	-0.0050	+/-0.50	
Calibration Blank (2100448-CCB1)			Lab File ID: 10JAN04.D			Analyzed: 01/10/21 17:29			
Bromochloromethane (IS)	92897	7.498	96371	7.503	96	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	158216	11.014	169282	11.019	93	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	281265	8.692	295787	8.697	95	50 - 200	-0.0050	+/-0.50	
LCS (B096926-BS1)			Lab File ID: 10JAN05.D			Analyzed: 01/10/21 18:01			
Bromochloromethane (IS)	104298	7.502	96371	7.503	108	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	182245	11.013	169282	11.019	108	50 - 200	-0.0060	+/-0.50	
1,4-Difluorobenzene (IS)	315151	8.69	295787	8.697	107	50 - 200	-0.0070	+/-0.50	
LCS Dup (B096926-BSD1)			Lab File ID: 10JAN06.D			Analyzed: 01/10/21 18:33			
Bromochloromethane (IS)	105805	7.499	96371	7.503	110	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	185529	11.015	169282	11.019	110	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	317173	8.692	295787	8.697	107	50 - 200	-0.0050	+/-0.50	

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B096926-BLK1)			Lab File ID: 10JAN07.D			Analyzed: 01/10/21 19:00			
Bromochloromethane (IS)	93371	7.5	96371	7.503	97	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	154156	11.011	169282	11.019	91	50 - 200	-0.0080	+/-0.50	
1,4-Difluorobenzene (IS)	276574	8.689	295787	8.697	94	50 - 200	-0.0080	+/-0.50	
SG-VW14-01 (2100036-18RE1)			Lab File ID: 10JAN10.D			Analyzed: 01/10/21 20:28			
Bromochloromethane (IS)	88270	7.504	96371	7.503	92	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	145894	11.015	169282	11.019	86	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	247707	8.692	295787	8.697	84	50 - 200	-0.0050	+/-0.50	
SG-VW15-01 (2100036-19)			Lab File ID: 10JAN11.D			Analyzed: 01/10/21 20:57			
Bromochloromethane (IS)	86677	7.499	96371	7.503	90	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	144710	11.015	169282	11.019	85	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	245864	8.692	295787	8.697	83	50 - 200	-0.0050	+/-0.50	
SG-VW56A-01 (2100036-23RE1)			Lab File ID: 10JAN15.D			Analyzed: 01/10/21 22:55			
Bromochloromethane (IS)	127439	7.506	96371	7.503	132	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	215122	11.017	169282	11.019	127	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	416859	8.694	295787	8.697	141	50 - 200	-0.0030	+/-0.50	
SG-VW56B-01 (2100036-24RE1)			Lab File ID: 10JAN16.D			Analyzed: 01/10/21 23:24			
Bromochloromethane (IS)	118969	7.506	96371	7.503	123	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	206551	11.017	169282	11.019	122	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	394954	8.694	295787	8.697	134	50 - 200	-0.0030	+/-0.50	
SG-VW33A-01 (2100036-16)			Lab File ID: 10JAN17.D			Analyzed: 01/11/21 09:22			
Bromochloromethane (IS)	109078	7.495	96371	7.503	113	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	190199	11.011	169282	11.019	112	50 - 200	-0.0080	+/-0.50	
1,4-Difluorobenzene (IS)	354979	8.688	295787	8.697	120	50 - 200	-0.0090	+/-0.50	
SG-VW33B-01 (2100036-17)			Lab File ID: 10JAN18.D			Analyzed: 01/11/21 09:57			
Bromochloromethane (IS)	110739	7.499	96371	7.503	115	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	192542	11.015	169282	11.019	114	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	365789	8.693	295787	8.697	124	50 - 200	-0.0040	+/-0.50	

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Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW14-01 (2100036-18)			Lab File ID: 10JAN19.D			Analyzed: 01/11/21 10:43			
Bromochloromethane (IS)	109917	7.503	96371	7.503	114	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	194374	11.014	169282	11.019	115	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	360933	8.691	295787	8.697	122	50 - 200	-0.0060	+/-0.50	
SG-VW57A-01 (2100036-20)			Lab File ID: 10JAN20.D			Analyzed: 01/11/21 11:19			
Bromochloromethane (IS)	111046	7.499	96371	7.503	115	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	191819	11.015	169282	11.019	113	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	363389	8.693	295787	8.697	123	50 - 200	-0.0040	+/-0.50	
SG-VW56A-01 (2100036-23)			Lab File ID: 10JAN21.D			Analyzed: 01/11/21 11:55			
Bromochloromethane (IS)	109006	7.501	96371	7.503	113	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	189197	11.012	169282	11.019	112	50 - 200	-0.0070	+/-0.50	
1,4-Difluorobenzene (IS)	354749	8.69	295787	8.697	120	50 - 200	-0.0070	+/-0.50	
SG-VW56B-01 (2100036-24)			Lab File ID: 10JAN22.D			Analyzed: 01/11/21 12:31			
Bromochloromethane (IS)	109248	7.503	96371	7.503	113	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	192652	11.015	169282	11.019	114	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	354612	8.692	295787	8.697	120	50 - 200	-0.0050	+/-0.50	
SG-VW57B-01 (2100036-21)			Lab File ID: 10JAN23.D			Analyzed: 01/11/21 13:07			
Bromochloromethane (IS)	124761	7.506	96371	7.503	129	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	233730	11.017	169282	11.019	138	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	481201	8.695	295787	8.697	163	50 - 200	-0.0020	+/-0.50	
SG-VW57B-02 (2100036-22)			Lab File ID: 10JAN24.D			Analyzed: 01/11/21 13:43			
Bromochloromethane (IS)	129338	7.505	96371	7.503	134	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	237655	11.017	169282	11.019	140	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	474167	8.694	295787	8.697	160	50 - 200	-0.0030	+/-0.50	
SG-VW57B-01 (2100036-21RE1)			Lab File ID: 10JAN25.D			Analyzed: 01/11/21 14:14			
Bromochloromethane (IS)	116111	7.499	96371	7.503	120	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5 (IS)	210986	11.015	169282	11.019	125	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	399976	8.692	295787	8.697	135	50 - 200	-0.0050	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100448
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW57B-02 (2100036-22RE1)			Lab File ID: 10JAN26.D			Analyzed: 01/11/21 14:44			
Bromochloromethane (IS)	114469	7.501	96371	7.503	119	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	206721	11.017	169282	11.019	122	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	396016	8.694	295787	8.697	134	50 - 200	-0.0030	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2100148
Calibration: 2101002

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J07014	TO-14A/TO-15 Working BFB	2100148-TUN2	16OCT09.D	10/16/20 13:36
0L12008	MS-A1 TO-14A / TO-15 CAL1 TPH	2100148-CAL7	16OCT10.D	10/16/20 14:05
0L12009	MS-A1 TO-14A / TO-15 CAL2 TPH	2100148-CAL8	16OCT11.D	10/16/20 14:34
0L12010	MS-A1 TO-14A / TO-15 CAL3 TPH	2100148-CAL9	16OCT12.D	10/16/20 15:03
0L12011	MS-A1 TO-14A / TO-15 CAL4 TPH	2100148-CALA	16OCT13.D	10/16/20 15:34
0L12012	MS-A1 TO-14A / TO-15 CAL5 TPH	2100148-CALB	16OCT14.D	10/16/20 16:05
0L12013	MS-A1 TO-14A / TO-15 CAL6 TPH	2100148-CALC	16OCT15.D	10/16/20 16:41
0L19003	TO-14A/TO-15 Working BFB	2100148-TUN1	28DEC10.D	12/28/20 17:12
0L29055	MS-A1 TO-14A /TO-15 CAL1	2100148-CAL1	28DEC11.D	12/28/20 17:41
0L29056	MS-A1 TO-14A /TO-15 CAL2	2100148-CAL2	28DEC12.D	12/28/20 18:10
0L29057	MS-A1 TO-14A /TO-15 CAL3	2100148-CAL3	28DEC13.D	12/28/20 18:42
0L29058	MS-A1 TO-14A /TO-15 CAL4	2100148-CAL4	28DEC14.D	12/28/20 19:21
0L29059	MS-A1 TO-14A /TO-15 CAL5	2100148-CAL5	28DEC15.D	12/28/20 20:03
0L29060	MS-A1 TO-14A /TO-15 CAL6	2100148-CAL6	28DEC16.D	12/28/20 20:49

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INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.638659	1	1.44823	5	1.344678	15	1.24182	20	1.224151	25	1.227421
Acrylonitrile	0.5	0.4199336	1	0.4011425	5	0.3890797	15	0.407164	20	0.3970303	25	0.4097802
Allyl chloride	0.5	1.131743	1	1.097389	5	1.072294	15	1.050872	20	1.040675	25	1.04992
t-Amyl Methyl ether	0.5	0.4513619	1	0.4479907	5	0.5432287	15	0.6396713	20	0.6659846	25	0.7030547
Benzene	0.5	2.984959	1	2.925946	5	2.772556	15	2.690203	20	2.601473	25	2.61716
Benzyl chloride	0.5	0.2076268	1	0.2567241	5	0.7760187	15	1.549344	20	1.740744	25	1.916387
Bromodichloromethane	0.5	0.7592996	1	0.7537917	5	0.7619807	15	0.816734	20	0.8307506	25	0.8808482
Bromoform	0.5	0.8132642	1	0.8323245	5	1.069494	15	1.258587	20	1.290742	25	1.334224
Bromomethane	0.5	1.162187	1	1.119938	5	0.9432713	15	0.8629052	20	0.8167406	25	0.8416446
1,3-Butadiene	0.5	1.049351	1	0.9737737	5	0.858557	15	0.8000283	20	0.7492559	25	0.7824285
t-Butyl alcohol	1	0.7676231	2	0.775573	10	1.043229	30	1.256246	40	1.334634	50	1.388572
Carbon disulfide	0.5	2.933253	1	2.714795	5	2.734848	15	2.658008	20	2.592119	25	2.589112
Carbon tetrachloride	0.5	1.252069	1	1.280326	5	1.416899	15	1.552862	20	1.58654	25	1.639958
Chlorobenzene	0.5	0.8656031	1	0.8193258	5	0.8097178	15	0.8382606	20	0.8475826	25	0.8854299
Chloroethane	0.5	0.7304138	1	0.6780915	5	0.6024011	15	0.5515561	20	0.5120502	25	0.5288557
Chloroform	0.5	2.037813	1	1.958995	5	1.901817	15	1.801703	20	1.742552	25	1.771294
Chloromethane	0.5	0.8401087	1	0.7801984	5	0.6897511	15	0.6091175	20	0.5784877	25	0.5805955
Cyclohexane	0.5	3.299064	1	2.418534	5	1.744446	15	1.550041	20	1.504092	25	1.512484
Dibromochloromethane	0.5	0.5464591	1	0.554353	5	0.6343213	15	0.705693	20	0.7244467	25	0.759649
1,2-Dibromo-3-chloropropane	0.5	5.514863E-02	1	7.608394E-02	5	0.1153696	15	0.148682	20	0.1547034	25	0.1584331
1,2-Dibromoethane	0.5	0.4164202	1	0.4250761	5	0.487797	15	0.508426	20	0.5077554	25	0.5234063
Dibromomethane	0.5	0.1512062	1	0.1406222	5	0.1297758	15	0.1280518	20	0.1270692	25	0.1287218
1,2-Dichlorobenzene	0.5	1.025451	1	1.006878	5	1.098262	15	1.201487	20	1.206221	25	1.247629
1,3-Dichlorobenzene	0.5	0.9306866	1	0.966638	5	1.172481	15	1.39521	20	1.398549	25	1.404263
1,4-Dichlorobenzene	0.5	0.8068515	1	0.8286725	5	0.9789227	15	1.140564	20	1.216836	25	1.322106

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INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.459921	1	2.300007	5	2.075085	15	1.951877	20	1.887185	25	1.883609
1,1-Dichloroethane	0.5	1.535971	1	1.503157	5	1.497587	15	1.447965	20	1.414571	25	1.428889
1,2-Dichloroethane	0.5	1.356448	1	1.280673	5	1.225493	15	1.142244	20	1.109114	25	1.112753
1,1-Dichloroethene	0.5	1.383268	1	1.349939	5	1.316579	15	1.308956	20	1.29317	25	1.317503
cis-1,2-Dichloroethene	0.5	1.184416	1	1.135318	5	1.133972	15	1.100765	20	1.070711	25	1.074239
trans-1,2-Dichloroethene	0.5	1.392449	1	1.301603	5	1.296054	15	1.267753	20	1.230884	25	1.247296
1,2-Dichloropropane	0.5	0.3172763	1	0.3149071	5	0.307762	15	0.3090445	20	0.3054269	25	0.3125295
cis-1,3-Dichloropropene	0.5	0.2628794	1	0.2707948	5	0.3797936	15	0.4471448	20	0.456682	25	0.472166
trans-1,3-Dichloropropene	0.5	0.3798444	1	0.390555	5	0.4756937	15	0.5375875	20	0.5537938	25	0.5840206
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	3.122199	1	3.044936	5	2.618858	15	2.426878	20	2.321498	25	2.383735
1,1-Difluoroethane	0.5	1.291453	1	1.237656	5	1.121167	15	0.9999908	20	0.9740127	25	0.9642153
Diisopropyl ether	0.5	0.6825732	1	0.6324152	5	0.6494485	15	0.6713124	20	0.6862529	25	0.7015778
1,4-Dioxane	0.5	0.1349416	1	0.1342405	5	0.1555241	15	0.1584882	20	0.1630101	25	0.1694329
Ethanol	1	0.3958925	2	0.3828719	10	0.3268307	30	0.29064	40	0.2678634	50	0.2751385
Ethyl acetate	0.5	0.2628813	1	0.2897847	5	0.3152401	15	0.3201674	20	0.3138743	25	0.3247549
Ethylbenzene	0.5	0.7860461	1	0.7701048	5	0.7473092	15	0.7390041	20	0.7333138	25	0.7468754
1-Ethyl-4-methylbenzene	0.5	2.863596	1	2.923179	5	3.14734	15	3.353323	20	3.299321	25	3.423187
Ethyl t-butyl ether	0.5	1.345334	1	1.318486	5	1.434892	15	1.664433	20	1.775205	25	1.892228
n-Heptane	0.5	0.324358	1	0.3106527	5	0.320866	15	0.3183544	20	0.320246	25	0.330605
Hexachlorobutadiene	0.5	1.671274	1	1.412253	5	1.149821	15	1.240417	20	1.304036	25	1.367611
Hexachloroethane	0.5	8.108416E-02	1	9.569669E-02	5	0.1380182	15	0.1770499	20	0.179298	25	0.1852844
Hexane	0.5	1.598067	1	1.532066	5	1.505453	15	1.49452	20	1.474479	25	1.489484
2-Hexanone	0.5	0.5071595	1	0.5001642	5	0.5878622	15	0.6439559	20	0.6548707	25	0.6781496
Isooctane	0.5	1.727393	1	1.68213	5	1.645583	15	1.621136	20	1.62001	25	1.666442
Isopropyl alcohol	0.5	0.7093929	1	0.6787854	5	0.8129001	15	1.028652	20	1.070631	25	1.09397
Methylene chloride	0.5	1.030504	1	0.9276348	5	0.8141246	15	0.7635201	20	0.7379816	25	0.736967

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Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	2.01341	1	1.895164	5	1.822042	15	1.68709	20	1.636352	25	1.636843
Methyl iodide	0.5	0.938206	1	0.8776799	5	0.8378662	15	0.8452011	20	0.8459503	25	0.8601449
Methyl isobutyl ketone	0.5	0.7635019	1	0.7508434	5	0.754401	15	0.773031	20	0.7730409	25	0.8030111
Methyl t-butyl ether	0.5	2.423195	1	2.392285	5	2.548651	15	2.690006	20	2.763977	25	2.87725
Naphthalene	0.5	0.439764	1	0.5812137	5	0.9393793	15	1.264923	20	1.368514	25	1.482512
Propylene	0.5	0.8649955	1	0.7574181	5	0.6241712	15	0.5582543	20	0.5426041	25	0.541012
Styrene	0.5	1.294782	1	1.265158	5	1.32847	15	1.358232	20	1.330401	25	1.332484
1,1,1,2-Tetrachloroethane	0.5	0.1877821	1	0.2058578	5	0.2342699	15	0.2597942	20	0.2650588	25	0.2807417
1,1,2,2-Tetrachloroethane	0.5	1.532904	1	1.491042	5	1.521272	15	1.623186	20	1.64395	25	1.680609
Tetrachloroethene	0.5	0.44	1	0.4343688	5	0.4504863	15	0.4776513	20	0.4895849	25	0.5116179
1,1,1,2-Tetrafluoroethane	0.5	1.351374	1	1.238928	5	1.135798	15	0.9993886	20	0.9408258	25	0.905846
Tetrahydrofuran	0.5	1.197705	1	1.165036	5	1.083604	15	1.027804	20	1.00123	25	1.013641
Toluene	0.5	1.052685	1	1.077506	5	1.074199	15	1.085558	20	1.0749	25	1.110228
1,2,4-Trichlorobenzene	0.5	0.3086613	1	0.3071086	5	0.4028899	15	0.5969324	20	0.6508286	25	0.734871
1,1,1-Trichloroethane	0.5	1.477982	1	1.454127	5	1.488622	15	1.583151	20	1.582177	25	1.612225
1,1,2-Trichloroethane	0.5	0.3485603	1	0.3555114	5	0.3456406	15	0.3478955	20	0.3483291	25	0.3607145
Trichloroethene	0.5	0.36	1	0.3424867	5	0.3393253	15	0.3582163	20	0.3673096	25	0.3860001
Trichlorofluoromethane	0.5	2.28064	1	2.120655	5	1.949072	15	1.95597	20	1.934143	25	1.968264
1,2,3-Trichloropropane	0.5	0.3323168	1	0.3217844	5	0.3331128	15	0.3134959	20	0.3022466	25	0.294759
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.654364	1	1.60827	5	1.58612	15	1.571918	20	1.552899	25	1.586245
1,2,4-Trimethylbenzene	0.5	2.143671	1	2.098835	5	2.145627	15	2.224448	20	2.228873	25	2.263242
1,3,5-Trimethylbenzene	0.5	2.102916	1	2.080034	5	2.168972	15	2.148973	20	2.214338	25	2.165958
Vinyl acetate	0.5	1.914346	1	1.847175	5	2.125681	15	2.254052	20	2.281976	25	2.334926
Vinyl bromide	0.5	1.009967	1	0.9578159	5	0.8378247	15	0.8222736	20	0.7722327	25	0.8203087
Vinyl chloride	0.5	1.231048	1	1.152779	5	1.024852	15	0.9274905	20	0.8656751	25	0.8926263
p- & m-Xylenes	1	2.037934	2	2.040335	10	2.022867	30	2.095399	40	2.0756	50	2.095234

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	2.154929	1	2.108979	5	2.111766	15	2.207699	20	2.232106	25	2.269443
Total Xylenes	1.5	2.076933	3	2.063216	15	2.0525	45	2.132832	60	2.127769	75	2.153304
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	0.9630561	10	1.001102	10	1.05248	10	1.024042	10	0.9894493	10	0.9576819

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
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Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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INITIAL CALIBRATION DATA (Continued)

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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air

SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
Total Petroleum Hydrocarbons	50	4.008398	100	3.941117	200	3.777784	300	3.735921	500	3.683891	1000	3.559055
4-Bromofluorobenzene (Surrogate)	10	~~1.143828~~	10	~~1.190717~~	10	~~1.260907~~	10	~~1.289156~~	10	~~1.306602~~	10	~~1.307584~~

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.35416	12.15506	5.313667	2.920133E-02			30	
Acrylonitrile	0.4040217	2.658088	5.650667	6.545118E-02			30	
Allyl chloride	1.073815	3.255199	6.096833	7.339098E-02			30	
t-Amyl Methyl ether	0.5752153	19.24701	8.843833	2.518937E-02			30	
Benzene	2.765383	5.79788	8.516	4.709529E-02			30	
Benzyl chloride	1.074474	70.72554	12.47933	1.743702E-02		0.999	0.99	
Bromodichloromethane	0.8005675	6.368602	9.092167	5.085719E-02			30	
Bromoform	1.099773	21.17628	11.35217	2.677033E-02			30	
Bromomethane	0.9577811	15.53321	4.776333	0.0712533			30	
1,3-Butadiene	0.8688991	13.63719	4.573	6.105655E-02			30	
t-Butyl alcohol	1.094313	25.24168	5.926167	0.1445921			30	
Carbon disulfide	2.703689	4.720855	6.281167	5.327424E-02			30	
Carbon tetrachloride	1.454776	11.26284	8.607833	4.507276E-02			30	
Chlorobenzene	0.84432	3.35513	11.04017	3.106664E-02			30	
Chloroethane	0.6005614	14.5644	4.899333	8.015979E-02			30	
Chloroform	1.869029	6.227538	7.587167	7.696929E-02			30	
Chloromethane	0.6797098	16.24736	4.306833	7.037411E-02			30	
Cyclohexane	2.004777	36.06609	8.69	3.012126E-02	0.9997578		0.99	
Dibromochloromethane	0.6541537	13.78849	10.34867	3.809283E-02			30	
1,2-Dibromo-3-chloropropane	0.1180701	37.1841	13.01333	1.556892E-02	0.998239		0.99	
1,2-Dibromoethane	0.4781468	9.612159	10.47933	2.200011E-02			30	
Dibromomethane	0.1342412	7.212184	8.968667	6.445581E-02			30	
1,2-Dichlorobenzene	1.130988	9.003705	12.74217	1.411764E-02			30	
1,3-Dichlorobenzene	1.211305	18.32027	12.49867	2.031891E-02			30	
1,4-Dichlorobenzene	1.048992	20.14279	12.53333	2.101552E-02			30	
Dichlorodifluoromethane	2.092947	11.38565	4.182667	5.756722E-02			30	

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2101002
Instrument: MS-A1
Matrix: Air
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.471357	3.25229	6.838333	0.06664			30	
1,2-Dichloroethane	1.204454	8.362325	8.0655	7.505512E-02			30	
1,1-Dichloroethene	1.328236	2.463162	5.935833	5.194093E-02			30	
cis-1,2-Dichloroethene	1.11657	3.88367	7.394667	5.380595E-02			30	
trans-1,2-Dichloroethene	1.28934	4.452412	6.691333	5.981446E-02			30	
1,2-Dichloropropane	0.3111577	1.453114	8.991	2.764642E-02			30	
cis-1,3-Dichloropropene	0.3815768	24.7268	9.865333	3.855663E-02			30	
trans-1,3-Dichloropropene	0.4869158	17.7492	9.591	3.952982E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.653017	13.1489	4.379167	5.838789E-02			30	
1,1-Difluoroethane	1.098082	12.90092	4.0605	0.1041516			30	
Diisopropyl ether	0.6705967	3.804152	7.514	3.255447E-02			30	
1,4-Dioxane	0.1526062	9.647694	9.1085	0.0487053			30	
Ethanol	0.3232062	17.10975	4.953667	0.1669544			30	
Ethyl acetate	0.3044504	7.783328	7.503333	5.645944E-02			30	
Ethylbenzene	0.7537756	2.675952	11.21167	0.0204329			30	
1-Ethyl-4-methylbenzene	3.168324	7.330859	12.1265	2.357457E-02			30	
Ethyl t-butyl ether	1.571763	15.23835	7.86	3.121364E-02			30	
n-Heptane	0.320847	2.05827	9.275333	4.165405E-02			30	
Hexachlorobutadiene	1.357569	13.22833	14.3045	1.176188E-02			30	
Hexachloroethane	0.1427386	31.89068	13.173	2.173384E-02	0.9985021		0.99	
Hexane	1.515678	2.949409	7.540167	2.899198E-02			30	
2-Hexanone	0.5953603	12.93552	10.23617	9.97657E-04			30	
Isooctane	1.660449	2.46691	9.146333	0.0345877			30	
Isopropyl alcohol	0.8990552	20.87641	5.478	0.1072399			30	
Methylene chloride	0.835122	14.30627	5.997667	0.0769743			30	
Methyl ethyl ketone	1.781817	8.667307	7.081833	3.547638E-02			30	

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Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.8675081	4.312147	5.894	4.748018E-02			30	
Methyl isobutyl ketone	0.7696382	2.437656	9.601667	2.349494E-02			30	
Methyl t-butyl ether	2.615894	7.40049	6.867167	5.213428E-02			30	
Naphthalene	1.012718	42.6034	14.03833	9.325176E-03		0.9999223	0.99	
Propylene	0.6480759	20.72905	4.126167	8.099896E-02			30	
Styrene	1.318255	2.498209	11.46667	0.0256742			30	
1,1,1,2-Tetrachloroethane	0.2389174	15.20436	11.02933	2.330274E-02			30	
1,1,2,2-Tetrachloroethane	1.58216	4.865499	11.51267	3.275722E-02			30	
Tetrachloroethene	0.4672849	6.547415	10.707	2.202255E-02			30	
1,1,1,2-Tetrafluoroethane	1.09536	16.16691	4.002667	8.184233E-02			30	
Tetrahydrofuran	1.081503	7.671459	7.851833	3.215177E-02			30	
Toluene	1.079179	1.734772	10.126	2.760287E-02			30	
1,2,4-Trichlorobenzene	0.5002153	36.92267	13.928	2.284243E-02		0.9997169	0.99	
1,1,1-Trichloroethane	1.533047	4.368665	8.238833	4.190848E-02			30	
1,1,2-Trichloroethane	0.3511086	1.641568	9.969667	0.046184			30	
Trichloroethene	0.3588897	4.760305	9.1215	5.105107E-02			30	
Trichlorofluoromethane	2.034791	6.807286	5.471667	4.363204E-02			30	
1,2,3-Trichloropropane	0.3162859	4.976357	11.575	2.286987E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.593303	2.200033	6.204667	5.570172E-02			30	
1,2,4-Trimethylbenzene	2.184116	2.915985	12.39033	0.0268067			30	
1,3,5-Trimethylbenzene	2.146865	2.263605	12.16033	0.021142			30	
Vinyl acetate	2.126359	9.566998	6.899167	4.121454E-02			30	
Vinyl bromide	0.8700704	10.61413	5.1625	7.298668E-02			30	
Vinyl chloride	1.015745	14.64785	4.472833	7.579094E-02			30	
p- & m-Xylenes	2.061228	1.531344	11.29317	1.959545E-02			30	
o-Xylene	2.18082	3.028245	11.52	2.611785E-02			30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2101002
Matrix: Air
SDG: 2100036
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 10/16/20 14:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	2.101092	1.999502	11.52	2.611785E-02			30	
TPH - Gasoline	3.784361	4.390169	10.42317	4.413093			30	
Total Petroleum Hydrocarbons	3.784361	4.390169	10.42317	4.413093			30	
4-Bromofluorobenzene (Surrogate)	0.9979685	3.633829	11.73933	1.540554E-02			30	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2100036
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW27A-01	12/23/20 15:57	01/04/21 09:30	01/08/21 08:03	16.00	30.00	01/08/21 10:48	16.00	30.00	
SG-VW27A-01	12/23/20 15:57	01/04/21 09:30	01/08/21 08:03	17.00	30.00	01/09/21 19:06	17.00	30.00	
SG-VW27B-01	12/23/20 15:47	01/04/21 09:30	01/08/21 08:03	16.00	30.00	01/08/21 15:24	16.00	30.00	
SG-VW28A-01	12/29/20 08:40	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 11:47	10.00	30.00	
SG-VW28A-01	12/29/20 08:40	01/04/21 09:30	01/08/21 08:03	11.00	30.00	01/09/21 19:42	11.00	30.00	
SG-VW28B-01	12/29/20 08:30	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 16:00	10.00	30.00	
SG-VW23A-01	12/29/20 09:40	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 16:36	10.00	30.00	
SG-VW23A-01	12/29/20 09:40	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 12:49	10.00	30.00	
SG-VW23B-01	12/29/20 09:30	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 17:12	10.00	30.00	
SG-VW29A-01	12/29/20 10:55	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 17:47	10.00	30.00	
SG-VW29A-01	12/29/20 10:55	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 13:48	10.00	30.00	
SG-VW29B-01	12/29/20 10:45	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 18:23	10.00	30.00	
SG-VW29B-01	12/29/20 10:45	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 14:18	10.00	30.00	
SG-VW53A-01	12/29/20 12:00	01/04/21 09:30	01/08/21 08:03	10.00	30.00	01/08/21 18:58	10.00	30.00	
SG-VW53A-02	12/29/20 12:00	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 20:17	11.00	30.00	
SG-VW53B-01	12/29/20 11:50	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 20:53	11.00	30.00	
SG-VW54A-01	12/29/20 13:35	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 21:28	11.00	30.00	
SG-VW54A-01	12/29/20 13:35	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 23:43	11.00	30.00	
SG-VW54B-01	12/29/20 13:25	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 22:03	11.00	30.00	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SG-VW55A-01	12/29/20 14:55	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 22:39	11.00	30.00	
SG-VW55A-01	12/29/20 14:55	01/04/21 09:30	01/09/21 12:01	12.00	30.00	01/10/21 15:19	12.00	30.00	
SG-VW55B-01	12/29/20 14:45	01/04/21 09:30	01/09/21 12:01	11.00	30.00	01/09/21 23:14	11.00	30.00	
SG-VW33A-01	12/29/20 16:00	01/04/21 09:30	01/10/21 12:26	13.00	30.00	01/11/21 09:22	13.00	30.00	
SG-VW33B-01	12/29/20 15:55	01/04/21 09:30	01/10/21 12:26	13.00	30.00	01/11/21 09:57	13.00	30.00	
SG-VW14-01	12/30/20 09:00	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 10:43	12.00	30.00	
SG-VW14-01	12/30/20 09:00	01/04/21 09:30	01/10/21 12:26	11.00	30.00	01/10/21 20:28	11.00	30.00	
SG-VW15-01	12/30/20 10:20	01/04/21 09:30	01/10/21 12:26	11.00	30.00	01/10/21 20:57	11.00	30.00	
SG-VW57A-01	12/30/20 11:40	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 11:19	12.00	30.00	
SG-VW57B-01	12/30/20 11:30	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 13:07	12.00	30.00	
SG-VW57B-01	12/30/20 11:30	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 14:14	12.00	30.00	
SG-VW57B-02	12/30/20 11:30	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 13:43	12.00	30.00	
SG-VW57B-02	12/30/20 11:30	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 14:44	12.00	30.00	
SG-VW56A-01	12/30/20 12:50	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 11:55	12.00	30.00	
SG-VW56A-01	12/30/20 12:50	01/04/21 09:30	01/10/21 12:26	11.00	30.00	01/10/21 22:55	11.00	30.00	
SG-VW56B-01	12/30/20 12:40	01/04/21 09:30	01/10/21 12:26	12.00	30.00	01/11/21 12:31	12.00	30.00	
SG-VW56B-01	12/30/20 12:40	01/04/21 09:30	01/10/21 12:26	11.00	30.00	01/10/21 23:24	11.00	30.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/20/2021 12:36:27PM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2107220

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.06

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2107220
COC Number:
Default Cooler was received at 25 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-TO-15	MS-A1

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The Continuing Calibration Verification (CCV) recovery was not within established control limits.

Lab Number	Method	Analyte
2104713-CCV1	EPA-TO-15	1,2-Dibromo-3-chloropropane
2104713-CCV1	EPA-TO-15	2-Hexanone
2104713-CCV1	EPA-TO-15	Methyl isobutyl ketone
2104843-CCV1	EPA-TO-15	1,2-Dibromo-3-chloropropane
2104843-CCV1	EPA-TO-15	2-Hexanone

LCS / LCSD

The LCS recoveries were within QC limits.

Lab Number	Receipt Pressure	Units
21-07220-01	12.0	PSIA
21-07220-02	12.7	PSIA
21-07220-03	12.8	PSIA
21-07220-04	12.7	PSIA
21-07220-05	12.7	PSIA
21-07220-06	12.6	PSIA
21-07220-07	12.8	PSIA
21-07220-08	12.5	PSIA
21-07220-09	12.2	PSIA

Chain of Custody and Cooler Receipt Form for 2107220 Page 1 of 3

CHAIN OF CUSTODY

Page 1 of 1

AECOM 21-07220

RUSH!

Lab: BC Laboratories

TAT: 6-day

Report results to: Keegan George (Keegan.George@smud.org)
Robert Kohlhardt (Robert.Kohlhardt@aecom.com)
Andy Shepard (andy.shepard@aecom.com)

Name	Andy Shepard (andy.shepard@aecom.com)
Company	AECOM
Mailing Address	2020 L Street, Suite 400
City, State, Zip	Sacramento, CA 95811
Telephone No.	916.296.3943
Fax No.	916.414.5850

Project Information
Site Address: SMUD 59th Street - Site Characterization
AECOM No. 60632793.06

CHK BY AAB
DISTRIBUTION
SUB OUT

Special instructions and/or specific regulatory requirements:

No Dilutions
Full TO-15 analyte list including naphthalene
CLP Report Requested
Send Invoices to SMUD

Lab ID	Sample Identification	Canister #	Flow Controller #	Date Sampled	Time Sampled	Matrix/ Media	Analyses Requested: USEPA Method TO-15	Canister Vacuum Init. Vac.	Canister Vacuum Final Vac.	Sample Condition/Comments
-1	SG-VW45A-02	5164	1527	03-Mar-21	1240	air	x	-30" Hg	-5" Hg	
-2	SG-VW48A-02	2649	1544	03-Mar-21	1350	air	x	-30" Hg	-5" Hg	
-3	SG-VW49A-02	6030	1197	03-Mar-21	1445	air	x	-30" Hg	-5" Hg	
-4	SG-VW24A-02	10282	1203	03-Mar-21	1550	air	x	-30" Hg	-5" Hg	
-5	SG-VW24A-03	6020	1203	03-Mar-21	1550	air	x	-30" Hg	-5" Hg	
-6	SG-VW30A-02	2642	1065	04-Mar-21	1240	air	x	-30	-5	
-7	SG-VW30B-02	6016	1358	04-Mar-21	1255	air	x	-30	-5	
-8	SG-VW42A-02	10255	1240	04-Mar-21	1355	air	x	-30	-5	
-9	SG-VW57B-03	2888	1290	04-Mar-21	1510	air	x	-30	-5	

Collected by (Printed Name/Affiliation): Brian Weeks AECOM — **Date/Time:** 3/4/2021 1530

Relinquished by (Signature/Affiliation): AECOM — **Date/Time:** 3/4/21 @ 1610

Relinquished by (Signature/Affiliation): — **Date/Time:** 3/4/21 1630

Relinquished by (Signature/Affiliation): — **Date/Time:**

Method of Shipment:

Received by (Signature/Affiliation): BCL — **Date/Time:** 2/4/21 1607

Received by (Signature/Affiliation): BCL — **Date/Time:** 3-5-21 1030

Received by (Signature/Affiliation): — **Date/Time:**

Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2107220 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 21-07220

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☐ None ☐ Box ☒ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? ~~Yes~~ ☐ No ☐

COC Received ☑ YES ☐ NO

~~Emissivity:~~ _____ Container: SUMMA Thermometer ID: _____ Date/Time 3-5-21 1030

Temperature: (A) ROOM °C / (C) TEMP °C Analyst Init TKS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER	A	A	A	A	A	A	A	A	A	

Comments:

Sample Numbering Completed By: CM2 Date/Time: 3/5/21 1200

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

Sample Receiving 21-7220

From: Natalie Serda
Sent: Friday, March 05, 2021 8:42 AM
To: BC Logins; Sample Receiving; Crystal Alejandre
Subject: FW: Additional instructions - SMUD 59th Street SVE Pilot Study
Attachments: 59th St COC 3-4-21.pdf

Importance: High

Good Morning,

Please include this email with the coc, thanks!

From: Shepard, Andy (Sacramento) [mailto:Andy.Shepard@aecom.com]
Sent: Friday, March 05, 2021 8:40 AM
To: Natalie Serda <natalie.serda@bclabs.com>
Cc: Mark Ellis <mark.ellis@bclabs.com>; Kohlhardt, Robert <Robert.Kohlhardt@aecom.com>; Keegan George <Keegan.George@smud.org>
Subject: Additional instructions - SMUD 59th Street SVE Pilot Study

Natalie-

Yesterday we submitted air samples to Mark Ellis – two separate COCs/work orders – that you will be receiving soon.

For the attached COC for the SMUD 59th Street SVE Pilot Study samples, we would like to add the following instructions:

- Please analyze the full TO-15 analyte list including naphthalene
- Please provide a CLP Report

Regards,

Andy Shepard
Senior Project Manager
D +1-916-361-6425
M +1-916-296-3943
andy.shepard@aecom.com

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2107220**
Class: **VOA**
Method: **EPA-TO-15**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III

Client Sample Id:	Lab Sample Id:
SG-VW45A-02	2107220-01
SG-VW48A-02	2107220-02
SG-VW49A-02	2107220-03
SG-VW24A-02	2107220-04
SG-VW24A-03	2107220-05
SG-VW30A-02	2107220-06
SG-VW30A-02	2107220-06RE1
SG-VW30B-02	2107220-07
SG-VW30B-02	2107220-07RE1
SG-VW42A-02	2107220-08
SG-VW57B-03	2107220-09

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-26-2021
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
Acrolein	0.82	10	ug/m3
Acetone	0.43	5.0	ug/m3
Acrylonitrile	0.27	2.0	ug/m3
Allyl chloride	0.28	2.0	ug/m3
t-Amyl Methyl ether	0.31	5.0	ug/m3
Benzene	0.21	2.0	ug/m3
Benzyl chloride	0.26	10	ug/m3
Bromodichloromethane	0.45	5.0	ug/m3
Bromoform	0.86	10	ug/m3
Bromomethane	0.47	2.0	ug/m3
1,3-Butadiene	0.22	2.0	ug/m3
t-Butyl alcohol	0.70	5.0	ug/m3
Carbon disulfide	0.19	2.0	ug/m3
Carbon tetrachloride	0.45	5.0	ug/m3
Chlorobenzene	0.40	5.0	ug/m3
Chloroethane	0.53	2.0	ug/m3
Chloroform	0.54	5.0	ug/m3
Chloromethane	0.21	2.0	ug/m3
Cyclohexane	0.38	2.0	ug/m3
Dibromochloromethane	0.43	5.0	ug/m3
1,2-Dibromo-3-chloropropane	1.7	5.0	ug/m3
1,2-Dibromoethane	0.58	5.0	ug/m3
Dibromomethane	0.57	5.0	ug/m3
1,2-Dichlorobenzene	0.50	5.0	ug/m3
1,3-Dichlorobenzene	0.31	5.0	ug/m3
1,4-Dichlorobenzene	0.50	5.0	ug/m3
Dichlorodifluoromethane	0.45	5.0	ug/m3
1,1-Dichloroethane	0.23	5.0	ug/m3
1,2-Dichloroethane	0.26	5.0	ug/m3
1,1-Dichloroethene	0.31	5.0	ug/m3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
cis-1,2-Dichloroethene	0.32	2.0	ug/m3
trans-1,2-Dichloroethene	0.27	2.0	ug/m3
1,2-Dichloropropane	0.32	5.0	ug/m3
cis-1,3-Dichloropropene	0.30	5.0	ug/m3
trans-1,3-Dichloropropene	0.40	5.0	ug/m3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	5.0	ug/m3
1,1-Difluoroethane	2.0	5.0	ug/m3
Diisopropyl ether	0.39	5.0	ug/m3
1,4-Dioxane	0.33	2.0	ug/m3
Ethanol	0.42	2.0	ug/m3
Ethyl acetate	0.33	2.0	ug/m3
Ethylbenzene	0.32	5.0	ug/m3
1-Ethyl-4-methylbenzene	0.30	5.0	ug/m3
Ethyl t-butyl ether	0.33	5.0	ug/m3
n-Heptane	0.34	2.0	ug/m3
Hexachlorobutadiene	1.5	10	ug/m3
Hexachloroethane	0.73	2.0	ug/m3
Hexane	0.20	5.0	ug/m3
2-Hexanone	0.29	5.0	ug/m3
Isooctane	0.35	5.0	ug/m3
Isopropyl alcohol	0.32	2.0	ug/m3
Methylene chloride	0.40	10	ug/m3
Methyl ethyl ketone	0.19	2.0	ug/m3
Methyl iodide	0.58	10	ug/m3
Methyl isobutyl ketone	0.26	5.0	ug/m3
Methyl t-butyl ether	0.28	2.0	ug/m3
Naphthalene	1.4	20	ug/m3
Propylene	0.25	2.0	ug/m3
Styrene	0.24	5.0	ug/m3
1,1,1,2-Tetrachloroethane	0.61	5.0	ug/m3

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Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP II
Matrix: Air
Instrument: MS-A1

Analyte	MDL	PQL	Units
1,1,2,2-Tetrachloroethane	0.47	5.0	ug/m3
Tetrachloroethene	0.50	5.0	ug/m3
1,1,1,2-Tetrafluoroethane	0.67	5.0	ug/m3
Tetrahydrofuran	0.27	2.0	ug/m3
Toluene	0.27	2.0	ug/m3
1,2,4-Trichlorobenzene	0.82	10	ug/m3
1,1,1-Trichloroethane	0.39	5.0	ug/m3
1,1,2-Trichloroethane	0.61	5.0	ug/m3
Trichloroethene	0.54	5.0	ug/m3
Trichlorofluoromethane	0.47	5.0	ug/m3
1,2,3-Trichloropropane	0.48	5.0	ug/m3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	5.0	ug/m3
1,2,4-Trimethylbenzene	0.40	5.0	ug/m3
1,3,5-Trimethylbenzene	0.40	5.0	ug/m3
Vinyl acetate	0.33	2.0	ug/m3
Vinyl bromide	0.32	5.0	ug/m3
Vinyl chloride	0.39	2.0	ug/m3
p- & m-Xylenes	0.61	5.0	ug/m3
o-Xylene	0.30	5.0	ug/m3
Total Xylenes	0.91	10	ug/m3
TPH - Gasoline	21	200	ug/m3
Total Petroleum Hydrocarbons	21	200	ug/m3

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-01
File ID: 10MAR08.D
Sampled: 03/03/21 12:40
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 19:13
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.66	1.4	UD
67-64-1	Acetone	1.66	2.1	JD
107-13-1	Acrylonitrile	1.66	0.45	UD
107-05-1	Allyl chloride	1.66	0.46	UD
994-05-8	t-Amyl Methyl ether	1.66	0.51	UD
71-43-2	Benzene	1.66	0.35	UD
100-44-7	Benzyl chloride	1.66	0.43	UD
75-27-4	Bromodichloromethane	1.66	0.75	UD
75-25-2	Bromoform	1.66	1.4	UD
74-83-9	Bromomethane	1.66	0.78	UD
106-99-0	1,3-Butadiene	1.66	0.37	UD
75-65-0	t-Butyl alcohol	1.66	3.9	JD
75-15-0	Carbon disulfide	1.66	0.32	UD
56-23-5	Carbon tetrachloride	1.66	0.75	UD
108-90-7	Chlorobenzene	1.66	0.66	UD
75-00-3	Chloroethane	1.66	0.88	UD
67-66-3	Chloroform	1.66	0.90	UD
74-87-3	Chloromethane	1.66	0.35	UD
110-82-7	Cyclohexane	1.66	0.63	UD
124-48-1	Dibromochloromethane	1.66	0.71	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.66	2.8	UD
106-93-4	1,2-Dibromoethane	1.66	4.0	JD
74-95-3	Dibromomethane	1.66	0.95	UD
95-50-1	1,2-Dichlorobenzene	1.66	0.83	UD
541-73-1	1,3-Dichlorobenzene	1.66	0.51	UD
106-46-7	1,4-Dichlorobenzene	1.66	0.83	UD
75-71-8	Dichlorodifluoromethane	1.66	2.8	JD
75-34-3	1,1-Dichloroethane	1.66	0.38	UD
107-06-2	1,2-Dichloroethane	1.66	0.43	UD
75-35-4	1,1-Dichloroethene	1.66	0.51	UD
156-59-2	cis-1,2-Dichloroethene	1.66	0.53	UD
156-60-5	trans-1,2-Dichloroethene	1.66	0.45	UD

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-01
File ID: 10MAR08.D
Sampled: 03/03/21 12:40
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 19:13
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.66	0.53	UD
10061-01-5	cis-1,3-Dichloropropene	1.66	0.50	UD
10061-02-6	trans-1,3-Dichloropropene	1.66	0.66	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.66	1.5	UD
75-37-6	1,1-Difluoroethane	1.66	3.3	UD
108-20-3	Diisopropyl ether	1.66	0.65	UD
123-91-1	1,4-Dioxane	1.66	0.55	UD
64-17-5	Ethanol	1.66	4.6	D
141-78-6	Ethyl acetate	1.66	0.55	UD
100-41-4	Ethylbenzene	1.66	0.53	UD
622-96-8	1-Ethyl-4-methylbenzene	1.66	0.50	UD
637-92-3	Ethyl t-butyl ether	1.66	0.55	UD
142-82-5	n-Heptane	1.66	0.56	UD
87-68-3	Hexachlorobutadiene	1.66	2.5	UD
67-72-1	Hexachloroethane	1.66	1.2	UD
110-54-3	Hexane	1.66	0.33	UD
591-78-6	2-Hexanone	1.66	0.48	UD
540-84-1	Isooctane	1.66	0.58	UD
67-63-0	Isopropyl alcohol	1.66	0.84	JD
75-09-2	Methylene chloride	1.66	0.66	UD
78-93-3	Methyl ethyl ketone	1.66	0.32	UD
74-88-4	Methyl iodide	1.66	0.96	UD
108-10-1	Methyl isobutyl ketone	1.66	0.43	UD
1634-04-4	Methyl t-butyl ether	1.66	0.46	UD
91-20-3	Naphthalene	1.66	2.3	UD
115-07-1	Propylene	1.66	0.42	UD
100-42-5	Styrene	1.66	0.40	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.66	1.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.66	0.78	UD
127-18-4	Tetrachloroethene	1.66	8.6	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.66	1.1	UD
109-99-9	Tetrahydrofuran	1.66	0.45	UD

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW45A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-01	File ID:	10MAR08.D
Sampled:	03/03/21 12:40	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 19:13
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.66	2.0	JD
120-82-1	1,2,4-Trichlorobenzene	1.66	1.4	UD
71-55-6	1,1,1-Trichloroethane	1.66	0.65	UD
79-00-5	1,1,2-Trichloroethane	1.66	1.0	UD
79-01-6	Trichloroethene	1.66	2.0	JD
75-69-4	Trichlorofluoromethane	1.66	0.78	UD
96-18-4	1,2,3-Trichloropropane	1.66	0.80	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.66	0.91	UD
95-63-6	1,2,4-Trimethylbenzene	1.66	0.66	UD
108-67-8	1,3,5-Trimethylbenzene	1.66	0.66	UD
108-05-4	Vinyl acetate	1.66	0.55	UD
593-60-2	Vinyl bromide	1.66	0.53	UD
75-01-4	Vinyl chloride	1.66	0.65	UD
179601-23-1	p- & m-Xylenes	1.66	3.2	JD
95-47-6	o-Xylene	1.66	0.50	UD
1330-20-7	Total Xylenes	1.66	3.2	JD
---	TPH - Gasoline	1.66	94	JD
---	Total Petroleum Hydrocarbons	1.66	94	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.30	93.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	89466	7.503	81002	7.504	
Chlorobenzene-d5 (IS)	141353	11.014	142062	11.015	
1,4-Difluorobenzene (IS)	239282	8.691	240384	8.692	

* Values outside of QC limits

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-02
File ID: 10MAR09.D
Sampled: 03/03/21 13:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 19:49
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.58	1.3	UD
67-64-1	Acetone	1.58	2.1	JD
107-13-1	Acrylonitrile	1.58	0.43	UD
107-05-1	Allyl chloride	1.58	0.44	UD
994-05-8	t-Amyl Methyl ether	1.58	0.49	UD
71-43-2	Benzene	1.58	0.33	UD
100-44-7	Benzyl chloride	1.58	0.41	UD
75-27-4	Bromodichloromethane	1.58	0.71	UD
75-25-2	Bromoform	1.58	1.4	UD
74-83-9	Bromomethane	1.58	0.74	UD
106-99-0	1,3-Butadiene	1.58	0.35	UD
75-65-0	t-Butyl alcohol	1.58	1.1	UD
75-15-0	Carbon disulfide	1.58	1.3	JD
56-23-5	Carbon tetrachloride	1.58	0.71	UD
108-90-7	Chlorobenzene	1.58	0.63	UD
75-00-3	Chloroethane	1.58	0.84	UD
67-66-3	Chloroform	1.58	5.4	JD
74-87-3	Chloromethane	1.58	0.33	UD
110-82-7	Cyclohexane	1.58	0.60	UD
124-48-1	Dibromochloromethane	1.58	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.58	2.7	UD
106-93-4	1,2-Dibromoethane	1.58	2.8	JD
74-95-3	Dibromomethane	1.58	0.90	UD
95-50-1	1,2-Dichlorobenzene	1.58	0.79	UD
541-73-1	1,3-Dichlorobenzene	1.58	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.58	0.79	UD
75-71-8	Dichlorodifluoromethane	1.58	2.7	JD
75-34-3	1,1-Dichloroethane	1.58	0.36	UD
107-06-2	1,2-Dichloroethane	1.58	0.41	UD
75-35-4	1,1-Dichloroethene	1.58	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.58	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.58	0.43	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-02
File ID: 10MAR09.D
Sampled: 03/03/21 13:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 19:49
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.58	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.58	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.58	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.58	1.4	UD
75-37-6	1,1-Difluoroethane	1.58	3.2	UD
108-20-3	Diisopropyl ether	1.58	0.62	UD
123-91-1	1,4-Dioxane	1.58	0.52	UD
64-17-5	Ethanol	1.58	2.2	JD
141-78-6	Ethyl acetate	1.58	0.52	UD
100-41-4	Ethylbenzene	1.58	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.58	29	D
637-92-3	Ethyl t-butyl ether	1.58	0.52	UD
142-82-5	n-Heptane	1.58	0.54	UD
87-68-3	Hexachlorobutadiene	1.58	2.4	UD
67-72-1	Hexachloroethane	1.58	1.2	UD
110-54-3	Hexane	1.58	0.32	UD
591-78-6	2-Hexanone	1.58	0.46	UD
540-84-1	Isooctane	1.58	0.55	UD
67-63-0	Isopropyl alcohol	1.58	0.51	UD
75-09-2	Methylene chloride	1.58	0.63	UD
78-93-3	Methyl ethyl ketone	1.58	0.30	UD
74-88-4	Methyl iodide	1.58	0.92	UD
108-10-1	Methyl isobutyl ketone	1.58	0.41	UD
1634-04-4	Methyl t-butyl ether	1.58	0.44	UD
91-20-3	Naphthalene	1.58	70	D
115-07-1	Propylene	1.58	0.40	UD
100-42-5	Styrene	1.58	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.58	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.58	0.74	UD
127-18-4	Tetrachloroethene	1.58	29	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.58	1.1	UD
109-99-9	Tetrahydrofuran	1.58	0.43	UD

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW48A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-02	File ID:	10MAR09.D
Sampled:	03/03/21 13:50	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 19:49
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.58	1.9	JD
120-82-1	1,2,4-Trichlorobenzene	1.58	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.58	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.58	0.96	UD
79-01-6	Trichloroethene	1.58	0.85	UD
75-69-4	Trichlorofluoromethane	1.58	0.74	UD
96-18-4	1,2,3-Trichloropropane	1.58	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.58	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.58	160	D
108-67-8	1,3,5-Trimethylbenzene	1.58	32	D
108-05-4	Vinyl acetate	1.58	0.52	UD
593-60-2	Vinyl bromide	1.58	0.51	UD
75-01-4	Vinyl chloride	1.58	0.62	UD
179601-23-1	p- & m-Xylenes	1.58	2.8	JD
95-47-6	o-Xylene	1.58	1.6	JD
1330-20-7	Total Xylenes	1.58	4.4	JD
---	TPH - Gasoline	1.58	2800	D
---	Total Petroleum Hydrocarbons	1.58	2800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	10.0	100	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	88815	7.501	81002	7.504	
Chlorobenzene-d5 (IS)	142125	11.017	142062	11.015	
1,4-Difluorobenzene (IS)	236441	8.694	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-03
File ID: 10MAR10.D
Sampled: 03/03/21 14:45
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 20:24
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.52	1.2	UD
67-64-1	Acetone	1.52	1.7	JD
107-13-1	Acrylonitrile	1.52	0.41	UD
107-05-1	Allyl chloride	1.52	0.43	UD
994-05-8	t-Amyl Methyl ether	1.52	0.47	UD
71-43-2	Benzene	1.52	0.32	UD
100-44-7	Benzyl chloride	1.52	0.40	UD
75-27-4	Bromodichloromethane	1.52	0.68	UD
75-25-2	Bromoform	1.52	1.3	UD
74-83-9	Bromomethane	1.52	0.71	UD
106-99-0	1,3-Butadiene	1.52	0.33	UD
75-65-0	t-Butyl alcohol	1.52	1.1	UD
75-15-0	Carbon disulfide	1.52	1.1	JD
56-23-5	Carbon tetrachloride	1.52	0.68	UD
108-90-7	Chlorobenzene	1.52	0.61	UD
75-00-3	Chloroethane	1.52	0.81	UD
67-66-3	Chloroform	1.52	7.6	D
74-87-3	Chloromethane	1.52	0.32	UD
110-82-7	Cyclohexane	1.52	0.58	UD
124-48-1	Dibromochloromethane	1.52	0.65	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.52	2.6	UD
106-93-4	1,2-Dibromoethane	1.52	0.88	UD
74-95-3	Dibromomethane	1.52	0.87	UD
95-50-1	1,2-Dichlorobenzene	1.52	0.76	UD
541-73-1	1,3-Dichlorobenzene	1.52	0.47	UD
106-46-7	1,4-Dichlorobenzene	1.52	0.76	UD
75-71-8	Dichlorodifluoromethane	1.52	2.8	JD
75-34-3	1,1-Dichloroethane	1.52	0.35	UD
107-06-2	1,2-Dichloroethane	1.52	0.40	UD
75-35-4	1,1-Dichloroethene	1.52	0.47	UD
156-59-2	cis-1,2-Dichloroethene	1.52	0.49	UD
156-60-5	trans-1,2-Dichloroethene	1.52	0.41	UD

AECOM - Sacramento
2020 L St, Suite 400
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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-03
File ID: 10MAR10.D
Sampled: 03/03/21 14:45
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 20:24
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.52	0.49	UD
10061-01-5	cis-1,3-Dichloropropene	1.52	0.46	UD
10061-02-6	trans-1,3-Dichloropropene	1.52	0.61	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.52	1.4	UD
75-37-6	1,1-Difluoroethane	1.52	3.0	UD
108-20-3	Diisopropyl ether	1.52	0.59	UD
123-91-1	1,4-Dioxane	1.52	0.50	UD
64-17-5	Ethanol	1.52	2.6	JD
141-78-6	Ethyl acetate	1.52	0.50	UD
100-41-4	Ethylbenzene	1.52	0.49	UD
622-96-8	1-Ethyl-4-methylbenzene	1.52	0.46	UD
637-92-3	Ethyl t-butyl ether	1.52	0.50	UD
142-82-5	n-Heptane	1.52	0.52	UD
87-68-3	Hexachlorobutadiene	1.52	2.3	UD
67-72-1	Hexachloroethane	1.52	1.1	UD
110-54-3	Hexane	1.52	0.30	UD
591-78-6	2-Hexanone	1.52	0.44	UD
540-84-1	Isooctane	1.52	0.53	UD
67-63-0	Isopropyl alcohol	1.52	0.49	UD
75-09-2	Methylene chloride	1.52	0.61	UD
78-93-3	Methyl ethyl ketone	1.52	0.29	UD
74-88-4	Methyl iodide	1.52	0.88	UD
108-10-1	Methyl isobutyl ketone	1.52	0.40	UD
1634-04-4	Methyl t-butyl ether	1.52	0.43	UD
91-20-3	Naphthalene	1.52	2.1	UD
115-07-1	Propylene	1.52	0.38	UD
100-42-5	Styrene	1.52	0.36	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.52	0.93	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.52	0.71	UD
127-18-4	Tetrachloroethene	1.52	55	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.52	1.0	UD
109-99-9	Tetrahydrofuran	1.52	0.41	UD

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW49A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-03	File ID:	10MAR10.D
Sampled:	03/03/21 14:45	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 20:24
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.52	0.41	UD
120-82-1	1,2,4-Trichlorobenzene	1.52	1.2	UD
71-55-6	1,1,1-Trichloroethane	1.52	0.59	UD
79-00-5	1,1,2-Trichloroethane	1.52	0.93	UD
79-01-6	Trichloroethene	1.52	0.82	UD
75-69-4	Trichlorofluoromethane	1.52	0.71	UD
96-18-4	1,2,3-Trichloropropane	1.52	0.73	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.52	0.84	UD
95-63-6	1,2,4-Trimethylbenzene	1.52	0.61	UD
108-67-8	1,3,5-Trimethylbenzene	1.52	0.61	UD
108-05-4	Vinyl acetate	1.52	0.50	UD
593-60-2	Vinyl bromide	1.52	0.49	UD
75-01-4	Vinyl chloride	1.52	0.59	UD
179601-23-1	p- & m-Xylenes	1.52	0.93	UD
95-47-6	o-Xylene	1.52	0.46	UD
1330-20-7	Total Xylenes	1.52	1.4	UD
---	TPH - Gasoline	1.52	120	JD
---	Total Petroleum Hydrocarbons	1.52	120	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.21	92.1	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	96415	7.504	81002	7.504	
Chlorobenzene-d5 (IS)	161754	11.015	142062	11.015	
1,4-Difluorobenzene (IS)	266444	8.692	240384	8.692	

* Values outside of QC limits

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-04
File ID: 10MAR11.D
Sampled: 03/03/21 15:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 20:59
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.57	1.3	UD
67-64-1	Acetone	1.57	6.0	JD
107-13-1	Acrylonitrile	1.57	0.42	UD
107-05-1	Allyl chloride	1.57	0.44	UD
994-05-8	t-Amyl Methyl ether	1.57	0.49	UD
71-43-2	Benzene	1.57	1.8	JD
100-44-7	Benzyl chloride	1.57	0.41	UD
75-27-4	Bromodichloromethane	1.57	0.71	UD
75-25-2	Bromoform	1.57	1.4	UD
74-83-9	Bromomethane	1.57	0.74	UD
106-99-0	1,3-Butadiene	1.57	0.35	UD
75-65-0	t-Butyl alcohol	1.57	3.3	JD
75-15-0	Carbon disulfide	1.57	1.5	JD
56-23-5	Carbon tetrachloride	1.57	0.71	UD
108-90-7	Chlorobenzene	1.57	0.63	UD
75-00-3	Chloroethane	1.57	0.83	UD
67-66-3	Chloroform	1.57	0.85	UD
74-87-3	Chloromethane	1.57	0.33	UD
110-82-7	Cyclohexane	1.57	0.60	UD
124-48-1	Dibromochloromethane	1.57	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.57	2.7	UD
106-93-4	1,2-Dibromoethane	1.57	0.91	UD
74-95-3	Dibromomethane	1.57	0.89	UD
95-50-1	1,2-Dichlorobenzene	1.57	0.78	UD
541-73-1	1,3-Dichlorobenzene	1.57	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.57	0.78	UD
75-71-8	Dichlorodifluoromethane	1.57	7.5	JD
75-34-3	1,1-Dichloroethane	1.57	0.36	UD
107-06-2	1,2-Dichloroethane	1.57	0.41	UD
75-35-4	1,1-Dichloroethene	1.57	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.57	0.50	UD
156-60-5	trans-1,2-Dichloroethene	1.57	0.42	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-04
File ID: 10MAR11.D
Sampled: 03/03/21 15:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 20:59
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.57	0.50	UD
10061-01-5	cis-1,3-Dichloropropene	1.57	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.57	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.57	1.4	UD
75-37-6	1,1-Difluoroethane	1.57	3.1	UD
108-20-3	Diisopropyl ether	1.57	0.61	UD
123-91-1	1,4-Dioxane	1.57	0.52	UD
64-17-5	Ethanol	1.57	49	D
141-78-6	Ethyl acetate	1.57	0.52	UD
100-41-4	Ethylbenzene	1.57	5.5	JD
622-96-8	1-Ethyl-4-methylbenzene	1.57	15	D
637-92-3	Ethyl t-butyl ether	1.57	0.52	UD
142-82-5	n-Heptane	1.57	0.53	UD
87-68-3	Hexachlorobutadiene	1.57	2.4	UD
67-72-1	Hexachloroethane	1.57	1.1	UD
110-54-3	Hexane	1.57	0.31	UD
591-78-6	2-Hexanone	1.57	0.46	UD
540-84-1	Isooctane	1.57	1.6	JD
67-63-0	Isopropyl alcohol	1.57	3.2	D
75-09-2	Methylene chloride	1.57	0.63	UD
78-93-3	Methyl ethyl ketone	1.57	1.0	JD
74-88-4	Methyl iodide	1.57	0.91	UD
108-10-1	Methyl isobutyl ketone	1.57	0.41	UD
1634-04-4	Methyl t-butyl ether	1.57	0.44	UD
91-20-3	Naphthalene	1.57	17	JD
115-07-1	Propylene	1.57	0.39	UD
100-42-5	Styrene	1.57	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.57	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.57	0.74	UD
127-18-4	Tetrachloroethene	1.57	120	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.57	1.1	UD
109-99-9	Tetrahydrofuran	1.57	0.42	UD

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Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-04
File ID: 10MAR11.D
Sampled: 03/03/21 15:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 20:59
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.57	14	D
120-82-1	1,2,4-Trichlorobenzene	1.57	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.57	0.61	UD
79-00-5	1,1,2-Trichloroethane	1.57	0.96	UD
79-01-6	Trichloroethene	1.57	0.85	UD
75-69-4	Trichlorofluoromethane	1.57	2.3	JD
96-18-4	1,2,3-Trichloropropane	1.57	0.75	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.57	3.0	JD
95-63-6	1,2,4-Trimethylbenzene	1.57	33	D
108-67-8	1,3,5-Trimethylbenzene	1.57	6.8	JD
108-05-4	Vinyl acetate	1.57	0.52	UD
593-60-2	Vinyl bromide	1.57	0.50	UD
75-01-4	Vinyl chloride	1.57	0.61	UD
179601-23-1	p- & m-Xylenes	1.57	29	D
95-47-6	o-Xylene	1.57	13	D
1330-20-7	Total Xylenes	1.57	42	D
---	TPH - Gasoline	1.57	860	D
---	Total Petroleum Hydrocarbons	1.57	860	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.83	98.3	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	95948	7.499	81002	7.504	
Chlorobenzene-d5 (IS)	160166	11.015	142062	11.015	
1,4-Difluorobenzene (IS)	262403	8.687	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-03

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-05
File ID: 10MAR12.D
Sampled: 03/03/21 15:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 21:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.59	1.3	UD
67-64-1	Acetone	1.59	6.7	JD
107-13-1	Acrylonitrile	1.59	0.43	UD
107-05-1	Allyl chloride	1.59	0.45	UD
994-05-8	t-Amyl Methyl ether	1.59	0.49	UD
71-43-2	Benzene	1.59	1.5	JD
100-44-7	Benzyl chloride	1.59	0.41	UD
75-27-4	Bromodichloromethane	1.59	0.72	UD
75-25-2	Bromoform	1.59	1.4	UD
74-83-9	Bromomethane	1.59	0.75	UD
106-99-0	1,3-Butadiene	1.59	0.35	UD
75-65-0	t-Butyl alcohol	1.59	2.7	JD
75-15-0	Carbon disulfide	1.59	0.30	UD
56-23-5	Carbon tetrachloride	1.59	0.72	UD
108-90-7	Chlorobenzene	1.59	0.64	UD
75-00-3	Chloroethane	1.59	0.84	UD
67-66-3	Chloroform	1.59	0.86	UD
74-87-3	Chloromethane	1.59	0.33	UD
110-82-7	Cyclohexane	1.59	0.60	UD
124-48-1	Dibromochloromethane	1.59	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.59	2.7	UD
106-93-4	1,2-Dibromoethane	1.59	0.92	UD
74-95-3	Dibromomethane	1.59	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.59	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.59	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.59	0.80	UD
75-71-8	Dichlorodifluoromethane	1.59	7.2	JD
75-34-3	1,1-Dichloroethane	1.59	0.37	UD
107-06-2	1,2-Dichloroethane	1.59	0.41	UD
75-35-4	1,1-Dichloroethene	1.59	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.59	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.59	0.43	UD

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-03

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-05
File ID: 10MAR12.D
Sampled: 03/03/21 15:50
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 21:35
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.59	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.59	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.59	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.59	1.4	UD
75-37-6	1,1-Difluoroethane	1.59	3.2	UD
108-20-3	Diisopropyl ether	1.59	0.62	UD
123-91-1	1,4-Dioxane	1.59	0.52	UD
64-17-5	Ethanol	1.59	7.1	D
141-78-6	Ethyl acetate	1.59	0.52	UD
100-41-4	Ethylbenzene	1.59	1.9	JD
622-96-8	1-Ethyl-4-methylbenzene	1.59	4.1	JD
637-92-3	Ethyl t-butyl ether	1.59	0.52	UD
142-82-5	n-Heptane	1.59	0.54	UD
87-68-3	Hexachlorobutadiene	1.59	2.4	UD
67-72-1	Hexachloroethane	1.59	1.2	UD
110-54-3	Hexane	1.59	0.32	UD
591-78-6	2-Hexanone	1.59	0.46	UD
540-84-1	Isooctane	1.59	0.56	UD
67-63-0	Isopropyl alcohol	1.59	3.6	D
75-09-2	Methylene chloride	1.59	0.64	UD
78-93-3	Methyl ethyl ketone	1.59	0.30	UD
74-88-4	Methyl iodide	1.59	0.92	UD
108-10-1	Methyl isobutyl ketone	1.59	0.41	UD
1634-04-4	Methyl t-butyl ether	1.59	0.45	UD
91-20-3	Naphthalene	1.59	6.9	JD
115-07-1	Propylene	1.59	0.40	UD
100-42-5	Styrene	1.59	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.59	0.97	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.59	0.75	UD
127-18-4	Tetrachloroethene	1.59	110	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.59	1.1	UD
109-99-9	Tetrahydrofuran	1.59	0.43	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW24A-03

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-05	File ID:	10MAR12.D
Sampled:	03/03/21 15:50	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 21:35
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.59	6.0	D
120-82-1	1,2,4-Trichlorobenzene	1.59	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.59	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.59	0.97	UD
79-01-6	Trichloroethene	1.59	0.86	UD
75-69-4	Trichlorofluoromethane	1.59	2.1	JD
96-18-4	1,2,3-Trichloropropane	1.59	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.59	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.59	8.2	D
108-67-8	1,3,5-Trimethylbenzene	1.59	1.9	JD
108-05-4	Vinyl acetate	1.59	0.52	UD
593-60-2	Vinyl bromide	1.59	0.51	UD
75-01-4	Vinyl chloride	1.59	0.62	UD
179601-23-1	p- & m-Xylenes	1.59	8.4	D
95-47-6	o-Xylene	1.59	3.7	JD
1330-20-7	Total Xylenes	1.59	12	JD
---	TPH - Gasoline	1.59	580	D
---	Total Petroleum Hydrocarbons	1.59	580	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.47	94.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	99846	7.499	81002	7.504	
Chlorobenzene-d5 (IS)	164972	11.015	142062	11.015	
1,4-Difluorobenzene (IS)	274643	8.692	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-06RE1	File ID:	09MAR21.D
Sampled:	03/04/21 12:40	Prepared:	03/09/21 12:23	Analyzed:	03/10/21 11:52
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102265	Sequence:	2104713	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	16.1	1400	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.15	81.5	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	72802	7.502	81002	7.504	
Chlorobenzene-d5 (IS)	112010	11.013	142062	11.015	
1,4-Difluorobenzene (IS)	193300	8.69	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-06	File ID:	10MAR13.D
Sampled:	03/04/21 12:40	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 22:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	5.0	JD
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	0.34	UD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	24	D
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.3	JD
75-15-0	Carbon disulfide	1.6	3.6	D
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	8.9	D
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD
78-87-5	1,2-Dichloropropane	1.6	0.51	UD

AECOM - Sacramento
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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-06
File ID: 10MAR13.D
Sampled: 03/04/21 12:40
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 22:10
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	4.1	D
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	1.8	JD
622-96-8	1-Ethyl-4-methylbenzene	1.6	0.48	UD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	1.2	JD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	1.0	JD
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	210	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	1.2	JD
108-88-3	Toluene	1.6	7.6	D

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-06	File ID:	10MAR13.D
Sampled:	03/04/21 12:40	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 22:10
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	2.5	JD
75-69-4	Trichlorofluoromethane	1.6	0.75	UD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	1.8	JD
108-67-8	1,3,5-Trimethylbenzene	1.6	0.64	UD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	4.7	JD
95-47-6	o-Xylene	1.6	1.9	JD
1330-20-7	Total Xylenes	1.6	6.6	JD
---	TPH - Gasoline	1.6	1800	D
---	Total Petroleum Hydrocarbons	1.6	1800	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.34	93.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	100746	7.501	81002	7.504	
Chlorobenzene-d5 (IS)	167148	11.017	142062	11.015	
1,4-Difluorobenzene (IS)	280607	8.694	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-07RE1	File ID:	09MAR22.D
Sampled:	03/04/21 12:55	Prepared:	03/09/21 12:23	Analyzed:	03/10/21 12:21
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102265	Sequence:	2104713	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
67-66-3	Chloroform	15.8	920	D
127-18-4	Tetrachloroethene	15.8	290	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.26	82.6	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	71363	7.499	81002	7.504	
Chlorobenzene-d5 (IS)	110171	11.015	142062	11.015	
1,4-Difluorobenzene (IS)	187992	8.692	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-07
File ID: 10MAR14.D
Sampled: 03/04/21 12:55
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 22:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.58	1.3	UD
67-64-1	Acetone	1.58	17	D
107-13-1	Acrylonitrile	1.58	0.43	UD
107-05-1	Allyl chloride	1.58	0.44	UD
994-05-8	t-Amyl Methyl ether	1.58	0.49	UD
71-43-2	Benzene	1.58	0.33	UD
100-44-7	Benzyl chloride	1.58	0.41	UD
75-27-4	Bromodichloromethane	1.58	43	D
75-25-2	Bromoform	1.58	1.4	UD
74-83-9	Bromomethane	1.58	0.74	UD
106-99-0	1,3-Butadiene	1.58	0.35	UD
75-65-0	t-Butyl alcohol	1.58	1.1	UD
75-15-0	Carbon disulfide	1.58	0.30	UD
56-23-5	Carbon tetrachloride	1.58	0.71	UD
108-90-7	Chlorobenzene	1.58	0.63	UD
75-00-3	Chloroethane	1.58	0.84	UD
74-87-3	Chloromethane	1.58	0.33	UD
110-82-7	Cyclohexane	1.58	0.60	UD
124-48-1	Dibromochloromethane	1.58	0.68	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.58	2.7	UD
106-93-4	1,2-Dibromoethane	1.58	0.92	UD
74-95-3	Dibromomethane	1.58	13	D
95-50-1	1,2-Dichlorobenzene	1.58	0.79	UD
541-73-1	1,3-Dichlorobenzene	1.58	0.49	UD
106-46-7	1,4-Dichlorobenzene	1.58	0.79	UD
75-71-8	Dichlorodifluoromethane	1.58	16	D
75-34-3	1,1-Dichloroethane	1.58	0.36	UD
107-06-2	1,2-Dichloroethane	1.58	0.41	UD
75-35-4	1,1-Dichloroethene	1.58	0.49	UD
156-59-2	cis-1,2-Dichloroethene	1.58	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.58	0.43	UD
78-87-5	1,2-Dichloropropane	1.58	0.51	UD

AECOM - Sacramento
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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-07
File ID: 10MAR14.D
Sampled: 03/04/21 12:55
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 22:46
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
10061-01-5	cis-1,3-Dichloropropene	1.58	0.47	UD
10061-02-6	trans-1,3-Dichloropropene	1.58	0.63	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.58	1.4	UD
75-37-6	1,1-Difluoroethane	1.58	3.2	UD
108-20-3	Diisopropyl ether	1.58	0.62	UD
123-91-1	1,4-Dioxane	1.58	0.52	UD
64-17-5	Ethanol	1.58	25	D
141-78-6	Ethyl acetate	1.58	0.52	UD
100-41-4	Ethylbenzene	1.58	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.58	0.47	UD
637-92-3	Ethyl t-butyl ether	1.58	0.52	UD
142-82-5	n-Heptane	1.58	0.54	UD
87-68-3	Hexachlorobutadiene	1.58	2.4	UD
67-72-1	Hexachloroethane	1.58	1.2	UD
110-54-3	Hexane	1.58	0.32	UD
591-78-6	2-Hexanone	1.58	0.46	UD
540-84-1	Isooctane	1.58	0.55	UD
67-63-0	Isopropyl alcohol	1.58	10	D
75-09-2	Methylene chloride	1.58	0.63	UD
78-93-3	Methyl ethyl ketone	1.58	1.7	JD
74-88-4	Methyl iodide	1.58	0.92	UD
108-10-1	Methyl isobutyl ketone	1.58	0.41	UD
1634-04-4	Methyl t-butyl ether	1.58	0.44	UD
91-20-3	Naphthalene	1.58	2.2	UD
115-07-1	Propylene	1.58	0.40	UD
100-42-5	Styrene	1.58	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.58	0.96	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.58	0.74	UD
811-97-2	1,1,1,2-Tetrafluoroethane	1.58	1.1	UD
109-99-9	Tetrahydrofuran	1.58	0.43	UD
108-88-3	Toluene	1.58	22	D
120-82-1	1,2,4-Trichlorobenzene	1.58	1.3	UD

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW30B-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-07	File ID:	10MAR14.D
Sampled:	03/04/21 12:55	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 22:46
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
71-55-6	1,1,1-Trichloroethane	1.58	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.58	0.96	UD
79-01-6	Trichloroethene	1.58	2.9	JD
75-69-4	Trichlorofluoromethane	1.58	2.4	JD
96-18-4	1,2,3-Trichloropropane	1.58	0.76	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.58	0.87	UD
95-63-6	1,2,4-Trimethylbenzene	1.58	1.6	JD
108-67-8	1,3,5-Trimethylbenzene	1.58	0.63	UD
108-05-4	Vinyl acetate	1.58	0.52	UD
593-60-2	Vinyl bromide	1.58	0.51	UD
75-01-4	Vinyl chloride	1.58	0.62	UD
179601-23-1	p- & m-Xylenes	1.58	0.96	UD
95-47-6	o-Xylene	1.58	0.47	UD
1330-20-7	Total Xylenes	1.58	1.4	UD
---	TPH - Gasoline	1.58	1500	D
---	Total Petroleum Hydrocarbons	1.58	1500	D

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.32	93.2	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	101928	7.497	81002	7.504	
Chlorobenzene-d5 (IS)	166964	11.013	142062	11.015	
1,4-Difluorobenzene (IS)	280087	8.69	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-08
File ID: 10MAR15.D
Sampled: 03/04/21 13:55
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 23:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.6	1.3	UD
67-64-1	Acetone	1.6	2.1	JD
107-13-1	Acrylonitrile	1.6	0.43	UD
107-05-1	Allyl chloride	1.6	0.45	UD
994-05-8	t-Amyl Methyl ether	1.6	0.50	UD
71-43-2	Benzene	1.6	0.34	UD
100-44-7	Benzyl chloride	1.6	0.42	UD
75-27-4	Bromodichloromethane	1.6	0.72	UD
75-25-2	Bromoform	1.6	1.4	UD
74-83-9	Bromomethane	1.6	0.75	UD
106-99-0	1,3-Butadiene	1.6	0.35	UD
75-65-0	t-Butyl alcohol	1.6	1.1	UD
75-15-0	Carbon disulfide	1.6	0.30	UD
56-23-5	Carbon tetrachloride	1.6	0.72	UD
108-90-7	Chlorobenzene	1.6	0.64	UD
75-00-3	Chloroethane	1.6	0.85	UD
67-66-3	Chloroform	1.6	0.86	UD
74-87-3	Chloromethane	1.6	0.34	UD
110-82-7	Cyclohexane	1.6	0.61	UD
124-48-1	Dibromochloromethane	1.6	0.69	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.6	2.7	UD
106-93-4	1,2-Dibromoethane	1.6	0.93	UD
74-95-3	Dibromomethane	1.6	0.91	UD
95-50-1	1,2-Dichlorobenzene	1.6	0.80	UD
541-73-1	1,3-Dichlorobenzene	1.6	0.50	UD
106-46-7	1,4-Dichlorobenzene	1.6	0.80	UD
75-71-8	Dichlorodifluoromethane	1.6	3.0	JD
75-34-3	1,1-Dichloroethane	1.6	0.37	UD
107-06-2	1,2-Dichloroethane	1.6	0.42	UD
75-35-4	1,1-Dichloroethene	1.6	0.50	UD
156-59-2	cis-1,2-Dichloroethene	1.6	0.51	UD
156-60-5	trans-1,2-Dichloroethene	1.6	0.43	UD

AECOM - Sacramento
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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-02

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-08
File ID: 10MAR15.D
Sampled: 03/04/21 13:55
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 23:22
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.6	0.51	UD
10061-01-5	cis-1,3-Dichloropropene	1.6	0.48	UD
10061-02-6	trans-1,3-Dichloropropene	1.6	0.64	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.6	1.5	UD
75-37-6	1,1-Difluoroethane	1.6	3.2	UD
108-20-3	Diisopropyl ether	1.6	0.62	UD
123-91-1	1,4-Dioxane	1.6	0.53	UD
64-17-5	Ethanol	1.6	1.4	JD
141-78-6	Ethyl acetate	1.6	0.53	UD
100-41-4	Ethylbenzene	1.6	0.51	UD
622-96-8	1-Ethyl-4-methylbenzene	1.6	0.48	UD
637-92-3	Ethyl t-butyl ether	1.6	0.53	UD
142-82-5	n-Heptane	1.6	0.54	UD
87-68-3	Hexachlorobutadiene	1.6	2.4	UD
67-72-1	Hexachloroethane	1.6	1.2	UD
110-54-3	Hexane	1.6	0.32	UD
591-78-6	2-Hexanone	1.6	0.46	UD
540-84-1	Isooctane	1.6	0.56	UD
67-63-0	Isopropyl alcohol	1.6	0.87	JD
75-09-2	Methylene chloride	1.6	0.64	UD
78-93-3	Methyl ethyl ketone	1.6	0.30	UD
74-88-4	Methyl iodide	1.6	0.93	UD
108-10-1	Methyl isobutyl ketone	1.6	0.42	UD
1634-04-4	Methyl t-butyl ether	1.6	0.45	UD
91-20-3	Naphthalene	1.6	2.2	UD
115-07-1	Propylene	1.6	0.40	UD
100-42-5	Styrene	1.6	0.38	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.6	0.98	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.6	0.75	UD
127-18-4	Tetrachloroethene	1.6	6.7	JD
811-97-2	1,1,1,2-Tetrafluoroethane	1.6	1.1	UD
109-99-9	Tetrahydrofuran	1.6	0.43	UD

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW42A-02

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	2107220-08	File ID:	10MAR15.D
Sampled:	03/04/21 13:55	Prepared:	03/10/21 08:31	Analyzed:	03/10/21 23:22
Solids:		Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Batch:	B102403	Sequence:	2104843	Calibration:	2103029
Instrument:	MS-A1				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.6	5.1	D
120-82-1	1,2,4-Trichlorobenzene	1.6	1.3	UD
71-55-6	1,1,1-Trichloroethane	1.6	0.62	UD
79-00-5	1,1,2-Trichloroethane	1.6	0.98	UD
79-01-6	Trichloroethene	1.6	0.86	UD
75-69-4	Trichlorofluoromethane	1.6	0.75	UD
96-18-4	1,2,3-Trichloropropane	1.6	0.77	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	0.88	UD
95-63-6	1,2,4-Trimethylbenzene	1.6	0.64	UD
108-67-8	1,3,5-Trimethylbenzene	1.6	0.64	UD
108-05-4	Vinyl acetate	1.6	0.53	UD
593-60-2	Vinyl bromide	1.6	0.51	UD
75-01-4	Vinyl chloride	1.6	0.62	UD
179601-23-1	p- & m-Xylenes	1.6	0.98	UD
95-47-6	o-Xylene	1.6	0.48	UD
1330-20-7	Total Xylenes	1.6	1.5	UD
---	TPH - Gasoline	1.6	91	JD
---	Total Petroleum Hydrocarbons	1.6	91	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.17	91.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	98919	7.498	81002	7.504	
Chlorobenzene-d5 (IS)	158518	11.014	142062	11.015	
1,4-Difluorobenzene (IS)	266252	8.692	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-03

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-09
File ID: 10MAR16.D
Sampled: 03/04/21 15:10
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 23:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
107-02-8	Acrolein	1.66	1.4	UD
67-64-1	Acetone	1.66	1.7	JD
107-13-1	Acrylonitrile	1.66	0.45	UD
107-05-1	Allyl chloride	1.66	0.46	UD
994-05-8	t-Amyl Methyl ether	1.66	0.51	UD
71-43-2	Benzene	1.66	0.35	UD
100-44-7	Benzyl chloride	1.66	0.43	UD
75-27-4	Bromodichloromethane	1.66	0.75	UD
75-25-2	Bromoform	1.66	1.4	UD
74-83-9	Bromomethane	1.66	0.78	UD
106-99-0	1,3-Butadiene	1.66	0.37	UD
75-65-0	t-Butyl alcohol	1.66	1.2	UD
75-15-0	Carbon disulfide	1.66	0.32	UD
56-23-5	Carbon tetrachloride	1.66	0.75	UD
108-90-7	Chlorobenzene	1.66	0.66	UD
75-00-3	Chloroethane	1.66	0.88	UD
67-66-3	Chloroform	1.66	2.0	JD
74-87-3	Chloromethane	1.66	0.35	UD
110-82-7	Cyclohexane	1.66	0.63	UD
124-48-1	Dibromochloromethane	1.66	0.71	UD
96-12-8	1,2-Dibromo-3-chloropropane	1.66	2.8	UD
106-93-4	1,2-Dibromoethane	1.66	0.96	UD
74-95-3	Dibromomethane	1.66	0.95	UD
95-50-1	1,2-Dichlorobenzene	1.66	0.83	UD
541-73-1	1,3-Dichlorobenzene	1.66	0.51	UD
106-46-7	1,4-Dichlorobenzene	1.66	0.83	UD
75-71-8	Dichlorodifluoromethane	1.66	3.0	JD
75-34-3	1,1-Dichloroethane	1.66	0.38	UD
107-06-2	1,2-Dichloroethane	1.66	0.43	UD
75-35-4	1,1-Dichloroethene	1.66	0.51	UD
156-59-2	cis-1,2-Dichloroethene	1.66	5.3	D
156-60-5	trans-1,2-Dichloroethene	1.66	0.45	UD

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-03

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-09
File ID: 10MAR16.D
Sampled: 03/04/21 15:10
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 23:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
78-87-5	1,2-Dichloropropane	1.66	0.53	UD
10061-01-5	cis-1,3-Dichloropropene	1.66	0.50	UD
10061-02-6	trans-1,3-Dichloropropene	1.66	0.66	UD
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.66	1.5	UD
75-37-6	1,1-Difluoroethane	1.66	3.3	UD
108-20-3	Diisopropyl ether	1.66	0.65	UD
123-91-1	1,4-Dioxane	1.66	0.55	UD
64-17-5	Ethanol	1.66	0.70	UD
141-78-6	Ethyl acetate	1.66	0.55	UD
100-41-4	Ethylbenzene	1.66	0.53	UD
622-96-8	1-Ethyl-4-methylbenzene	1.66	0.50	UD
637-92-3	Ethyl t-butyl ether	1.66	0.55	UD
142-82-5	n-Heptane	1.66	0.56	UD
87-68-3	Hexachlorobutadiene	1.66	2.5	UD
67-72-1	Hexachloroethane	1.66	1.2	UD
110-54-3	Hexane	1.66	0.33	UD
591-78-6	2-Hexanone	1.66	0.48	UD
540-84-1	Isooctane	1.66	0.58	UD
67-63-0	Isopropyl alcohol	1.66	1.5	JD
75-09-2	Methylene chloride	1.66	0.66	UD
78-93-3	Methyl ethyl ketone	1.66	0.32	UD
74-88-4	Methyl iodide	1.66	0.96	UD
108-10-1	Methyl isobutyl ketone	1.66	0.43	UD
1634-04-4	Methyl t-butyl ether	1.66	0.46	UD
91-20-3	Naphthalene	1.66	2.3	UD
115-07-1	Propylene	1.66	0.42	UD
100-42-5	Styrene	1.66	0.40	UD
630-20-6	1,1,1,2-Tetrachloroethane	1.66	1.0	UD
79-34-5	1,1,2,2-Tetrachloroethane	1.66	0.78	UD
127-18-4	Tetrachloroethene	1.66	37	D
811-97-2	1,1,1,2-Tetrafluoroethane	1.66	1.1	UD
109-99-9	Tetrahydrofuran	1.66	0.45	UD

AECOM - Sacramento
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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-TO-15

SG-VW57B-03

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Matrix: Air
Laboratory ID: 2107220-09
File ID: 10MAR16.D
Sampled: 03/04/21 15:10
Prepared: 03/10/21 08:31
Analyzed: 03/10/21 23:58
Solids:
Preparation: EPA TO-15
Initial/Final: 1 ml / 1 ml
Batch: B102403
Sequence: 2104843
Calibration: 2103029
Instrument: MS-A1

CAS NO.	COMPOUND	DILUTION	CONC. (ug/m3)	Q
108-88-3	Toluene	1.66	0.45	UD
120-82-1	1,2,4-Trichlorobenzene	1.66	1.4	UD
71-55-6	1,1,1-Trichloroethane	1.66	0.65	UD
79-00-5	1,1,2-Trichloroethane	1.66	1.0	UD
79-01-6	Trichloroethene	1.66	5.6	JD
75-69-4	Trichlorofluoromethane	1.66	0.78	UD
96-18-4	1,2,3-Trichloropropane	1.66	0.80	UD
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.66	0.91	UD
95-63-6	1,2,4-Trimethylbenzene	1.66	0.66	UD
108-67-8	1,3,5-Trimethylbenzene	1.66	0.66	UD
108-05-4	Vinyl acetate	1.66	0.55	UD
593-60-2	Vinyl bromide	1.66	0.53	UD
75-01-4	Vinyl chloride	1.66	0.65	UD
179601-23-1	p- & m-Xylenes	1.66	1.0	UD
95-47-6	o-Xylene	1.66	0.50	UD
1330-20-7	Total Xylenes	1.66	1.5	UD
---	TPH - Gasoline	1.66	100	JD
---	Total Petroleum Hydrocarbons	1.66	100	JD

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	9.27	92.7	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	97724	7.501	81002	7.504	
Chlorobenzene-d5 (IS)	157105	11.012	142062	11.015	
1,4-Difluorobenzene (IS)	262840	8.69	240384	8.692	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B102265 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW30A-02	2107220-06RE1	09MAR21.D	03/09/21 12:23	FULL Customized List-All Table 8
SG-VW30B-02	2107220-07RE1	09MAR22.D	03/09/21 12:23	FULL Customized List-All Table 8
Blank	B102265-BLK1	09MAR07.D	03/09/21 14:22	
LCS	B102265-BS1	09MAR05.D	03/09/21 14:22	
LCS Dup	B102265-BSD1	09MAR06.D	03/09/21 14:22	

AECOM - Sacramento
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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Batch: B102403 Batch Matrix: Air
Preparation: EPA TO-15

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
SG-VW45A-02	2107220-01	10MAR08.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW48A-02	2107220-02	10MAR09.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW49A-02	2107220-03	10MAR10.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW24A-02	2107220-04	10MAR11.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW24A-03	2107220-05	10MAR12.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW30A-02	2107220-06	10MAR13.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW30B-02	2107220-07	10MAR14.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW42A-02	2107220-08	10MAR15.D	03/10/21 08:31	FULL Customized List-All Table 8
SG-VW57B-03	2107220-09	10MAR16.D	03/10/21 08:31	FULL Customized List-All Table 8
Blank	B102403-BLK1	10MAR07.D	03/10/21 08:31	
LCS	B102403-BS1	10MAR05.D	03/10/21 08:31	
LCS Dup	B102403-BSD1	10MAR06.D	03/10/21 08:31	

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102265-BLK1	File ID:	09MAR07.D
Prepared:	03/09/21 14:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/09/21 20:02	Instrument:	MS-A1		
Batch:	B102265	Sequence:	2104713	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102265-BLK1	File ID:	09MAR07.D
Prepared:	03/09/21 14:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/09/21 20:02	Instrument:	MS-A1		
Batch:	B102265	Sequence:	2104713	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102265-BLK1	File ID:	09MAR07.D
Prepared:	03/09/21 14:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/09/21 20:02	Instrument:	MS-A1		
Batch:	B102265	Sequence:	2104713	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102265-BLK1	File ID:	09MAR07.D
Prepared:	03/09/21 14:22	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/09/21 20:02	Instrument:	MS-A1		
Batch:	B102265	Sequence:	2104713	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.54	85.4	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	78301	7.499	81002	7.504	
Chlorobenzene-d5 (IS)	119479	11.01	142062	11.015	
1,4-Difluorobenzene (IS)	207632	8.688	240384	8.692	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102403-BLK1	File ID:	10MAR07.D
Prepared:	03/10/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/10/21 18:16	Instrument:	MS-A1		
Batch:	B102403	Sequence:	2104843	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
107-02-8	Acrolein	0.82	U
67-64-1	Acetone	0.43	U
107-13-1	Acrylonitrile	0.27	U
107-05-1	Allyl chloride	0.28	U
994-05-8	t-Amyl Methyl ether	0.31	U
71-43-2	Benzene	0.21	U
100-44-7	Benzyl chloride	0.26	U
75-27-4	Bromodichloromethane	0.45	U
75-25-2	Bromoform	0.86	U
74-83-9	Bromomethane	0.47	U
106-99-0	1,3-Butadiene	0.22	U
75-65-0	t-Butyl alcohol	0.70	U
75-15-0	Carbon disulfide	0.19	U
56-23-5	Carbon tetrachloride	0.45	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	0.53	U
67-66-3	Chloroform	0.54	U
74-87-3	Chloromethane	0.21	U
110-82-7	Cyclohexane	0.38	U
124-48-1	Dibromochloromethane	0.43	U
96-12-8	1,2-Dibromo-3-chloropropane	1.7	U
106-93-4	1,2-Dibromoethane	0.58	U
74-95-3	Dibromomethane	0.57	U
95-50-1	1,2-Dichlorobenzene	0.50	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102403-BLK1	File ID:	10MAR07.D
Prepared:	03/10/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/10/21 18:16	Instrument:	MS-A1		
Batch:	B102403	Sequence:	2104843	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
541-73-1	1,3-Dichlorobenzene	0.31	U
106-46-7	1,4-Dichlorobenzene	0.50	U
75-71-8	Dichlorodifluoromethane	0.45	U
75-34-3	1,1-Dichloroethane	0.23	U
107-06-2	1,2-Dichloroethane	0.26	U
75-35-4	1,1-Dichloroethene	0.31	U
156-59-2	cis-1,2-Dichloroethene	0.32	U
156-60-5	trans-1,2-Dichloroethene	0.27	U
78-87-5	1,2-Dichloropropane	0.32	U
10061-01-5	cis-1,3-Dichloropropene	0.30	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.91	U
75-37-6	1,1-Difluoroethane	2.0	U
108-20-3	Diisopropyl ether	0.39	U
123-91-1	1,4-Dioxane	0.33	U
64-17-5	Ethanol	0.42	U
141-78-6	Ethyl acetate	0.33	U
100-41-4	Ethylbenzene	0.32	U
622-96-8	1-Ethyl-4-methylbenzene	0.30	U
637-92-3	Ethyl t-butyl ether	0.33	U
142-82-5	n-Heptane	0.34	U
87-68-3	Hexachlorobutadiene	1.5	U
67-72-1	Hexachloroethane	0.73	U
110-54-3	Hexane	0.20	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102403-BLK1	File ID:	10MAR07.D
Prepared:	03/10/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/10/21 18:16	Instrument:	MS-A1		
Batch:	B102403	Sequence:	2104843	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
591-78-6	2-Hexanone	0.29	U
540-84-1	Isooctane	0.35	U
67-63-0	Isopropyl alcohol	0.32	U
75-09-2	Methylene chloride	0.40	U
78-93-3	Methyl ethyl ketone	0.19	U
74-88-4	Methyl iodide	0.58	U
108-10-1	Methyl isobutyl ketone	0.26	U
1634-04-4	Methyl t-butyl ether	0.28	U
91-20-3	Naphthalene	1.4	U
115-07-1	Propylene	0.25	U
100-42-5	Styrene	0.24	U
630-20-6	1,1,1,2-Tetrachloroethane	0.61	U
79-34-5	1,1,2,2-Tetrachloroethane	0.47	U
127-18-4	Tetrachloroethene	0.50	U
811-97-2	1,1,1,2-Tetrafluoroethane	0.67	U
109-99-9	Tetrahydrofuran	0.27	U
108-88-3	Toluene	0.27	U
120-82-1	1,2,4-Trichlorobenzene	0.82	U
71-55-6	1,1,1-Trichloroethane	0.39	U
79-00-5	1,1,2-Trichloroethane	0.61	U
79-01-6	Trichloroethene	0.54	U
75-69-4	Trichlorofluoromethane	0.47	U
96-18-4	1,2,3-Trichloropropane	0.48	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-TO-15

Laboratory:	BC Laboratories			SDG:	2107220
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St. SVM Air Sampling-CLP III
Matrix:	Air	Laboratory ID:	B102403-BLK1	File ID:	10MAR07.D
Prepared:	03/10/21 08:31	Preparation:	EPA TO-15	Initial/Final:	1 ml / 1 ml
Analyzed:	03/10/21 18:16	Instrument:	MS-A1		
Batch:	B102403	Sequence:	2104843	Calibration:	2103029

CAS NO.	COMPOUND	CONC. (ug/m3)	Q
95-63-6	1,2,4-Trimethylbenzene	0.40	U
108-67-8	1,3,5-Trimethylbenzene	0.40	U
108-05-4	Vinyl acetate	0.33	U
593-60-2	Vinyl bromide	0.32	U
75-01-4	Vinyl chloride	0.39	U
179601-23-1	p- & m-Xylenes	0.61	U
95-47-6	o-Xylene	0.30	U
1330-20-7	Total Xylenes	0.91	U
---	TPH - Gasoline	21	U
---	Total Petroleum Hydrocarbons	21	U

SYSTEM MONITORING COMPOUND	ADDED (ppbv)	CONC (ppbv)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surrogate)	10.000	8.70	87.0	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Bromochloromethane (IS)	79157	7.496	81002	7.504	
Chlorobenzene-d5 (IS)	123111	11.012	142062	11.015	
1,4-Difluorobenzene (IS)	214325	8.69	240384	8.692	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B102265
Preparation: EPA TO-15

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B102265-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	15.667	98.1	70 - 130
Chloroform	24.413	25.121	103	70 - 130
Ethylbenzene	21.711	22.036	102	70 - 130
Tetrachloroethene	33.913	35.201	104	70 - 130
Toluene	18.842	20.157	107	70 - 130
Trichloroethene	26.869	27.777	103	70 - 130
Trichlorofluoromethane	28.092	28.086	100	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	37.383	97.6	70 - 130
p- & m-Xylenes	43.421	43.860	101	70 - 130
o-Xylene	21.711	21.932	101	70 - 130
Total Xylenes	65.132	65.792	101	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	16.044	100	2.38	30	70 - 130
Chloroform	24.413	25.047	103	0.292	30	70 - 130
Ethylbenzene	21.711	21.611	99.5	1.95	30	70 - 130
Tetrachloroethene	33.913	33.906	100	3.75	30	70 - 130
Toluene	18.842	19.950	106	1.03	30	70 - 130
Trichloroethene	26.869	27.358	102	1.52	30	70 - 130
Trichlorofluoromethane	28.092	28.457	101	1.31	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	38.188	99.7	2.13	30	70 - 130
p- & m-Xylenes	43.421	43.916	101	0.129	30	70 - 130
o-Xylene	21.711	21.572	99.4	1.66	30	70 - 130

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Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B102265
Preparation: EPA TO-15

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B102265-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	65.488	101	0.463	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B102403
Preparation: EPA TO-15

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B102403-BS1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCS CONCENTRATION (ug/m3)	LCS % REC. #	QC LIMITS REC.
Benzene	15.974	16.782	105	70 - 130
Chloroform	24.413	26.273	108	70 - 130
Ethylbenzene	21.711	23.382	108	70 - 130
Tetrachloroethene	33.913	36.137	107	70 - 130
Toluene	18.842	20.666	110	70 - 130
Trichloroethene	26.869	28.422	106	70 - 130
Trichlorofluoromethane	28.092	29.451	105	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	39.069	102	70 - 130
p- & m-Xylenes	43.421	46.821	108	70 - 130
o-Xylene	21.711	22.979	106	70 - 130
Total Xylenes	65.132	69.800	107	70 - 130

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	15.974	16.562	104	1.32	30	70 - 130
Chloroform	24.413	25.819	106	1.74	30	70 - 130
Ethylbenzene	21.711	22.796	105	2.54	30	70 - 130
Tetrachloroethene	33.913	36.388	107	0.692	30	70 - 130
Toluene	18.842	20.888	111	1.07	30	70 - 130
Trichloroethene	26.869	28.518	106	0.340	30	70 - 130
Trichlorofluoromethane	28.092	29.788	106	1.14	30	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	38.318	38.893	102	0.452	30	70 - 130
p- & m-Xylenes	43.421	45.996	106	1.78	30	70 - 130
o-Xylene	21.711	22.605	104	1.64	30	70 - 130

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

LCS RECOVERY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Air
Batch: B102403
Preparation: EPA TO-15

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Laboratory ID: B102403-BSD1
Initial/Final: 1 ml / 1 ml

COMPOUND	SPIKE ADDED (ug/m3)	LCSD CONCENTRATION (ug/m3)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Total Xylenes	65.132	68.601	105	1.73	30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104589
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2104589-TUN1	26JAN01.D	01/26/21 08:57
Cal Standard	2104589-CAL1	26JAN02.D	01/26/21 09:26
Cal Standard	2104589-CAL2	26JAN03.D	01/26/21 09:55
Cal Standard	2104589-CAL3	26JAN04.D	01/26/21 10:26
Cal Standard	2104589-CAL4	26JAN05.D	01/26/21 11:04
Cal Standard	2104589-CAL5	26JAN06.D	01/26/21 11:46
Cal Standard	2104589-CAL6	26JAN07.D	01/26/21 12:31
MS Tune	2104589-TUN2	08MAR13.D	03/08/21 16:56
Cal Standard	2104589-CAL7	08MAR14.D	03/08/21 17:26
Cal Standard	2104589-CAL8	08MAR15.D	03/08/21 17:56
Cal Standard	2104589-CAL9	08MAR16.D	03/08/21 18:26
Cal Standard	2104589-CALA	08MAR17.D	03/08/21 18:56
Cal Standard	2104589-CALB	08MAR18.D	03/08/21 19:28
Cal Standard	2104589-CALC	08MAR19.D	03/08/21 20:04

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104713
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2104713-ICV1	26JAN08.D	01/26/21 13:02
Initial Cal Blank	2104713-ICB1	26JAN10.D	01/26/21 14:01
Initial Cal Check	2104713-ICV2	08MAR20.D	03/08/21 20:36
Initial Cal Blank	2104713-ICB2	08MAR22.D	03/08/21 21:35
MS Tune	2104713-TUN1	09MAR01.D	03/09/21 17:00
Calibration Check	2104713-CCV1	09MAR02.D	03/09/21 17:32
Calibration Check	2104713-CCV2	09MAR03.D	03/09/21 18:04
Calibration Blank	2104713-CCB1	09MAR04.D	03/09/21 18:31
LCS	B102265-BS1	09MAR05.D	03/09/21 19:02
LCS Dup	B102265-BSD1	09MAR06.D	03/09/21 19:34
Blank	B102265-BLK1	09MAR07.D	03/09/21 20:02
SG-VW30A-02	2107220-06RE1	09MAR21.D	03/10/21 11:52
SG-VW30B-02	2107220-07RE1	09MAR22.D	03/10/21 12:21

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2104843-ICV1	26JAN08.D	01/26/21 13:02
Initial Cal Blank	2104843-ICB1	26JAN10.D	01/26/21 14:01
Initial Cal Check	2104843-ICV2	08MAR20.D	03/08/21 20:36
Initial Cal Blank	2104843-ICB2	08MAR22.D	03/08/21 21:35
MS Tune	2104843-TUN1	10MAR01.D	03/10/21 15:14
Calibration Check	2104843-CCV1	10MAR02.D	03/10/21 15:46
Calibration Check	2104843-CCV2	10MAR03.D	03/10/21 16:18
Calibration Blank	2104843-CCB1	10MAR04.D	03/10/21 16:46
LCS	B102403-BS1	10MAR05.D	03/10/21 17:17
LCS Dup	B102403-BSD1	10MAR06.D	03/10/21 17:49
Blank	B102403-BLK1	10MAR07.D	03/10/21 18:16
SG-VW45A-02	2107220-01	10MAR08.D	03/10/21 19:13
SG-VW48A-02	2107220-02	10MAR09.D	03/10/21 19:49
SG-VW49A-02	2107220-03	10MAR10.D	03/10/21 20:24
SG-VW24A-02	2107220-04	10MAR11.D	03/10/21 20:59
SG-VW24A-03	2107220-05	10MAR12.D	03/10/21 21:35
SG-VW30A-02	2107220-06	10MAR13.D	03/10/21 22:10
SG-VW30B-02	2107220-07	10MAR14.D	03/10/21 22:46
SG-VW42A-02	2107220-08	10MAR15.D	03/10/21 23:22
SG-VW57B-03	2107220-09	10MAR16.D	03/10/21 23:58

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Project Number: 60632793.06
Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	26JAN01.D	Injection Date:	01/26/21
Instrument ID:	MS-A1	Injection Time:	08:57
Sequence:	2104589	Lab Sample ID:	2104589-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	17.9	PASS
Mass 75	30 - 66% of Mass 95	55.7	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.77	PASS
Mass 173	Less than 2% of Mass 174	0.392	PASS
Mass 174	50 - 120% of Mass 95	67.9	PASS
Mass 175	4 - 9% of Mass 174	7.53	PASS
Mass 176	93 - 101% of Mass 174	96.8	PASS
Mass 177	5 - 9% of Mass 176	6.81	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	08MAR13.D	Injection Date:	03/08/21
Instrument ID:	MS-A1	Injection Time:	16:56
Sequence:	2104589	Lab Sample ID:	2104589-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	20	PASS
Mass 75	30 - 66% of Mass 95	58.6	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.62	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	66	PASS
Mass 175	4 - 9% of Mass 174	7.42	PASS
Mass 176	93 - 101% of Mass 174	96.2	PASS
Mass 177	5 - 9% of Mass 176	6.47	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	09MAR01.D	Injection Date:	03/09/21
Instrument ID:	MS-A1	Injection Time:	17:00
Sequence:	2104713	Lab Sample ID:	2104713-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	19.4	PASS
Mass 75	30 - 66% of Mass 95	57	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.76	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 120% of Mass 95	71.3	PASS
Mass 175	4 - 9% of Mass 174	7.43	PASS
Mass 176	93 - 101% of Mass 174	98	PASS
Mass 177	5 - 9% of Mass 176	6.37	PASS

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Project Manager: Andy Shepard

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Lab File ID:	10MAR01.D	Injection Date:	03/10/21
Instrument ID:	MS-A1	Injection Time:	15:14
Sequence:	2104843	Lab Sample ID:	2104843-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	8 - 40% of Mass 95	19.2	PASS
Mass 75	30 - 66% of Mass 95	59.9	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	6.69	PASS
Mass 173	Less than 2% of Mass 174	0.387	PASS
Mass 174	50 - 120% of Mass 95	72	PASS
Mass 175	4 - 9% of Mass 174	7.23	PASS
Mass 176	93 - 101% of Mass 174	94.8	PASS
Mass 177	5 - 9% of Mass 176	6.71	PASS

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	26JAN08.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	01/26/21
Lab Sample ID:	2104713-ICV1	Injection Time:	13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.2120	1.217052	1.268631		4.2	30
Acrylonitrile	A	5.0000	5.4170	0.2895196	0.3136883		8.3	30
Allyl chloride	A	5.0000	5.3730	0.9086106	0.9764671		7.5	30
t-Amyl Methyl ether	A	5.0000	5.4020	0.5049205	0.5455639		8.0	30
Benzene	A	5.0000	5.3180	2.260804	2.404624		6.4	30
Benzyl chloride	Q	5.0000	4.7890	0.9408947	0.8762263		-4.2	30
Bromodichloromethane	A	5.0000	5.0220	0.6931104	0.6961414		0.4	30
Bromoform	A	5.0000	5.3180	0.9612564	1.022376		6.4	30
Bromomethane	A	5.0000	5.4070	0.7403444	0.8005752		8.1	30
1,3-Butadiene	A	5.0000	5.4160	0.7035234	0.7621145		8.3	30
t-Butyl alcohol	A	10.000	11.587	0.9471439	1.097498		15.9	30
Carbon disulfide	A	5.0000	5.2730	2.333711	2.460912		5.5	30
Carbon tetrachloride	A	5.0000	5.4460	1.356187	1.477186		8.9	30
Chlorobenzene	A	5.0000	4.9990	0.6920421	0.6918612		-0.03	30
Chloroethane	A	5.0000	5.4610	0.4849406	0.5296387		9.2	30
Chloroform	A	5.0000	5.2880	1.536653	1.625185		5.8	30
Chloromethane	A	5.0000	5.2460	0.6020907	0.6317591		4.9	30
Cyclohexane	L	5.0000	5.3910	1.754615	1.572664		7.8	30
Dibromochloromethane	A	5.0000	5.0960	0.5801956	0.5913149		1.9	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.2960	8.210992E-02	8.697682E-02		5.9	30
1,2-Dibromoethane	A	5.0000	5.2410	0.4104453	0.4302108		4.8	30
Dibromomethane	A	5.0000	5.1570	7.894414E-02	8.142168E-02		3.1	30
1,2-Dichlorobenzene	A	5.0000	5.1630	0.8621761	0.8902707		3.3	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	26JAN08.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	01/26/21
Lab Sample ID:	2104713-ICV1	Injection Time:	13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	4.9110	0.948247	0.9314054		-1.8	30
1,4-Dichlorobenzene	A	5.0000	5.0200	0.8175955	0.8207878		0.4	30
Dichlorodifluoromethane	A	5.0000	5.5310	1.746741	1.932186		10.6	30
1,1-Dichloroethane	A	5.0000	5.2820	1.2862	1.35886		5.6	30
1,2-Dichloroethane	A	5.0000	5.2480	0.9748027	1.023191		5.0	30
1,1-Dichloroethene	A	5.0000	5.2970	1.103148	1.168588		5.9	30
cis-1,2-Dichloroethene	A	5.0000	5.3380	0.9364539	0.9997033		6.8	30
trans-1,2-Dichloroethene	A	5.0000	5.2940	1.087051	1.150944		5.9	30
1,2-Dichloropropane	A	5.0000	5.0880	0.2783404	0.2832404		1.8	30
cis-1,3-Dichloropropene	A	5.0000	5.4380	0.3627383	0.3945174		8.8	30
trans-1,3-Dichloropropene	A	5.0000	5.1890	0.4444029	0.4611854		3.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.3530	2.111687	2.260688		7.1	30
1,1-Difluoroethane	A	5.0000	5.4780	1.00964	1.106183		9.6	30
Diisopropyl ether	A	5.0000	5.3480	0.4807914	0.5142088		7.0	30
1,4-Dioxane	A	5.0000	5.3540	0.1208882	0.1294489		7.1	30
Ethanol	A	10.000	11.444	0.2326268	0.2662231		14.4	30
Ethyl acetate	A	5.0000	5.5630	0.2608944	0.2902924		11.3	30
Ethylbenzene	A	5.0000	5.2360	0.5967742	0.6248922		4.7	30
1-Ethyl-4-methylbenzene	A	5.0000	5.3360	2.511953	2.680655		6.7	30
Ethyl t-butyl ether	A	5.0000	5.5490	1.52042	1.687339		11.0	30
n-Heptane	A	5.0000	4.9850	0.279467	0.278635		-0.3	30
Hexachlorobutadiene	A	5.0000	4.9000	0.7882724	0.7724818		-2.0	30
Hexachloroethane	A	5.0000	5.6520	0.118551	0.134012		13.0	30

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 26JAN08.D
Sequence: 2104713
Lab Sample ID: 2104713-ICV1

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2103029
Calibration Date: 01/26/21 09:26
Injection Date: 01/26/21
Injection Time: 13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2000	1.300773	1.352902		4.0	30
2-Hexanone	A	5.0000	5.3220	0.4593612	0.4889687		6.4	30
Isooctane	A	5.0000	5.0860	1.458536	1.483611		1.7	30
Isopropyl alcohol	A	5.0000	5.8300	0.9324757	1.087284		16.6	30
Methylene chloride	A	5.0000	4.9710	0.7752345	0.7707425		-0.6	30
Methyl ethyl ketone	A	5.0000	5.3530	1.489465	1.594645		7.1	30
Methyl iodide	A	5.0000	5.4260	0.6050165	0.6565703		8.5	30
Methyl isobutyl ketone	A	5.0000	5.1140	0.6288406	0.6431912		2.3	30
Methyl t-butyl ether	A	5.0000	5.4730	2.429218	2.659241		9.5	30
Naphthalene	Q	5.0000	5.3300	0.4086985	0.4358178		6.6	30
Propylene	A	5.0000	5.2730	0.5616619	0.5923398		5.5	30
Styrene	A	5.0000	5.3490	1.02117	1.092352		7.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.1910	0.156388	0.1623745		3.8	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9120	1.295239	1.272401		-1.8	30
Tetrachloroethene	A	5.0000	5.0230	0.3740789	0.3757784		0.5	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.6040	1.003273	1.124421		12.1	30
Tetrahydrofuran	A	5.0000	5.3720	0.8919411	0.9583666		7.4	30
Toluene	A	5.0000	5.1690	0.8940923	0.924231		3.4	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3180	0.3141898	0.2909904		6.4	30
1,1,1-Trichloroethane	A	5.0000	5.4010	1.360361	1.469562		8.0	30
1,1,2-Trichloroethane	A	5.0000	5.1510	0.295788	0.3047396		3.0	30
Trichloroethene	A	5.0000	5.0470	0.2947562	0.2975555		0.9	30
Trichlorofluoromethane	A	5.0000	5.3720	1.699779	1.826391		7.4	30

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	26JAN08.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	01/26/21
Lab Sample ID:	2104713-ICV1	Injection Time:	13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.3150	0.1860988	0.1978408		6.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.2720	1.341406	1.414348		5.4	30
1,2,4-Trimethylbenzene	A	5.0000	5.1940	1.670657	1.735438		3.9	30
1,3,5-Trimethylbenzene	A	5.0000	4.8230	1.719522	1.658784		-3.5	30
Vinyl acetate	A	5.0000	5.6850	1.8103	2.058478		13.7	30
Vinyl bromide	A	5.0000	5.2030	0.727439	0.7569104		4.1	30
Vinyl chloride	A	5.0000	5.4560	0.8420508	0.918856		9.1	30
p- & m-Xylenes	A	10.000	10.119	1.653064	1.672673		1.2	30
o-Xylene	A	5.0000	4.9490	1.748421	1.730537		-1.0	30
Total Xylenes	A	15.000	15.068	1.68485	1.691961		0.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	08MAR20.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/08/21
Lab Sample ID:	2104713-ICV2	Injection Time:	20:36

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	529.25	2.365803	2.504182		5.8	30
Total Petroleum Hydrocarbons	A	500.00	529.25	2.365803	2.504182		5.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	09MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/09/21
Lab Sample ID:	2104713-CCV1	Injection Time:	17:32

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	5.0000	5.7210	1.217052	1.392619		14.4	30	
Acrylonitrile	A	5.0000	5.7980	0.2895196	0.3357387		16.0	30	
Allyl chloride	A	5.0000	5.8960	0.9086106	1.071496		17.9	30	
t-Amyl Methyl ether	A	5.0000	6.2020	0.5049205	0.6263338		24.0	30	
Benzene	A	5.0000	5.4120	2.260804	2.447186		8.2	30	
Benzyl chloride	Q	5.0000	5.3560	0.9408947	1.012774		7.1	30	
Bromodichloromethane	A	5.0000	5.9650	0.6931104	0.8268771		19.3	30	
Bromoform	A	5.0000	5.6710	0.9612564	1.090309		13.4	30	
Bromomethane	A	5.0000	5.2380	0.7403444	0.7756397		4.8	30	
1,3-Butadiene	A	5.0000	5.4970	0.7035234	0.7733947		9.9	30	
t-Butyl alcohol	A	10.000	12.829	0.9471439	1.215117		28.3	30	
Carbon disulfide	A	5.0000	5.4400	2.333711	2.539253		8.8	30	
Carbon tetrachloride	A	5.0000	5.8090	1.356187	1.575699		16.2	30	
Chlorobenzene	A	5.0000	5.6420	0.6920421	0.78085		12.8	30	
Chloroethane	A	5.0000	5.5390	0.4849406	0.537191		10.8	30	
Chloroform	A	5.0000	5.5800	1.536653	1.715048		11.6	30	
Chloromethane	A	5.0000	5.7280	0.6020907	0.689712		14.6	30	
Cyclohexane	L	5.0000	5.7870	1.754615	1.674524		15.7	30	
Dibromochloromethane	A	5.0000	6.0130	0.5801956	0.6976863		20.3	30	
1,2-Dibromo-3-chloropropane	A	5.0000	6.8100	8.210992E-02	0.1118304		36.2	30	*
1,2-Dibromoethane	A	5.0000	5.8490	0.4104453	0.4801543		17.0	30	
Dibromomethane	A	5.0000	6.2420	7.894414E-02	9.855149E-02		24.8	30	
1,2-Dichlorobenzene	A	5.0000	5.3970	0.8621761	0.9305667		7.9	30	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	09MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/09/21
Lab Sample ID:	2104713-CCV1	Injection Time:	17:32

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.2270	0.948247	0.9912313		4.5	30
1,4-Dichlorobenzene	A	5.0000	5.4240	0.8175955	0.8868831		8.5	30
Dichlorodifluoromethane	A	5.0000	5.8190	1.746741	2.032713		16.4	30
1,1-Dichloroethane	A	5.0000	5.6090	1.2862	1.442925		12.2	30
1,2-Dichloroethane	A	5.0000	5.8330	0.9748027	1.137219		16.7	30
1,1-Dichloroethene	A	5.0000	5.7240	1.103148	1.262777		14.5	30
cis-1,2-Dichloroethene	A	5.0000	5.6160	0.9364539	1.051864		12.3	30
trans-1,2-Dichloroethene	A	5.0000	5.5270	1.087051	1.201567		10.5	30
1,2-Dichloropropane	A	5.0000	5.9910	0.2783404	0.333532		19.8	30
cis-1,3-Dichloropropene	A	5.0000	6.2910	0.3627383	0.4564042		25.8	30
trans-1,3-Dichloropropene	A	5.0000	5.9590	0.4444029	0.5296046		19.2	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.3820	2.111687	2.273223		7.6	30
1,1-Difluoroethane	A	5.0000	5.8560	1.00964	1.182416		17.1	30
Diisopropyl ether	A	5.0000	5.3190	0.4807914	0.5114883		6.4	30
1,4-Dioxane	A	5.0000	6.3020	0.1208882	0.1523703		26.0	30
Ethanol	A	10.000	11.289	0.2326268	0.2626165		12.9	30
Ethyl acetate	A	5.0000	6.1530	0.2608944	0.3210547		23.1	30
Ethylbenzene	A	5.0000	5.5310	0.5967742	0.6602043		10.6	30
1-Ethyl-4-methylbenzene	A	5.0000	5.8040	2.511953	2.915825		16.1	30
Ethyl t-butyl ether	A	5.0000	5.9420	1.52042	1.806978		18.8	30
n-Heptane	A	5.0000	6.1610	0.279467	0.3443724		23.2	30
Hexachlorobutadiene	A	5.0000	3.7360	0.7882724	0.5890534		-25.3	30
Hexachloroethane	A	5.0000	6.4020	0.118551	0.1518007		28.0	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	09MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/09/21
Lab Sample ID:	2104713-CCV1	Injection Time:	17:32

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.6400	1.300773	1.467161		12.8	30
2-Hexanone	A	5.0000	7.3990	0.4593612	0.6797438		48.0	30 *
Isooctane	A	5.0000	6.2140	1.458536	1.812758		24.3	30
Isopropyl alcohol	A	5.0000	6.2310	0.9324757	1.162097		24.6	30
Methylene chloride	A	5.0000	5.1200	0.7752345	0.7938744		2.4	30
Methyl ethyl ketone	A	5.0000	6.0540	1.489465	1.803312		21.1	30
Methyl iodide	A	5.0000	5.0440	0.6050165	0.6103361		0.9	30
Methyl isobutyl ketone	A	5.0000	6.7680	0.6288406	0.8511637		35.4	30 *
Methyl t-butyl ether	A	5.0000	5.6320	2.429218	2.73649		12.6	30
Naphthalene	Q	5.0000	5.9230	0.4086985	0.4951358		18.5	30
Propylene	A	5.0000	5.6830	0.5616619	0.6384212		13.7	30
Styrene	A	5.0000	5.6240	1.02117	1.148678		12.5	30
1,1,1,2-Tetrachloroethane	A	5.0000	6.0890	0.156388	0.1904608		21.8	30
1,1,2,2-Tetrachloroethane	A	5.0000	5.5480	1.295239	1.437287		11.0	30
Tetrachloroethene	A	5.0000	5.6450	0.3740789	0.4223587		12.9	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.5640	1.003273	1.116441		11.3	30
Tetrahydrofuran	A	5.0000	5.9510	0.8919411	1.061577		19.0	30
Toluene	A	5.0000	5.8040	0.8940923	1.037861		16.1	30
1,2,4-Trichlorobenzene	Q	5.0000	3.8260	0.3141898	0.191604		-23.5	30
1,1,1-Trichloroethane	A	5.0000	5.7010	1.360361	1.551027		14.0	30
1,1,2-Trichloroethane	A	5.0000	5.8300	0.295788	0.3448834		16.6	30
Trichloroethene	A	5.0000	5.6310	0.2947562	0.3319566		12.6	30
Trichlorofluoromethane	A	5.0000	5.5330	1.699779	1.880993		10.7	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	09MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/09/21
Lab Sample ID:	2104713-CCV1	Injection Time:	17:32

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	6.3500	0.1860988	0.2363585		27.0	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.2670	1.341406	1.412984		5.3	30
1,2,4-Trimethylbenzene	A	5.0000	5.6150	1.670657	1.876279		12.3	30
1,3,5-Trimethylbenzene	A	5.0000	5.4090	1.719522	1.860215		8.2	30
Vinyl acetate	A	5.0000	6.3110	1.8103	2.285135		26.2	30
Vinyl bromide	A	5.0000	5.3350	0.727439	0.7761208		6.7	30
Vinyl chloride	A	5.0000	5.5340	0.8420508	0.9320322		10.7	30
p- & m-Xylenes	A	10.000	11.198	1.653064	1.851113		12.0	30
o-Xylene	A	5.0000	5.5210	1.748421	1.930643		10.4	30
Total Xylenes	A	15.000	16.719	1.68485	1.877623		11.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	09MAR03.D	Calibration Date:	01/26/21 09:26
Sequence:	2104713	Injection Date:	03/09/21
Lab Sample ID:	2104713-CCV2	Injection Time:	18:04

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	484.18	2.365803	2.290973		-3.2	30
Total Petroleum Hydrocarbons	A	500.00	484.18	2.365803	2.290973		-3.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 26JAN08.D
Sequence: 2104843
Lab Sample ID: 2104843-ICV1

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2103029
Calibration Date: 01/26/21 09:26
Injection Date: 01/26/21
Injection Time: 13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.0000	5.2120	1.217052	1.268631		4.2	30
Acrylonitrile	A	5.0000	5.4170	0.2895196	0.3136883		8.3	30
Allyl chloride	A	5.0000	5.3730	0.9086106	0.9764671		7.5	30
t-Amyl Methyl ether	A	5.0000	5.4020	0.5049205	0.5455639		8.0	30
Benzene	A	5.0000	5.3180	2.260804	2.404624		6.4	30
Benzyl chloride	Q	5.0000	4.7890	0.9408947	0.8762263		-4.2	30
Bromodichloromethane	A	5.0000	5.0220	0.6931104	0.6961414		0.4	30
Bromoform	A	5.0000	5.3180	0.9612564	1.022376		6.4	30
Bromomethane	A	5.0000	5.4070	0.7403444	0.8005752		8.1	30
1,3-Butadiene	A	5.0000	5.4160	0.7035234	0.7621145		8.3	30
t-Butyl alcohol	A	10.000	11.587	0.9471439	1.097498		15.9	30
Carbon disulfide	A	5.0000	5.2730	2.333711	2.460912		5.5	30
Carbon tetrachloride	A	5.0000	5.4460	1.356187	1.477186		8.9	30
Chlorobenzene	A	5.0000	4.9990	0.6920421	0.6918612		-0.03	30
Chloroethane	A	5.0000	5.4610	0.4849406	0.5296387		9.2	30
Chloroform	A	5.0000	5.2880	1.536653	1.625185		5.8	30
Chloromethane	A	5.0000	5.2460	0.6020907	0.6317591		4.9	30
Cyclohexane	L	5.0000	5.3910	1.754615	1.572664		7.8	30
Dibromochloromethane	A	5.0000	5.0960	0.5801956	0.5913149		1.9	30
1,2-Dibromo-3-chloropropane	A	5.0000	5.2960	8.210992E-02	8.697682E-02		5.9	30
1,2-Dibromoethane	A	5.0000	5.2410	0.4104453	0.4302108		4.8	30
Dibromomethane	A	5.0000	5.1570	7.894414E-02	8.142168E-02		3.1	30
1,2-Dichlorobenzene	A	5.0000	5.1630	0.8621761	0.8902707		3.3	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	26JAN08.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	01/26/21
Lab Sample ID:	2104843-ICV1	Injection Time:	13:02

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	4.9110	0.948247	0.9314054		-1.8	30
1,4-Dichlorobenzene	A	5.0000	5.0200	0.8175955	0.8207878		0.4	30
Dichlorodifluoromethane	A	5.0000	5.5310	1.746741	1.932186		10.6	30
1,1-Dichloroethane	A	5.0000	5.2820	1.2862	1.35886		5.6	30
1,2-Dichloroethane	A	5.0000	5.2480	0.9748027	1.023191		5.0	30
1,1-Dichloroethene	A	5.0000	5.2970	1.103148	1.168588		5.9	30
cis-1,2-Dichloroethene	A	5.0000	5.3380	0.9364539	0.9997033		6.8	30
trans-1,2-Dichloroethene	A	5.0000	5.2940	1.087051	1.150944		5.9	30
1,2-Dichloropropane	A	5.0000	5.0880	0.2783404	0.2832404		1.8	30
cis-1,3-Dichloropropene	A	5.0000	5.4380	0.3627383	0.3945174		8.8	30
trans-1,3-Dichloropropene	A	5.0000	5.1890	0.4444029	0.4611854		3.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.3530	2.111687	2.260688		7.1	30
1,1-Difluoroethane	A	5.0000	5.4780	1.00964	1.106183		9.6	30
Diisopropyl ether	A	5.0000	5.3480	0.4807914	0.5142088		7.0	30
1,4-Dioxane	A	5.0000	5.3540	0.1208882	0.1294489		7.1	30
Ethanol	A	10.000	11.444	0.2326268	0.2662231		14.4	30
Ethyl acetate	A	5.0000	5.5630	0.2608944	0.2902924		11.3	30
Ethylbenzene	A	5.0000	5.2360	0.5967742	0.6248922		4.7	30
1-Ethyl-4-methylbenzene	A	5.0000	5.3360	2.511953	2.680655		6.7	30
Ethyl t-butyl ether	A	5.0000	5.5490	1.52042	1.687339		11.0	30
n-Heptane	A	5.0000	4.9850	0.279467	0.278635		-0.3	30
Hexachlorobutadiene	A	5.0000	4.9000	0.7882724	0.7724818		-2.0	30
Hexachloroethane	A	5.0000	5.6520	0.118551	0.134012		13.0	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: MS-A1
Lab File ID: 26JAN08.D
Sequence: 2104843
Lab Sample ID: 2104843-ICV1

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2103029
Calibration Date: 01/26/21 09:26
Injection Date: 01/26/21
Injection Time: 13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Hexane	A	5.0000	5.2000	1.300773	1.352902		4.0	30
2-Hexanone	A	5.0000	5.3220	0.4593612	0.4889687		6.4	30
Isooctane	A	5.0000	5.0860	1.458536	1.483611		1.7	30
Isopropyl alcohol	A	5.0000	5.8300	0.9324757	1.087284		16.6	30
Methylene chloride	A	5.0000	4.9710	0.7752345	0.7707425		-0.6	30
Methyl ethyl ketone	A	5.0000	5.3530	1.489465	1.594645		7.1	30
Methyl iodide	A	5.0000	5.4260	0.6050165	0.6565703		8.5	30
Methyl isobutyl ketone	A	5.0000	5.1140	0.6288406	0.6431912		2.3	30
Methyl t-butyl ether	A	5.0000	5.4730	2.429218	2.659241		9.5	30
Naphthalene	Q	5.0000	5.3300	0.4086985	0.4358178		6.6	30
Propylene	A	5.0000	5.2730	0.5616619	0.5923398		5.5	30
Styrene	A	5.0000	5.3490	1.02117	1.092352		7.0	30
1,1,1,2-Tetrachloroethane	A	5.0000	5.1910	0.156388	0.1623745		3.8	30
1,1,2,2-Tetrachloroethane	A	5.0000	4.9120	1.295239	1.272401		-1.8	30
Tetrachloroethene	A	5.0000	5.0230	0.3740789	0.3757784		0.5	30
1,1,1,2-Tetrafluoroethane	A	5.0000	5.6040	1.003273	1.124421		12.1	30
Tetrahydrofuran	A	5.0000	5.3720	0.8919411	0.9583666		7.4	30
Toluene	A	5.0000	5.1690	0.8940923	0.924231		3.4	30
1,2,4-Trichlorobenzene	Q	5.0000	5.3180	0.3141898	0.2909904		6.4	30
1,1,1-Trichloroethane	A	5.0000	5.4010	1.360361	1.469562		8.0	30
1,1,2-Trichloroethane	A	5.0000	5.1510	0.295788	0.3047396		3.0	30
Trichloroethene	A	5.0000	5.0470	0.2947562	0.2975555		0.9	30
Trichlorofluoromethane	A	5.0000	5.3720	1.699779	1.826391		7.4	30

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	26JAN08.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	01/26/21
Lab Sample ID:	2104843-ICV1	Injection Time:	13:02

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	5.3150	0.1860988	0.1978408		6.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.2720	1.341406	1.414348		5.4	30
1,2,4-Trimethylbenzene	A	5.0000	5.1940	1.670657	1.735438		3.9	30
1,3,5-Trimethylbenzene	A	5.0000	4.8230	1.719522	1.658784		-3.5	30
Vinyl acetate	A	5.0000	5.6850	1.8103	2.058478		13.7	30
Vinyl bromide	A	5.0000	5.2030	0.727439	0.7569104		4.1	30
Vinyl chloride	A	5.0000	5.4560	0.8420508	0.918856		9.1	30
p- & m-Xylenes	A	10.000	10.119	1.653064	1.672673		1.2	30
o-Xylene	A	5.0000	4.9490	1.748421	1.730537		-1.0	30
Total Xylenes	A	15.000	15.068	1.68485	1.691961		0.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	08MAR20.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/08/21
Lab Sample ID:	2104843-ICV2	Injection Time:	20:36

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	529.25	2.365803	2.504182		5.8	30
Total Petroleum Hydrocarbons	A	500.00	529.25	2.365803	2.504182		5.8	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Sacramento, CA 95811

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	10MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/10/21
Lab Sample ID:	2104843-CCV1	Injection Time:	15:46

COMPOUND	(1) CAL TYPE	CONC. (ppbv) STD	CONC. (ppbv) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Acetone	A	5.0000	5.4860	1.217052	1.335256		9.7	30	
Acrylonitrile	A	5.0000	5.5020	0.2895196	0.3186156		10.0	30	
Allyl chloride	A	5.0000	5.4810	0.9086106	0.9959645		9.6	30	
t-Amyl Methyl ether	A	5.0000	5.8470	0.5049205	0.590493		16.9	30	
Benzene	A	5.0000	5.2950	2.260804	2.394341		5.9	30	
Benzyl chloride	Q	5.0000	4.8670	0.9408947	0.8948653		-2.7	30	
Bromodichloromethane	A	5.0000	5.5840	0.6931104	0.7741011		11.7	30	
Bromoform	A	5.0000	5.4810	0.9612564	1.053695		9.6	30	
Bromomethane	A	5.0000	4.9420	0.7403444	0.7317096		-1.2	30	
1,3-Butadiene	A	5.0000	5.3040	0.7035234	0.7463087		6.1	30	
t-Butyl alcohol	A	10.000	12.553	0.9471439	1.188909		25.5	30	
Carbon disulfide	A	5.0000	5.2300	2.333711	2.440939		4.6	30	
Carbon tetrachloride	A	5.0000	5.6850	1.356187	1.541922		13.7	30	
Chlorobenzene	A	5.0000	5.2750	0.6920421	0.7300379		5.5	30	
Chloroethane	A	5.0000	5.1410	0.4849406	0.4986469		2.8	30	
Chloroform	A	5.0000	5.4020	1.536653	1.660305		8.0	30	
Chloromethane	A	5.0000	5.2610	0.6020907	0.6335517		5.2	30	
Cyclohexane	L	5.0000	5.5390	1.754615	1.610882		10.8	30	
Dibromochloromethane	A	5.0000	5.6310	0.5801956	0.6534294		12.6	30	
1,2-Dibromo-3-chloropropane	A	5.0000	6.5470	8.210992E-02	0.1075184		30.9	30	*
1,2-Dibromoethane	A	5.0000	5.4750	0.4104453	0.4494634		9.5	30	
Dibromomethane	A	5.0000	5.7250	7.894414E-02	9.039218E-02		14.5	30	
1,2-Dichlorobenzene	A	5.0000	5.0810	0.8621761	0.8762107		1.6	30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	10MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/10/21
Lab Sample ID:	2104843-CCV1	Injection Time:	15:46

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,3-Dichlorobenzene	A	5.0000	5.0000	0.948247	0.9482666		0.002	30
1,4-Dichlorobenzene	A	5.0000	4.9480	0.8175955	0.8091512		-1.0	30
Dichlorodifluoromethane	A	5.0000	5.7280	1.746741	2.001116		14.6	30
1,1-Dichloroethane	A	5.0000	5.4870	1.2862	1.41148		9.7	30
1,2-Dichloroethane	A	5.0000	5.6430	0.9748027	1.100247		12.9	30
1,1-Dichloroethene	A	5.0000	5.4870	1.103148	1.210583		9.7	30
cis-1,2-Dichloroethene	A	5.0000	5.4810	0.9364539	1.026516		9.6	30
trans-1,2-Dichloroethene	A	5.0000	5.3000	1.087051	1.152329		6.0	30
1,2-Dichloropropane	A	5.0000	5.6490	0.2783404	0.314493		13.0	30
cis-1,3-Dichloropropene	A	5.0000	5.9340	0.3627383	0.43047		18.7	30
trans-1,3-Dichloropropene	A	5.0000	5.6210	0.4444029	0.4996031		12.4	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane	A	5.0000	5.1310	2.111687	2.167046		2.6	30
1,1-Difluoroethane	A	5.0000	5.5930	1.00964	1.12935		11.9	30
Diisopropyl ether	A	5.0000	5.1700	0.4807914	0.4971751		3.4	30
1,4-Dioxane	A	5.0000	6.2370	0.1208882	0.1507881		24.7	30
Ethanol	A	10.000	10.532	0.2326268	0.2449912		5.3	30
Ethyl acetate	A	5.0000	5.8640	0.2608944	0.3059868		17.3	30
Ethylbenzene	A	5.0000	5.2510	0.5967742	0.6267708		5.0	30
1-Ethyl-4-methylbenzene	A	5.0000	5.3030	2.511953	2.664066		6.1	30
Ethyl t-butyl ether	A	5.0000	5.7730	1.52042	1.755353		15.5	30
n-Heptane	A	5.0000	5.6870	0.279467	0.317866		13.7	30
Hexachlorobutadiene	A	5.0000	3.5370	0.7882724	0.5576211		-29.3	30
Hexachloroethane	A	5.0000	6.2020	0.118551	0.1470611		24.0	30

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Project Number: 60632793.06
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	10MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/10/21
Lab Sample ID:	2104843-CCV1	Injection Time:	15:46

COMPOUND	(1) CAL TYPE	CONC. (ppbv) STD	CONC. (ppbv) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Hexane	A	5.0000	5.3850	1.300773	1.400964		7.7	30	
2-Hexanone	A	5.0000	6.8130	0.4593612	0.6259221		36.3	30	*
Isooctane	A	5.0000	5.8560	1.458536	1.708362		17.1	30	
Isopropyl alcohol	A	5.0000	5.9950	0.9324757	1.117979		19.9	30	
Methylene chloride	A	5.0000	5.0680	0.7752345	0.7857143		1.4	30	
Methyl ethyl ketone	A	5.0000	5.7370	1.489465	1.708992		14.7	30	
Methyl iodide	A	5.0000	4.9540	0.6050165	0.5994635		-0.9	30	
Methyl isobutyl ketone	A	5.0000	6.3120	0.6288406	0.7938068		26.2	30	
Methyl t-butyl ether	A	5.0000	5.4520	2.429218	2.648602		9.0	30	
Naphthalene	Q	5.0000	5.4440	0.4086985	0.4471248		8.9	30	
Propylene	A	5.0000	5.5400	0.5616619	0.6223472		10.8	30	
Styrene	A	5.0000	5.3190	1.02117	1.086222		6.4	30	
1,1,1,2-Tetrachloroethane	A	5.0000	5.6480	0.156388	0.1766561		13.0	30	
1,1,2,2-Tetrachloroethane	A	5.0000	5.2420	1.295239	1.357824		4.8	30	
Tetrachloroethene	A	5.0000	5.2750	0.3740789	0.3946376		5.5	30	
1,1,1,2-Tetrafluoroethane	A	5.0000	5.5060	1.003273	1.104733		10.1	30	
Tetrahydrofuran	A	5.0000	5.6360	0.8919411	1.005341		12.7	30	
Toluene	A	5.0000	5.4880	0.8940923	0.9813972		9.8	30	
1,2,4-Trichlorobenzene	Q	5.0000	3.7200	0.3141898	0.1849288		-25.6	30	
1,1,1-Trichloroethane	A	5.0000	5.5550	1.360361	1.511466		11.1	30	
1,1,2-Trichloroethane	A	5.0000	5.4840	0.295788	0.3244403		9.7	30	
Trichloroethene	A	5.0000	5.2820	0.2947562	0.3113776		5.6	30	
Trichlorofluoromethane	A	5.0000	5.3490	1.699779	1.818568		7.0	30	

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	10MAR02.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/10/21
Lab Sample ID:	2104843-CCV1	Injection Time:	15:46

	(1) CAL	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2,3-Trichloropropane	A	5.0000	6.0490	0.1860988	0.2251587		21.0	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	5.0000	5.1310	1.341406	1.376537		2.6	30
1,2,4-Trimethylbenzene	A	5.0000	5.3340	1.670657	1.7823		6.7	30
1,3,5-Trimethylbenzene	A	5.0000	5.4170	1.719522	1.862789		8.3	30
Vinyl acetate	A	5.0000	6.0770	1.8103	2.200328		21.5	30
Vinyl bromide	A	5.0000	4.9790	0.727439	0.724327		-0.4	30
Vinyl chloride	A	5.0000	5.2520	0.8420508	0.8845131		5.0	30
p- & m-Xylenes	A	10.000	10.649	1.653064	1.760274		6.5	30
o-Xylene	A	5.0000	5.2840	1.748421	1.847713		5.7	30
Total Xylenes	A	15.000	15.933	1.68485	1.78942		6.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-TO-15

Laboratory:	BC Laboratories	SDG:	2107220
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St. SVM Air Sampling-CLP III
Instrument ID:	MS-A1	Calibration:	2103029
Lab File ID:	10MAR03.D	Calibration Date:	01/26/21 09:26
Sequence:	2104843	Injection Date:	03/10/21
Lab Sample ID:	2104843-CCV2	Injection Time:	16:18

COMPOUND	(1) CAL TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Gasoline	A	500.00	492.24	2.365803	2.329101		-1.6	30
Total Petroleum Hydrocarbons	A	500.00	492.24	2.365803	2.329101		-1.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104589
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101018

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104589-CAL1)			Lab File ID: 26JAN02.D		Analyzed: 01/26/21 09:26			
4-Bromofluorobenzene (Surrogate)	10.000	106		11.737	11.7375	-0.0005	+/-1.0	
Cal Standard (2104589-CAL2)			Lab File ID: 26JAN03.D		Analyzed: 01/26/21 09:55			
4-Bromofluorobenzene (Surrogate)	10.000	109		11.737	11.7375	-0.0005	+/-1.0	
Cal Standard (2104589-CAL3)			Lab File ID: 26JAN04.D		Analyzed: 01/26/21 10:26			
4-Bromofluorobenzene (Surrogate)	10.000	116		11.735	11.7375	-0.0025	+/-1.0	
Cal Standard (2104589-CAL4)			Lab File ID: 26JAN05.D		Analyzed: 01/26/21 11:04			
4-Bromofluorobenzene (Surrogate)	10.000	114		11.739	11.7375	0.0015	+/-1.0	
Cal Standard (2104589-CAL5)			Lab File ID: 26JAN06.D		Analyzed: 01/26/21 11:46			
4-Bromofluorobenzene (Surrogate)	10.000	111		11.737	11.7375	-0.0005	+/-1.0	
Cal Standard (2104589-CAL6)			Lab File ID: 26JAN07.D		Analyzed: 01/26/21 12:31			
4-Bromofluorobenzene (Surrogate)	10.000	108		11.74	11.7375	0.0025	+/-1.0	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104713
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2104713-ICV1)			Lab File ID: 26JAN08.D		Analyzed: 01/26/21 13:02			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Initial Cal Blank (2104713-ICB1)			Lab File ID: 26JAN10.D		Analyzed: 01/26/21 14:01			
4-Bromofluorobenzene (Surrogate)	10.000	96.6	70 - 130	11.74	11.7375	0.0025	+/-1.0	
Initial Cal Check (2104713-ICV2)			Lab File ID: 08MAR20.D		Analyzed: 03/08/21 20:36			
4-Bromofluorobenzene (Surrogate)	10.000	99.0	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Initial Cal Blank (2104713-ICB2)			Lab File ID: 08MAR22.D		Analyzed: 03/08/21 21:35			
4-Bromofluorobenzene (Surrogate)	10.000	85.4	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
Calibration Check (2104713-CCV1)			Lab File ID: 09MAR02.D		Analyzed: 03/09/21 17:32			
4-Bromofluorobenzene (Surrogate)	10.000	98.1	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
Calibration Check (2104713-CCV2)			Lab File ID: 09MAR03.D		Analyzed: 03/09/21 18:04			
4-Bromofluorobenzene (Surrogate)	10.000	90.2	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Calibration Blank (2104713-CCB1)			Lab File ID: 09MAR04.D		Analyzed: 03/09/21 18:31			
4-Bromofluorobenzene (Surrogate)	10.000	88.4	70 - 130	11.734	11.7375	-0.0035	+/-1.0	
LCS (B102265-BS1)			Lab File ID: 09MAR05.D		Analyzed: 03/09/21 19:02			
4-Bromofluorobenzene (Surrogate)	10.000	99.8	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
LCS Dup (B102265-BSD1)			Lab File ID: 09MAR06.D		Analyzed: 03/09/21 19:34			
4-Bromofluorobenzene (Surrogate)	10.000	99.2	70 - 130	11.736	11.7375	-0.0015	+/-1.0	
Blank (B102265-BLK1)			Lab File ID: 09MAR07.D		Analyzed: 03/09/21 20:02			
4-Bromofluorobenzene (Surrogate)	10.000	85.4	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
SG-VW30A-02 (2107220-06RE1)			Lab File ID: 09MAR21.D		Analyzed: 03/10/21 11:52			
4-Bromofluorobenzene (Surrogate)	10.000	81.5	70 - 130	11.738	11.7375	0.0005	+/-1.0	
SG-VW30B-02 (2107220-07RE1)			Lab File ID: 09MAR22.D		Analyzed: 03/10/21 12:21			
4-Bromofluorobenzene (Surrogate)	10.000	82.6	70 - 130	11.735	11.7375	-0.0025	+/-1.0	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2104843-ICV1)			Lab File ID: 26JAN08.D		Analyzed: 01/26/21 13:02			
4-Bromofluorobenzene (Surrogate)	10.000	104	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Initial Cal Blank (2104843-ICB1)			Lab File ID: 26JAN10.D		Analyzed: 01/26/21 14:01			
4-Bromofluorobenzene (Surrogate)	10.000	96.6	70 - 130	11.74	11.7375	0.0025	+/-1.0	
Initial Cal Check (2104843-ICV2)			Lab File ID: 08MAR20.D		Analyzed: 03/08/21 20:36			
4-Bromofluorobenzene (Surrogate)	10.000	99.0	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Initial Cal Blank (2104843-ICB2)			Lab File ID: 08MAR22.D		Analyzed: 03/08/21 21:35			
4-Bromofluorobenzene (Surrogate)	10.000	85.4	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
Calibration Check (2104843-CCV1)			Lab File ID: 10MAR02.D		Analyzed: 03/10/21 15:46			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Calibration Check (2104843-CCV2)			Lab File ID: 10MAR03.D		Analyzed: 03/10/21 16:18			
4-Bromofluorobenzene (Surrogate)	10.000	94.6	70 - 130	11.736	11.7375	-0.0015	+/-1.0	
Calibration Blank (2104843-CCB1)			Lab File ID: 10MAR04.D		Analyzed: 03/10/21 16:46			
4-Bromofluorobenzene (Surrogate)	10.000	94.7	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
LCS (B102403-BS1)			Lab File ID: 10MAR05.D		Analyzed: 03/10/21 17:17			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
LCS Dup (B102403-BSD1)			Lab File ID: 10MAR06.D		Analyzed: 03/10/21 17:49			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
Blank (B102403-BLK1)			Lab File ID: 10MAR07.D		Analyzed: 03/10/21 18:16			
4-Bromofluorobenzene (Surrogate)	10.000	87.0	70 - 130	11.732	11.7375	-0.0055	+/-1.0	
SG-VW45A-02 (2107220-01)			Lab File ID: 10MAR08.D		Analyzed: 03/10/21 19:13			
4-Bromofluorobenzene (Surrogate)	10.000	93.0	70 - 130	11.734	11.7375	-0.0035	+/-1.0	
SG-VW48A-02 (2107220-02)			Lab File ID: 10MAR09.D		Analyzed: 03/10/21 19:49			
4-Bromofluorobenzene (Surrogate)	10.000	100	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
SG-VW49A-02 (2107220-03)			Lab File ID: 10MAR10.D		Analyzed: 03/10/21 20:24			
4-Bromofluorobenzene (Surrogate)	10.000	92.1	70 - 130	11.735	11.7375	-0.0025	+/-1.0	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Surrogate Compound	Spike Level ppbv	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SG-VW24A-02 (2107220-04)			Lab File ID: 10MAR11.D		Analyzed: 03/10/21 20:59			
4-Bromofluorobenzene (Surrogate)	10.000	98.3	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
SG-VW24A-03 (2107220-05)			Lab File ID: 10MAR12.D		Analyzed: 03/10/21 21:35			
4-Bromofluorobenzene (Surrogate)	10.000	94.7	70 - 130	11.735	11.7375	-0.0025	+/-1.0	
SG-VW30A-02 (2107220-06)			Lab File ID: 10MAR13.D		Analyzed: 03/10/21 22:10			
4-Bromofluorobenzene (Surrogate)	10.000	93.4	70 - 130	11.737	11.7375	-0.0005	+/-1.0	
SG-VW30B-02 (2107220-07)			Lab File ID: 10MAR14.D		Analyzed: 03/10/21 22:46			
4-Bromofluorobenzene (Surrogate)	10.000	93.2	70 - 130	11.738	11.7375	0.0005	+/-1.0	
SG-VW42A-02 (2107220-08)			Lab File ID: 10MAR15.D		Analyzed: 03/10/21 23:22			
4-Bromofluorobenzene (Surrogate)	10.000	91.7	70 - 130	11.734	11.7375	-0.0035	+/-1.0	
SG-VW57B-03 (2107220-09)			Lab File ID: 10MAR16.D		Analyzed: 03/10/21 23:58			
4-Bromofluorobenzene (Surrogate)	10.000	92.7	70 - 130	11.732	11.7375	-0.0055	+/-1.0	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104589
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104589-CAL1)			Lab File ID: 26JAN02.D			Analyzed: 01/26/21 09:26			
Bromochloromethane (IS)	76342	7.496	81002	7.504	94	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	129611	11.012	142062	11.015	91	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	224378	8.689	240384	8.692	93	50 - 200	-0.0030	+/-0.50	
Cal Standard (2104589-CAL2)			Lab File ID: 26JAN03.D			Analyzed: 01/26/21 09:55			
Bromochloromethane (IS)	76087	7.496	81002	7.504	94	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	129468	11.012	142062	11.015	91	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	224497	8.689	240384	8.692	93	50 - 200	-0.0030	+/-0.50	
Cal Standard (2104589-CAL3)			Lab File ID: 26JAN04.D			Analyzed: 01/26/21 10:26			
Bromochloromethane (IS)	81002	7.504	81002	7.504	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	142062	11.015	142062	11.015	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	240384	8.692	240384	8.692	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2104589-CAL4)			Lab File ID: 26JAN05.D			Analyzed: 01/26/21 11:04			
Bromochloromethane (IS)	92911	7.502	81002	7.504	115	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	163494	11.019	142062	11.015	115	50 - 200	0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	268934	8.696	240384	8.692	112	50 - 200	0.0040	+/-0.50	
Cal Standard (2104589-CAL5)			Lab File ID: 26JAN06.D			Analyzed: 01/26/21 11:46			
Bromochloromethane (IS)	98570	7.506	81002	7.504	122	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	174082	11.022	142062	11.015	123	50 - 200	0.0070	+/-0.50	
1,4-Difluorobenzene (IS)	286264	8.699	240384	8.692	119	50 - 200	0.0070	+/-0.50	
Cal Standard (2104589-CAL6)			Lab File ID: 26JAN07.D			Analyzed: 01/26/21 12:31			
Bromochloromethane (IS)	103476	7.504	81002	7.504	128	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	182326	11.02	142062	11.015	128	50 - 200	0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	297930	8.698	240384	8.692	124	50 - 200	0.0060	+/-0.50	
Cal Standard (2104589-CAL7)			Lab File ID: 08MAR14.D			Analyzed: 03/08/21 17:26			
Chlorobenzene-d5 (IS)	132565	11.014	142062	11.015	93	50 - 200	-0.0010	+/-0.50	
Cal Standard (2104589-CAL8)			Lab File ID: 08MAR15.D			Analyzed: 03/08/21 17:56			
Chlorobenzene-d5 (IS)	135032	11.01	142062	11.015	95	50 - 200	-0.0050	+/-0.50	
Cal Standard (2104589-CAL9)			Lab File ID: 08MAR16.D			Analyzed: 03/08/21 18:26			
Chlorobenzene-d5 (IS)	144759	11.012	142062	11.015	102	50 - 200	-0.0030	+/-0.50	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104589
Matrix: Air

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2101018

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104589-CALA)			Lab File ID: 08MAR17.D			Analyzed: 03/08/21 18:56			
Chlorobenzene-d5 (IS)	152344	11.015	142062	11.015	107	50 - 200	0.0000	+/-0.50	
Cal Standard (2104589-CALB)			Lab File ID: 08MAR18.D			Analyzed: 03/08/21 19:28			
Chlorobenzene-d5 (IS)	167250	11.015	142062	11.015	118	50 - 200	0.0000	+/-0.50	
Cal Standard (2104589-CALC)			Lab File ID: 08MAR19.D			Analyzed: 03/08/21 20:04			
Chlorobenzene-d5 (IS)	193295	11.014	142062	11.015	136	50 - 200	-0.0010	+/-0.50	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104713
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2104713-ICV1)			Lab File ID: 26JAN08.D			Analyzed: 01/26/21 13:02			
Bromochloromethane (IS)	87622	7.503	81002	7.504	108	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	154225	11.015	142062	11.015	109	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	264475	8.692	240384	8.692	110	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2104713-ICB1)			Lab File ID: 26JAN10.D			Analyzed: 01/26/21 14:01			
Bromochloromethane (IS)	80907	7.504	81002	7.504	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	139299	11.015	142062	11.015	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	245369	8.692	240384	8.692	102	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2104713-ICB2)			Lab File ID: 08MAR22.D			Analyzed: 03/08/21 21:35			
Chlorobenzene-d5 (IS)	158013	11.017	142062	11.015	111	50 - 200	0.0020	+/-0.50	
Calibration Check (2104713-CCV1)			Lab File ID: 09MAR02.D			Analyzed: 03/09/21 17:32			
Bromochloromethane (IS)	87306	7.496	81002	7.504	108	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	143807	11.012	142062	11.015	101	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	234862	8.689	240384	8.692	98	50 - 200	-0.0030	+/-0.50	
Calibration Check (2104713-CCV2)			Lab File ID: 09MAR03.D			Analyzed: 03/09/21 18:04			
Chlorobenzene-d5 (IS)	152958	11.01	142062	11.015	108	50 - 200	-0.0050	+/-0.50	
Calibration Blank (2104713-CCB1)			Lab File ID: 09MAR04.D			Analyzed: 03/09/21 18:31			
Bromochloromethane (IS)	81215	7.493	81002	7.504	100	50 - 200	-0.0110	+/-0.50	
Chlorobenzene-d5 (IS)	128732	11.014	142062	11.015	91	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	217833	8.687	240384	8.692	91	50 - 200	-0.0050	+/-0.50	
LCS (B102265-BS1)			Lab File ID: 09MAR05.D			Analyzed: 03/09/21 19:02			
Bromochloromethane (IS)	88614	7.501	81002	7.504	109	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	145314	11.017	142062	11.015	102	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	237614	8.694	240384	8.692	99	50 - 200	0.0020	+/-0.50	
LCS Dup (B102265-BSD1)			Lab File ID: 09MAR06.D			Analyzed: 03/09/21 19:34			
Bromochloromethane (IS)	87405	7.495	81002	7.504	108	50 - 200	-0.0090	+/-0.50	
Chlorobenzene-d5 (IS)	143864	11.011	142062	11.015	101	50 - 200	-0.0040	+/-0.50	
1,4-Difluorobenzene (IS)	236948	8.689	240384	8.692	99	50 - 200	-0.0030	+/-0.50	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104713
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B102265-BLK1)			Lab File ID: 09MAR07.D			Analyzed: 03/09/21 20:02			
Bromochloromethane (IS)	78301	7.499	81002	7.504	97	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	119479	11.01	142062	11.015	84	50 - 200	-0.0050	+/-0.50	
1,4-Difluorobenzene (IS)	207632	8.688	240384	8.692	86	50 - 200	-0.0040	+/-0.50	
SG-VW30A-02 (2107220-06RE1)			Lab File ID: 09MAR21.D			Analyzed: 03/10/21 11:52			
Bromochloromethane (IS)	72802	7.502	81002	7.504	90	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5 (IS)	112010	11.013	142062	11.015	79	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	193300	8.69	240384	8.692	80	50 - 200	-0.0020	+/-0.50	
SG-VW30B-02 (2107220-07RE1)			Lab File ID: 09MAR22.D			Analyzed: 03/10/21 12:21			
Bromochloromethane (IS)	71363	7.499	81002	7.504	88	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	110171	11.015	142062	11.015	78	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	187992	8.692	240384	8.692	78	50 - 200	0.0000	+/-0.50	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2104843-ICV1)			Lab File ID: 26JAN08.D			Analyzed: 01/26/21 13:02			
Bromochloromethane (IS)	87622	7.503	81002	7.504	108	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	154225	11.015	142062	11.015	109	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	264475	8.692	240384	8.692	110	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2104843-ICB1)			Lab File ID: 26JAN10.D			Analyzed: 01/26/21 14:01			
Bromochloromethane (IS)	80907	7.504	81002	7.504	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	139299	11.015	142062	11.015	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	245369	8.692	240384	8.692	102	50 - 200	0.0000	+/-0.50	
Initial Cal Check (2104843-ICV2)			Lab File ID: 08MAR20.D			Analyzed: 03/08/21 20:36			
Chlorobenzene-d5 (IS)	177059	11.015	142062	11.015	125	50 - 200	0.0000	+/-0.50	
Initial Cal Blank (2104843-ICB2)			Lab File ID: 08MAR22.D			Analyzed: 03/08/21 21:35			
Chlorobenzene-d5 (IS)	158013	11.017	142062	11.015	111	50 - 200	0.0020	+/-0.50	
Calibration Check (2104843-CCV1)			Lab File ID: 10MAR02.D			Analyzed: 03/10/21 15:46			
Bromochloromethane (IS)	84252	7.499	81002	7.504	104	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	139697	11.015	142062	11.015	98	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	233029	8.692	240384	8.692	97	50 - 200	0.0000	+/-0.50	
Calibration Check (2104843-CCV2)			Lab File ID: 10MAR03.D			Analyzed: 03/10/21 16:18			
Chlorobenzene-d5 (IS)	145419	11.016	142062	11.015	102	50 - 200	0.0010	+/-0.50	
Calibration Blank (2104843-CCB1)			Lab File ID: 10MAR04.D			Analyzed: 03/10/21 16:46			
Bromochloromethane (IS)	80732	7.496	81002	7.504	100	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	129479	11.012	142062	11.015	91	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	220192	8.689	240384	8.692	92	50 - 200	-0.0030	+/-0.50	
LCS (B102403-BS1)			Lab File ID: 10MAR05.D			Analyzed: 03/10/21 17:17			
Bromochloromethane (IS)	88935	7.499	81002	7.504	110	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	146609	11.015	142062	11.015	103	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	245461	8.692	240384	8.692	102	50 - 200	0.0000	+/-0.50	
LCS Dup (B102403-BSD1)			Lab File ID: 10MAR06.D			Analyzed: 03/10/21 17:49			
Bromochloromethane (IS)	88350	7.499	81002	7.504	109	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	147478	11.015	142062	11.015	104	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	241877	8.692	240384	8.692	101	50 - 200	0.0000	+/-0.50	

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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B102403-BLK1)			Lab File ID: 10MAR07.D			Analyzed: 03/10/21 18:16			
Bromochloromethane (IS)	79157	7.496	81002	7.504	98	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5 (IS)	123111	11.012	142062	11.015	87	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	214325	8.69	240384	8.692	89	50 - 200	-0.0020	+/-0.50	
SG-VW45A-02 (2107220-01)			Lab File ID: 10MAR08.D			Analyzed: 03/10/21 19:13			
Bromochloromethane (IS)	89466	7.503	81002	7.504	110	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5 (IS)	141353	11.014	142062	11.015	100	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	239282	8.691	240384	8.692	100	50 - 200	-0.0010	+/-0.50	
SG-VW48A-02 (2107220-02)			Lab File ID: 10MAR09.D			Analyzed: 03/10/21 19:49			
Bromochloromethane (IS)	88815	7.501	81002	7.504	110	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	142125	11.017	142062	11.015	100	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	236441	8.694	240384	8.692	98	50 - 200	0.0020	+/-0.50	
SG-VW49A-02 (2107220-03)			Lab File ID: 10MAR10.D			Analyzed: 03/10/21 20:24			
Bromochloromethane (IS)	96415	7.504	81002	7.504	119	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	161754	11.015	142062	11.015	114	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	266444	8.692	240384	8.692	111	50 - 200	0.0000	+/-0.50	
SG-VW24A-02 (2107220-04)			Lab File ID: 10MAR11.D			Analyzed: 03/10/21 20:59			
Bromochloromethane (IS)	95948	7.499	81002	7.504	118	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	160166	11.015	142062	11.015	113	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	262403	8.687	240384	8.692	109	50 - 200	-0.0050	+/-0.50	
SG-VW24A-03 (2107220-05)			Lab File ID: 10MAR12.D			Analyzed: 03/10/21 21:35			
Bromochloromethane (IS)	99846	7.499	81002	7.504	123	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5 (IS)	164972	11.015	142062	11.015	116	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	274643	8.692	240384	8.692	114	50 - 200	0.0000	+/-0.50	
SG-VW30A-02 (2107220-06)			Lab File ID: 10MAR13.D			Analyzed: 03/10/21 22:10			
Bromochloromethane (IS)	100746	7.501	81002	7.504	124	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	167148	11.017	142062	11.015	118	50 - 200	0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	280607	8.694	240384	8.692	117	50 - 200	0.0020	+/-0.50	

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104843
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration: 2103029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SG-VW30B-02 (2107220-07)			Lab File ID: 10MAR14.D			Analyzed: 03/10/21 22:46			
Bromochloromethane (IS)	101928	7.497	81002	7.504	126	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5 (IS)	166964	11.013	142062	11.015	118	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene (IS)	280087	8.69	240384	8.692	117	50 - 200	-0.0020	+/-0.50	
SG-VW42A-02 (2107220-08)			Lab File ID: 10MAR15.D			Analyzed: 03/10/21 23:22			
Bromochloromethane (IS)	98919	7.498	81002	7.504	122	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (IS)	158518	11.014	142062	11.015	112	50 - 200	-0.0010	+/-0.50	
1,4-Difluorobenzene (IS)	266252	8.692	240384	8.692	111	50 - 200	0.0000	+/-0.50	
SG-VW57B-03 (2107220-09)			Lab File ID: 10MAR16.D			Analyzed: 03/10/21 23:58			
Bromochloromethane (IS)	97724	7.501	81002	7.504	121	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5 (IS)	157105	11.012	142062	11.015	111	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene (IS)	262840	8.69	240384	8.692	109	50 - 200	-0.0020	+/-0.50	

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104589
Calibration: 2103029

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
1A26006	TO-14A/TO-15 Working BFB	2104589-TUN1	26JAN01.D	01/26/21 08:57
1A26014	MS-A1 TO-14A /TO-15 CAL1	2104589-CAL1	26JAN02.D	01/26/21 09:26
1A26015	MS-A1 TO-14A /TO-15 CAL2	2104589-CAL2	26JAN03.D	01/26/21 09:55
1A26016	MS-A1 TO-14A /TO-15 CAL3	2104589-CAL3	26JAN04.D	01/26/21 10:26
1A26017	MS-A1 TO-14A /TO-15 CAL4	2104589-CAL4	26JAN05.D	01/26/21 11:04
1A26018	MS-A1 TO-14A /TO-15 CAL5	2104589-CAL5	26JAN06.D	01/26/21 11:46
1A26019	MS-A1 TO-14A /TO-15 CAL6	2104589-CAL6	26JAN07.D	01/26/21 12:31
1B27004	TO-14A/TO-15 Working BFB	2104589-TUN2	08MAR13.D	03/08/21 16:56
1C09041	MS-A1 TO-14A / TO-15 CAL1 TPH	2104589-CAL7	08MAR14.D	03/08/21 17:26
1C09042	MS-A1 TO-14A / TO-15 CAL2 TPH	2104589-CAL8	08MAR15.D	03/08/21 17:56
1C09043	MS-A1 TO-14A / TO-15 CAL3 TPH	2104589-CAL9	08MAR16.D	03/08/21 18:26
1C09044	MS-A1 TO-14A / TO-15 CAL4 TPH	2104589-CALA	08MAR17.D	03/08/21 18:56
1C09045	MS-A1 TO-14A / TO-15 CAL5 TPH	2104589-CALB	08MAR18.D	03/08/21 19:28
1C09046	MS-A1 TO-14A / TO-15 CAL6 TPH	2104589-CALC	08MAR19.D	03/08/21 20:04

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Project: SMUD 59th St. SVM Air Sampling-CLP III
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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone	0.5	1.490922	1	1.380656	5	1.221525	15	1.085124	20	1.07028	25	1.053806
Acrylonitrile	0.5	0.2942024	1	0.2887484	5	0.2969309	15	0.2868767	20	0.2871513	25	0.2832077
Allyl chloride	0.5	0.92269	1	0.9485195	5	0.9256068	15	0.887473	20	0.8897332	25	0.8776412
t-Amyl Methyl ether	0.5	0.4838264	1	0.4861089	5	0.5011565	15	0.5165233	20	0.5176358	25	0.5242721
Benzene	0.5	2.336853	1	2.351519	5	2.332337	15	2.202459	20	2.184864	25	2.156794
Benzyl chloride	0.5	0.2667983	1	0.3412426	5	0.7639904	15	1.293662	20	1.439098	25	1.540577
Bromodichloromethane	0.5	0.687144	1	0.6769801	5	0.6657515	15	0.6926111	20	0.709974	25	0.7262015
Bromoform	0.5	0.7598121	1	0.8062996	5	0.9591868	15	1.049926	20	1.082122	25	1.110192
Bromomethane	0.5	0.8273296	1	0.7984281	5	0.7616355	15	0.6994866	20	0.6740895	25	0.6810971
1,3-Butadiene	0.5	0.7628828	1	0.7633367	5	0.7128466	15	0.6744304	20	0.6489601	25	0.6586841
t-Butyl alcohol	1	0.8192083	2	0.8240567	10	0.9598775	30	1.000901	40	1.032809	50	1.046011
Carbon disulfide	0.5	2.54565	1	2.453901	5	2.375966	15	2.24211	20	2.209415	25	2.175225
Carbon tetrachloride	0.5	1.335045	1	1.304296	5	1.358411	15	1.36766	20	1.385376	25	1.386335
Chlorobenzene	0.5	0.6665538	1	0.6905215	5	0.6834565	15	0.6994554	20	0.7012915	25	0.7109737
Chloroethane	0.5	0.5150507	1	0.5451654	5	0.4992716	15	0.4615098	20	0.4398194	25	0.4488268
Chloroform	0.5	1.654135	1	1.610131	5	1.564085	15	1.47811	20	1.465106	25	1.448351
Chloromethane	0.5	0.7052474	1	0.6755425	5	0.6119355	15	0.5558366	20	0.530278	25	0.5337044
Cyclohexane	0.5	2.914254	1	2.090107	5	1.513938	15	1.355046	20	1.339322	25	1.315026
Dibromochloromethane	0.5	0.5217089	1	0.517557	5	0.5690146	15	0.6142325	20	0.621119	25	0.6375417
1,2-Dibromo-3-chloropropane	0.5	5.339053E-02	1	5.854729E-02	5	8.055638E-02	15	9.547751E-02	20	0.101725	25	0.1029628
1,2-Dibromoethane	0.5	0.3732986	1	0.3821432	5	0.4212094	15	0.4273316	20	0.4261434	25	0.4325459
Dibromomethane	0.5	8.191534E-02	1	8.320824E-02	5	7.784212E-02	15	7.732256E-02	20	7.649408E-02	25	7.688249E-02
1,2-Dichlorobenzene	0.5	0.6817323	1	0.7458986	5	0.8551337	15	0.9409601	20	0.9601194	25	0.9892127
1,3-Dichlorobenzene	0.5	0.7079646	1	0.7568666	5	0.9103349	15	1.080244	20	1.105011	25	1.129061
1,4-Dichlorobenzene	0.5	0.5959371	1	0.6442519	5	0.7802931	15	0.8996864	20	0.9656484	25	1.019756

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane	0.5	2.023788	1	1.87049	5	1.773462	15	1.640681	20	1.610926	25	1.561096
1,1-Dichloroethane	0.5	1.392156	1	1.357131	5	1.293721	15	1.239258	20	1.219884	25	1.215049
1,2-Dichloroethane	0.5	1.034031	1	1.032371	5	1.007975	15	0.9334094	20	0.9269707	25	0.9140593
1,1-Dichloroethene	0.5	1.146944	1	1.115039	5	1.119775	15	1.080339	20	1.083408	25	1.073385
cis-1,2-Dichloroethene	0.5	0.9415525	1	0.9858452	5	0.9574578	15	0.917882	20	0.9130516	25	0.902934
trans-1,2-Dichloroethene	0.5	1.16764	1	1.094537	5	1.100442	15	1.062651	20	1.055032	25	1.042004
1,2-Dichloropropane	0.5	0.2917398	1	0.290917	5	0.2766324	15	0.269915	20	0.2686052	25	0.2722331
cis-1,3-Dichloropropene	0.5	0.2901354	1	0.3170644	5	0.3728285	15	0.3960749	20	0.3975998	25	0.4027268
trans-1,3-Dichloropropene	0.5	0.3970978	1	0.3947046	5	0.4399045	15	0.4677381	20	0.4782928	25	0.4886799
1,2-Dichloro-1,1,2,2-tetrafluoroeth	0.5	2.395536	1	2.292507	5	2.102343	15	1.97607	20	1.936791	25	1.966875
1,1-Difluoroethane	0.5	1.164759	1	1.125028	5	1.039011	15	0.9209315	20	0.9162524	25	0.891859
Diisopropyl ether	0.5	0.4718242	1	0.4610512	5	0.4880373	15	0.4813998	20	0.4922238	25	0.4902122
1,4-Dioxane	0.5	7.915215E-02	1	0.117329	5	0.1271382	15	0.1296774	20	0.1345332	25	0.1374994
Ethanol	1	0.2626339	2	0.2597684	10	0.2403521	30	0.2162392	40	0.2091077	50	0.2076597
Ethyl acetate	0.5	0.2355191	1	0.2485313	5	0.2812029	15	0.2654368	20	0.2692198	25	0.2654567
Ethylbenzene	0.5	0.5899191	1	0.5714153	5	0.5949937	15	0.6035492	20	0.608739	25	0.612029
1-Ethyl-4-methylbenzene	0.5	2.115715	1	2.241094	5	2.478453	15	2.726812	20	2.741705	25	2.767937
Ethyl t-butyl ether	0.5	1.460795	1	1.498811	5	1.535394	15	1.528509	20	1.545597	25	1.553415
n-Heptane	0.5	0.274715	1	0.2759502	5	0.2788372	15	0.2798183	20	0.2835634	25	0.2839177
Hexachlorobutadiene	0.5	0.6556542	1	0.7058887	5	0.7491518	15	0.8251924	20	0.8744816	25	0.9192655
Hexachloroethane	0.5	8.517796E-02	1	0.1013378	5	0.123974	15	0.1319111	20	0.1341925	25	0.1347125
Hexane	0.5	1.349716	1	1.304559	5	1.316511	15	1.277222	20	1.277808	25	1.278824
2-Hexanone	0.5	0.3035057	1	0.3841922	5	0.481072	15	0.5213919	20	0.5300474	25	0.5359581
Isooctane	0.5	1.435702	1	1.457213	5	1.466312	15	1.440899	20	1.491223	25	1.459864
Isopropyl alcohol	0.5	0.822614	1	0.8757081	5	0.9309894	15	0.9816348	20	0.9906767	25	0.9932313
Methylene chloride	0.5	1.000236	1	0.8642738	5	0.7477099	15	0.6904242	20	0.6785787	25	0.6701844

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Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA
EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methyl ethyl ketone	0.5	1.638417	1	1.564919	5	1.546036	15	1.425665	20	1.395719	25	1.366033
Methyl iodide	0.5	0.6541615	1	0.6148225	5	0.5948001	15	0.5833898	20	0.5920209	25	0.5909042
Methyl isobutyl ketone	0.5	0.5690397	1	0.6048633	5	0.6453425	15	0.6430822	20	0.6511192	25	0.6595965
Methyl t-butyl ether	0.5	2.429069	1	2.375833	5	2.468458	15	2.411677	20	2.437633	25	2.452638
Naphthalene	0.5	0.1291557	1	0.2178917	5	0.3858034	15	0.5237623	20	0.5754012	25	0.620177
Propylene	0.5	0.6952922	1	0.6213939	5	0.5614923	15	0.5096131	20	0.4975652	25	0.4846148
Styrene	0.5	0.885573	1	0.9350573	5	1.047275	15	1.085732	20	1.086304	25	1.087077
1,1,1,2-Tetrachloroethane	0.5	0.1436861	1	0.1443672	5	0.1582385	15	0.1616729	20	0.1633859	25	0.1669775
1,1,2,2-Tetrachloroethane	0.5	1.172431	1	1.235672	5	1.253678	15	1.333549	20	1.375964	25	1.40014
Tetrachloroethene	0.5	0.3596609	1	0.3501606	5	0.3636016	15	0.379062	20	0.3895932	25	0.4023952
1,1,1,2-Tetrafluoroethane	0.5	1.242828	1	1.117011	5	1.045332	15	0.9137992	20	0.8766968	25	0.8239708
Tetrahydrofuran	0.5	0.9153546	1	0.9261766	5	0.9386188	15	0.8719886	20	0.8550725	25	0.8444354
Toluene	0.5	0.8546292	1	0.8574725	5	0.9048522	15	0.9157067	20	0.9137125	25	0.9181808
1,2,4-Trichlorobenzene	0.5	0.1181998	1	0.1539377	5	0.2613225	15	0.3899511	20	0.4559087	25	0.5058192
1,1,1-Trichloroethane	0.5	1.429357	1	1.344382	5	1.370781	15	1.337129	20	1.342488	25	1.338026
1,1,2-Trichloroethane	0.5	0.300386	1	0.2935006	5	0.2931892	15	0.2945431	20	0.2946511	25	0.298458
Trichloroethene	0.5	0.2785478	1	0.2884226	5	0.2870324	15	0.2986458	20	0.3047362	25	0.3111523
Trichlorofluoromethane	0.5	1.856383	1	1.784668	5	1.708674	15	1.61513	20	1.613518	25	1.620302
1,2,3-Trichloropropane	0.5	0.1777627	1	0.1994315	5	0.1920007	15	0.1861679	20	0.1830919	25	0.1781381
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	1.424642	1	1.396165	5	1.332041	15	1.295964	20	1.297809	25	1.301813
1,2,4-Trimethylbenzene	0.5	1.423799	1	1.500371	5	1.683716	15	1.776595	20	1.802185	25	1.837278
1,3,5-Trimethylbenzene	0.5	1.561904	1	1.579077	5	1.756402	15	1.738041	20	1.819815	25	1.861894
Vinyl acetate	0.5	1.653873	1	1.735776	5	1.883731	15	1.845974	20	1.874673	25	1.867772
Vinyl bromide	0.5	0.7822693	1	0.7827881	5	0.7351177	15	0.694428	20	0.6790453	25	0.6909853
Vinyl chloride	0.5	0.9344791	1	0.9357709	5	0.8538555	15	0.7944377	20	0.7642843	25	0.769477
p- & m-Xylenes	1	1.531274	2	1.544436	10	1.629577	30	1.708279	40	1.733595	50	1.771223

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INITIAL CALIBRATION DATA
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Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
o-Xylene	0.5	1.623319	1	1.628974	5	1.6993	15	1.804437	20	1.846182	25	1.888314
Total Xylenes	1.5	1.561956	3	1.572615	15	1.652818	45	1.740332	60	1.771124	75	1.810253
TPH - Gasoline												
Total Petroleum Hydrocarbons												
4-Bromofluorobenzene (Surrogate)	10	1.052835	10	1.090563	10	1.161373	10	1.141858	10	1.110844	10	1.0761

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Acetone												
Acrylonitrile												
Allyl chloride												
t-Amyl Methyl ether												
Benzene												
Benzyl chloride												
Bromodichloromethane												
Bromoform												
Bromomethane												
1,3-Butadiene												
t-Butyl alcohol												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												

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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloropropane												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,2-Dichloro-1,1,2,2-tetrafluoroeth												
1,1-Difluoroethane												
Diisopropyl ether												
1,4-Dioxane												
Ethanol												
Ethyl acetate												
Ethylbenzene												
1-Ethyl-4-methylbenzene												
Ethyl t-butyl ether												
n-Heptane												
Hexachlorobutadiene												
Hexachloroethane												
Hexane												
2-Hexanone												
Isooctane												
Isopropyl alcohol												

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Methylene chloride												
Methyl ethyl ketone												
Methyl iodide												
Methyl isobutyl ketone												
Methyl t-butyl ether												
Naphthalene												
Propylene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
1,1,1,2-Tetrafluoroethane												
Tetrahydrofuran												
Toluene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl acetate												
Vinyl bromide												

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
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INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air

SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF	ppbv	RF
Vinyl chloride												
p- & m-Xylenes												
o-Xylene												
Total Xylenes												
TPH - Gasoline	50	2.278938	100	2.416815	200	2.335069	300	2.295076	500	2.65992	1000	2.209002
Total Petroleum Hydrocarbons	50	2.278938	100	2.416815	200	2.335069	300	2.295076	500	2.65992	1000	2.209002
4-Bromofluorobenzene (Surrogate)	10		10		10		10		10		10	

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Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acetone	1.217052	15.03376	5.3125	0.0581301			30	
Acrylonitrile	0.2895196	1.760437	5.646	0.0709791			30	
Allyl chloride	0.9086106	3.050864	6.0925	0.0754426			30	
t-Amyl Methyl ether	0.5049205	3.411771	8.840167	1.704161E-02			30	
Benzene	2.260804	3.912434	8.513167	4.331594E-02			30	
Benzyl chloride	0.9408947	59.69886	12.477	1.391174E-02		0.9991395	0.99	
Bromodichloromethane	0.6931104	3.176707	9.089166	0.0482326			30	
Bromoform	0.9612564	15.37741	11.34933	1.778663E-02			30	
Bromomethane	0.7403444	8.745923	4.774333	3.167378E-02			30	
1,3-Butadiene	0.7035234	7.254018	4.569333	3.417939E-02			30	
t-Butyl alcohol	0.9471439	10.7343	5.9225	0.1088763			30	
Carbon disulfide	2.333711	6.358805	6.278333	4.750246E-02			30	
Carbon tetrachloride	1.356187	2.340376	8.606667	2.930331E-02			30	
Chlorobenzene	0.6920421	2.261365	11.03867	2.079383E-02			30	
Chloroethane	0.4849406	8.566157	4.895	6.294749E-02			30	
Chloroform	1.536653	5.544664	7.5835	7.250186E-02			30	
Chloromethane	0.6020907	12.45251	4.305667	8.234937E-02			30	
Cyclohexane	1.754615	36.40932	8.687167	2.596556E-02	0.9998377		0.99	
Dibromochloromethane	0.5801956	8.986019	10.34583	4.185795E-02			30	
1,2-Dibromo-3-chloropropane	8.210992E-02	26.57491	13.0105	0.0063743			30	
1,2-Dibromoethane	0.4104453	6.275044	10.4765	1.354249E-02			30	
Dibromomethane	7.894414E-02	3.632107	8.965834	3.947452E-02			30	
1,2-Dichlorobenzene	0.8621761	14.49291	12.73933	1.203826E-02			30	
1,3-Dichlorobenzene	0.948247	19.47353	12.496	1.412908E-02			30	
1,4-Dichlorobenzene	0.8175955	21.19171	12.53233	2.135474E-02			30	
Dichlorodifluoromethane	1.746741	10.14274	4.176667	6.831921E-02			30	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2103029
Instrument: MS-A1
Matrix: Air
Calibration Date: 01/26/21 09:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethane	1.2862	5.81589	6.833	7.073166E-02			30	
1,2-Dichloroethane	0.9748027	5.732575	8.062666	5.442409E-02			30	
1,1-Dichloroethene	1.103148	2.605871	5.931333	4.108125E-02			30	
cis-1,2-Dichloroethene	0.9364539	3.350703	7.392667	5.171079E-02			30	
trans-1,2-Dichloroethene	1.087051	4.191375	6.688333	5.162465E-02			30	
1,2-Dichloropropane	0.2783404	3.746421	8.9865	3.744712E-02			30	
cis-1,3-Dichloropropene	0.3627383	13.15481	9.861833	3.537076E-02			30	
trans-1,3-Dichloropropene	0.4444029	9.212932	9.5865	4.193808E-02			30	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.111687	9.067182	4.373833	7.091305E-02			30	
1,1-Difluoroethane	1.00964	11.61	4.059167	6.769871E-02			30	
Diisopropyl ether	0.4807914	2.534426	7.507833	2.905622E-02			30	
1,4-Dioxane	0.1208882	17.8685	9.1105	0.1834013			30	
Ethanol	0.2326268	10.77572	4.945833	9.076796E-02			30	
Ethyl acetate	0.2608944	6.227703	7.502167	5.521604E-02			30	
Ethylbenzene	0.5967742	2.502284	11.20883	2.725389E-02			30	
1-Ethyl-4-methylbenzene	2.511953	11.20299	12.1235	1.489425E-02			30	
Ethyl t-butyl ether	1.52042	2.28487	7.8565	4.741251E-02			30	
n-Heptane	0.279467	1.358345	9.2725	2.765864E-02			30	
Hexachlorobutadiene	0.7882724	12.9197	14.3025	8.238552E-03			30	
Hexachloroethane	0.118551	17.3847	13.1725	2.246655E-02			30	
Hexane	1.300773	2.233735	7.5365	2.333713E-02			30	
2-Hexanone	0.4593612	20.68069	10.2335	3.197021E-02			30	
Isooctane	1.458536	1.359228	9.144333	3.936209E-02			30	
Isopropyl alcohol	0.9324757	7.551129	5.472	9.953873E-02			30	
Methylene chloride	0.7752345	17.00382	5.995667	5.444346E-02			30	
Methyl ethyl ketone	1.489465	7.30386	7.080333	4.990539E-02			30	

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Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103029
Matrix: Air
SDG: 2107220
Project: SMUD 59th St. SVM Air Sampling-CLP III
Instrument: MS-A1
Calibration Date: 01/26/21 09:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Methyl iodide	0.6050165	4.34264	5.8895	6.280161E-02			30	
Methyl isobutyl ketone	0.6288406	5.540059	9.597167	3.154567E-02			30	
Methyl t-butyl ether	2.429218	1.342391	6.861667	2.383285E-02			30	
Naphthalene	0.4086985	49.03705	14.0355	2.710109E-03		0.9999277	0.99	
Propylene	0.5616619	14.72035	4.120833	4.786505E-02			30	
Styrene	1.02117	8.674996	11.463	2.497967E-02			30	
1,1,1,2-Tetrachloroethane	0.156388	6.383477	11.0265	2.680552E-02			30	
1,1,2,2-Tetrachloroethane	1.295239	6.84879	11.50967	0.0317666			30	
Tetrachloroethene	0.3740789	5.288776	10.70333	1.765726E-02			30	
1,1,1,2-Tetrafluoroethane	1.003273	15.9645	3.997333	8.194862E-02			30	
Tetrahydrofuran	0.8919411	4.460213	7.849	2.517336E-02			30	
Toluene	0.8940923	3.335345	10.124	0.0410289			30	
1,2,4-Trichlorobenzene	0.3141898	51.20902	13.926	1.657953E-02		0.9998715	0.99	
1,1,1-Trichloroethane	1.360361	2.646789	8.235	5.261237E-02			30	
1,1,2-Trichloroethane	0.295788	0.9926351	9.967667	3.356356E-02			30	
Trichloroethene	0.2947562	4.14413	9.118833	4.837087E-02			30	
Trichlorofluoromethane	1.699779	6.041756	5.465333	6.372217E-02			30	
1,2,3-Trichloropropane	0.1860988	4.524603	11.573	2.551852E-02			30	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.341406	4.157054	6.202	3.247834E-02			30	
1,2,4-Trimethylbenzene	1.670657	10.24203	12.38767	2.617361E-02			30	
1,3,5-Trimethylbenzene	1.719522	7.198163	12.15817	2.036189E-02			30	
Vinyl acetate	1.8103	5.189865	6.8955	5.247893E-02			30	
Vinyl bromide	0.727439	6.415351	5.162	2.804412E-02			30	
Vinyl chloride	0.8420508	9.358135	4.469333	5.633324E-02			30	
p- & m-Xylenes	1.653064	6.090377	11.29033	1.505625E-02			30	
o-Xylene	1.748421	6.500884	11.51717	1.775365E-02			30	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III
Calibration: 2103029
Instrument: MS-A1
Matrix: Air
Calibration Date: 01/26/21 09:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Total Xylenes	1.68485	6.223409	11.51717	1.775365E-02			30	
TPH - Gasoline	2.365803	6.741494	10.41917	4.407423			30	
Total Petroleum Hydrocarbons	2.365803	6.741494	10.41917	4.407423			30	
4-Bromofluorobenzene (Surrogate)	1.105596	3.692572	11.7375	2.104488E-02			30	

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Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

HOLDING TIME SUMMARY
EPA-TO-15

Laboratory: BC Laboratories
SDG: 2107220
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St. SVM Air Sampling-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
SG-VW45A-02	03/03/21 12:40	03/05/21 10:30	03/10/21 08:31	7.00	30.00	03/10/21 19:13	7.00	30.00	
SG-VW48A-02	03/03/21 13:50	03/05/21 10:30	03/10/21 08:31	7.00	30.00	03/10/21 19:49	7.00	30.00	
SG-VW49A-02	03/03/21 14:45	03/05/21 10:30	03/10/21 08:31	7.00	30.00	03/10/21 20:24	7.00	30.00	
SG-VW24A-02	03/03/21 15:50	03/05/21 10:30	03/10/21 08:31	7.00	30.00	03/10/21 20:59	7.00	30.00	
SG-VW24A-03	03/03/21 15:50	03/05/21 10:30	03/10/21 08:31	7.00	30.00	03/10/21 21:35	7.00	30.00	
SG-VW30A-02	03/04/21 12:40	03/05/21 10:30	03/10/21 08:31	6.00	30.00	03/10/21 22:10	6.00	30.00	
SG-VW30A-02	03/04/21 12:40	03/05/21 10:30	03/09/21 12:23	6.00	30.00	03/10/21 11:52	6.00	30.00	
SG-VW30B-02	03/04/21 12:55	03/05/21 10:30	03/10/21 08:31	6.00	30.00	03/10/21 22:46	6.00	30.00	
SG-VW30B-02	03/04/21 12:55	03/05/21 10:30	03/09/21 12:23	6.00	30.00	03/10/21 12:21	6.00	30.00	
SG-VW42A-02	03/04/21 13:55	03/05/21 10:30	03/10/21 08:31	6.00	30.00	03/10/21 23:22	6.00	30.00	
SG-VW57B-03	03/04/21 15:10	03/05/21 10:30	03/10/21 08:31	6.00	30.00	03/10/21 23:58	6.00	30.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

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Sacramento, CA 95811

Reported: 3/26/2021 10:47:41AM
Project: SMUD 59th St. SVM Air Sampling-CLP III
Project Number: 60632793.06
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

Soil
Laboratory Analytical Data Reports

BC LABORATORIES, INC.

Work Order Number: 2018704

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632763.5

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2018704
COC Number:
Cooler 2 was received at 3 °C
Cooler 3 was received at 3 °C
Cooler 4 was received at 3 °C
Default Cooler was received at 3 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL4

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B081467	EPA-6020 (TTLC)	2018704-10	B08-N-3
B081468	EPA-6020 (TTLC)	2018704-21	KA-44-S-1.5

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

Chain of Custody and Cooler Receipt Form for 2018704 Page 1 of 7

AECOM

CHAIN OF CUSTODY

RUSH

Page 1 of 3

Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400 Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

2018704

Analyses Requested

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	~~SW8010~~ (Arsenic)	Sample Condition/Comments	Preservative
KA-10-S-1.5	29-Jun-20	0900	soil	1	x		
KA-10-S-3	29-Jun-20	0930	soil	1	x		
KA-10-S-3-FD	29-Jun-20	0935	soil	1	x		
KA-10-N-1.5	29-Jun-20	0942	soil	1	x		
KA-10-N-3	29-Jun-20	0950	soil	1	x		
KA-10-W-1.5	29-Jun-20	1000	soil	1	x		
KA-10-W-3	29-Jun-20	1010	soil	1	x		
B08-N-1.5	29-Jun-20	1050	soil	1	x		
B08-N-1.5-FD	29-Jun-20	1055	soil	1	x		
B08-N-3	29-Jun-20	1120	soil	1	x		
B08-E-1.5	29-Jun-20	1145	soil	1	x		
B08-E-3	29-Jun-20	1155	soil	1	x	Perform MS/MSD	
B08-S-1.5	29-Jun-20	1250	soil	1	x		
B08-S-3	29-Jun-20	1335	soil	1	x		

Special instructions and/or specific regulatory requirements:

IMPORTANT: Date results required:
Rush charges authorized?
Phone results?
Fax results?

Relinquished by: Date/Time 6/30/20 @ 1515
Relinquished by: Date/Time 6/30/20 1520
Relinquished by: Date/Time
Method of Shipment:

Received by: Date/Time 6/30/2020 - 1515
Received by: Date/Time 7-1-20 0940
Received by: Date/Time
Sample Condition on Rcpt:

CHK BY
DISTRIBUTION
SUB OUT

Chain of Custody and Cooler Receipt Form for 2018704 Page 2 of 7

AECOM

CHAIN OF CUSTODY

RUSH

Page 2 of 3

Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

2018704

Special instructions and/or specific regulatory requirements:

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	SW6020 (Arsenic)	Sample Condition/Comments	Preservative
B08-W-1.5	29-Jun-20	1355	soil	1	x		
B08-W-3	29-Jun-20	1430	soil	1	x		
KA-44-N-1.5	30-Jun-20	0755	soil	1	x		
KA-44-N-3	30-Jun-20	0810	soil	1	x		
KA-44-E-1.5	30-Jun-20	0830	soil	1	x		
KA-44-E-3	30-Jun-20	0840	soil	1	x		
KA-44-S-1.5	30-Jun-20	0850	soil	1	x		
KA-44-S-3	30-Jun-20	0900	soil	1	x	Provide MS/MSD	
KA-44-W-1.5	30-Jun-20	0930	soil	1	x		
KA-44-W-1.5-FD	30-Jun-20	0935	soil	1	x		
KA-44-W-3	30-Jun-20	0945	soil	1	x		
KA-17-E-1.5	30-Jun-20	1130	soil	1	x		
KA-17-E-3	30-Jun-20	1140	soil	1	x		
KA-17-N-1.5	30-Jun-20	1150	soil	1	x		

Relinquished by: _____ Date/Time 6/30/2020 1515
Received by: _____ Date/Time 6-30-20 1515
Relinquished by: _____ Date/Time 6/30/2020 1530
Received by: _____ Date/Time 7-1-20 940
Method of Shipment: _____
Sample Condition on Rcpt: _____

Chain of Custody and Cooler Receipt Form for 2018704 Page 3 of 7

AECOM

CHAIN OF CUSTODY

Page 3 of 3

PUSH Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

20-18704

Special instructions and/or specific regulatory requirements:

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	SW6020 (Arsenic)	Sample Condition/Comments
KA-17-N-3	30-Jun-20	1155	soil	1	x	
KA-17-W-1.5	30-Jun-20	1215	soil	1	x	
KA-17-W-3	30-Jun-20	1250	soil	1	x	

Analyses Requested

Preservative

Relinquished by: Date/Time 6/30/20 1515
Relinquished by: Date/Time 6/30/20 - 1515
Relinquished by: Date/Time
Method of Shipment:

Received by: Date/Time 6/30/20 - 1515
Received by: Date/Time 7-1-20 940
Received by: Date/Time
Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2018704 Page 4 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 4

Submission #: 20-18704

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: PE Thermometer ID: 274

Temperature: (A) 3.2 °C / (C) 3.0 °C

Date/Time 7-20 940

Analyst Init TH

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER SAL										
8oz / 16oz / 32oz JAR 402	A	A	A	A	A	A	A	A	A	A B
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CM2 Date/Time: 7/11/20 1435

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2018704 Page 5 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 4

Submission #: 20-18704

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: PE Thermometer ID: 274 Date/Time 7-1-20 940
Temperature: (A) 3.2 °C / (C) 3.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS (1	(2	(3	(4	(5	(6	(7	(8	(9	(10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz ~~AMBER~~										
8oz / 16oz / 32oz JAR 4oz	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: CMZ Date/Time: 7/1/20 1435
A = Actual / C = Corrected

Rev 21 05/23/2016
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Chain of Custody and Cooler Receipt Form for 2018704 Page 6 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 4

Submission #: 20-18704

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers: ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: PE Thermometer ID: 174 Date/Time 7-1-20 940

Temperature: (A) 3.2 °C / (C) 3.0 °C Analyst Init JKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	Z_1	Z_2	Z_3	Z_4	Z_5	Z_6	Z_7	Z_8	Z_9	Z_{10}
QT PR UNPRES										
4oz / 8oz / 16oz PR UNPRES										
2oz Cr^{6+}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / ~~16oz~~ / 32oz ~~AMBER~~ SPA	B									
8oz / 16oz / 32oz JAR 402	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMZ Date/Time: 7/1/20 1435

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2018704 Page 7 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 4

Submission #: 20-18704

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: PE Thermometer ID: 274 Date/Time 7-1-20 940

Temperature: (A) 3.2 °C / (C) 3.0 °C Analyst Init JKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz ~~AMBER~~ JAR	A									
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMZ Date/Time: 7/1/20 1435

A = Actual / C = Corrected

Rev 21 05/23/2016

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2018704Notes**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2018704Notes
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
KA-10-S-1.5	2018704-01
KA-10-S-3	2018704-02
KA-10-S-3-FD	2018704-03
KA-10-N-1.5	2018704-04
KA-10-N-3	2018704-05
KA-10-W-1.5	2018704-06
KA-10-W-3	2018704-07
B08-N-1.5	2018704-08
B08-N-1.5-FD	2018704-09
B08-N-3	2018704-10
B08-E-1.5	2018704-11
B08-E-3	2018704-12
B08-S-1.5	2018704-13
B08-S-3	2018704-14
B08-W-1.5	2018704-15
B08-W-3	2018704-16
KA-44-N-1.5	2018704-17
KA-44-N-3	2018704-18
KA-44-E-1.5	2018704-19
KA-44-E-3	2018704-20
KA-44-S-1.5	2018704-21
KA-44-S-3	2018704-22
KA-44-W-1.5	2018704-23
KA-44-W-1.5-FD	2018704-24
KA-44-W-3	2018704-25
KA-17-E-1.5	2018704-26
KA-17-E-3	2018704-27
KA-17-N-1.5	2018704-28
KA-17-N-3	2018704-29
KA-17-W-1.5	2018704-30
KA-17-W-3	2018704-31

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron Name: Sara Guron

Date: 07-21-2020 Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL4

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-S-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-01
File ID: PE_EL4_200702-096
Sampled: 06/29/20 09:00
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:27
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	110	0.909	D	EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-S-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-02
File ID: PE_EL4_200702-097
Sampled: 06/29/20 09:30
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:29
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.2	1		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-S-3-FD

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-03
File ID: PE_EL4_200702-098
Sampled: 06/29/20 09:35
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:31
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	5.5	0.99		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-N-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-04
File ID: PE_EL4_200702-099
Sampled: 06/29/20 09:42
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:34
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.09 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	16	0.917		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-N-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-05
File ID: PE_EL4_200702-100
Sampled: 06/29/20 09:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:36
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.0	0.99		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-W-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-06
File ID: PE_EL4_200702-101
Sampled: 06/29/20 10:00
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:38
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.09 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	35	0.917		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-W-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-07
File ID: PE_EL4_200702-105
Sampled: 06/29/20 10:10
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:48
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.9	0.909	D	EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-N-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-08
File ID: PE_EL4_200702-106
Sampled: 06/29/20 10:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:51
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	28	0.926		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-N-1.5-FD

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-09
File ID: PE_EL4_200702-107
Sampled: 06/29/20 10:55
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:53
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	29	1		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-N-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-10
File ID: PE_EL4_200702-088
Sampled: 06/29/20 11:20
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:02
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	5.7	1		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-E-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-11
File ID: PE_EL4_200702-108
Sampled: 06/29/20 11:45
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:55
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	29	0.98		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-E-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-12
File ID: PE_EL4_200702-109
Sampled: 06/29/20 11:55
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 16:58
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	40	0.909	D	EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-S-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-13
File ID: PE_EL4_200702-110
Sampled: 06/29/20 12:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:00
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	54	1		EPA-6020

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Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-S-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-14
File ID: PE_EL4_200702-113
Sampled: 06/29/20 13:35
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:09
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	9.1	0.98		EPA-6020

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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-W-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-15
File ID: PE_EL4_200702-114
Sampled: 06/29/20 13:55
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:12
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	19	0.943		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-W-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-16
File ID: PE_EL4_200702-115
Sampled: 06/29/20 14:30
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:14
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	12	0.935		EPA-6020

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Project Number: 60632763.5
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INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-44-N-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-17
File ID: PE_EL4_200702-116
Sampled: 06/30/20 07:55
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:16
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.04 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	5.0	0.962		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
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KA-44-N-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-18
File ID: PE_EL4_200702-117
Sampled: 06/30/20 08:10
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:19
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.8	1		EPA-6020

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Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
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KA-44-E-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-19
File ID: PE_EL4_200702-118
Sampled: 06/30/20 08:30
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:21
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.3	0.98		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
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INORGANIC ANALYSIS DATA SHEET
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KA-44-E-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-20
File ID: PE_EL4_200702-119
Sampled: 06/30/20 08:40
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 17:23
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B081467
Sequence: 2011582
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.5	0.943		EPA-6020

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Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
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KA-44-S-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-21
File ID: PE_EL4_200702-126
Sampled: 06/30/20 08:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:17
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	14	1		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-44-S-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-22
File ID: PE_EL4_200702-134
Sampled: 06/30/20 09:00
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:36
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.6	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-44-W-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-23
File ID: PE_EL4_200702-135
Sampled: 06/30/20 09:30
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:38
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.4	0.943		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-44-W-1.5-FD

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-24
File ID: PE_EL4_200702-136
Sampled: 06/30/20 09:35
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:40
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.6	0.98		EPA-6020

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Project Number: 60632763.5
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INORGANIC ANALYSIS DATA SHEET
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KA-44-W-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-25
File ID: PE_EL4_200702-137
Sampled: 06/30/20 09:45
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:43
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	9.5	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
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KA-17-E-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-26
File ID: PE_EL4_200702-138
Sampled: 06/30/20 11:30
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:45
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.04 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	17	0.962		EPA-6020

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Project: SMUD 59th St.-CLP III
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INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-E-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-27
File ID: PE_EL4_200702-141
Sampled: 06/30/20 11:40
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:52
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.6	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-N-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-28
File ID: PE_EL4_200702-142
Sampled: 06/30/20 11:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:54
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	78	0.952		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-N-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-29
File ID: PE_EL4_200702-143
Sampled: 06/30/20 11:55
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:57
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.6	0.935		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-W-1.5

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-30
File ID: PE_EL4_200702-144
Sampled: 06/30/20 12:15
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 18:59
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	150	0.952		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-W-3

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2018704-31
File ID: PE_EL4_200702-145
Sampled: 06/30/20 12:50
Prepared: 07/02/20 09:00
Analyzed: 07/02/20 19:01
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B081468
Sequence: 2011583
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.1	0.971		EPA-6020

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Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B081467 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
KA-10-S-1.5	2018704-01	PE_EL4_200702-096	07/02/20 09:00	
KA-10-S-3	2018704-02	PE_EL4_200702-097	07/02/20 09:00	
KA-10-S-3-FD	2018704-03	PE_EL4_200702-098	07/02/20 09:00	
KA-10-N-1.5	2018704-04	PE_EL4_200702-099	07/02/20 09:00	
KA-10-N-3	2018704-05	PE_EL4_200702-100	07/02/20 09:00	
KA-10-W-1.5	2018704-06	PE_EL4_200702-101	07/02/20 09:00	
KA-10-W-3	2018704-07	PE_EL4_200702-105	07/02/20 09:00	
B08-N-1.5	2018704-08	PE_EL4_200702-106	07/02/20 09:00	
B08-N-1.5-FD	2018704-09	PE_EL4_200702-107	07/02/20 09:00	
B08-N-3	2018704-10	PE_EL4_200702-088	07/02/20 09:00	
B08-E-1.5	2018704-11	PE_EL4_200702-108	07/02/20 09:00	
B08-E-3	2018704-12	PE_EL4_200702-109	07/02/20 09:00	
B08-S-1.5	2018704-13	PE_EL4_200702-110	07/02/20 09:00	
B08-S-3	2018704-14	PE_EL4_200702-113	07/02/20 09:00	
B08-W-1.5	2018704-15	PE_EL4_200702-114	07/02/20 09:00	
B08-W-3	2018704-16	PE_EL4_200702-115	07/02/20 09:00	
KA-44-N-1.5	2018704-17	PE_EL4_200702-116	07/02/20 09:00	
KA-44-N-3	2018704-18	PE_EL4_200702-117	07/02/20 09:00	
KA-44-E-1.5	2018704-19	PE_EL4_200702-118	07/02/20 09:00	
KA-44-E-3	2018704-20	PE_EL4_200702-119	07/02/20 09:00	
Blank	B081467-BLK1	PE_EL4_200702-102	07/02/20 09:00	
LCS	B081467-BS1	PE_EL4_200702-087	07/02/20 09:00	
B08-N-3	B081467-DUP1	PE_EL4_200702-089	07/02/20 09:00	
B08-N-3	B081467-MS1	PE_EL4_200702-091	07/02/20 09:00	

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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B081467 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
B08-N-3	B081467-MSD1	PE_EL4_200702-092	07/02/20 09:00	
B08-N-3	B081467-PS1	PE_EL4_200702-093	07/02/20 09:00	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B081468 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
KA-44-S-1.5	2018704-21	PE_EL4_200702-126	07/02/20 09:00	
KA-44-S-3	2018704-22	PE_EL4_200702-134	07/02/20 09:00	
KA-44-W-1.5	2018704-23	PE_EL4_200702-135	07/02/20 09:00	
KA-44-W-1.5-FD	2018704-24	PE_EL4_200702-136	07/02/20 09:00	
KA-44-W-3	2018704-25	PE_EL4_200702-137	07/02/20 09:00	
KA-17-E-1.5	2018704-26	PE_EL4_200702-138	07/02/20 09:00	
KA-17-E-3	2018704-27	PE_EL4_200702-141	07/02/20 09:00	
KA-17-N-1.5	2018704-28	PE_EL4_200702-142	07/02/20 09:00	
KA-17-N-3	2018704-29	PE_EL4_200702-143	07/02/20 09:00	
KA-17-W-1.5	2018704-30	PE_EL4_200702-144	07/02/20 09:00	
KA-17-W-3	2018704-31	PE_EL4_200702-145	07/02/20 09:00	
Blank	B081468-BLK1	PE_EL4_200702-124	07/02/20 09:00	
LCS	B081468-BS1	PE_EL4_200702-125	07/02/20 09:00	
KA-44-S-1.5	B081468-DUP1	PE_EL4_200702-127	07/02/20 09:00	
KA-44-S-1.5	B081468-MS1	PE_EL4_200702-129	07/02/20 09:00	
KA-44-S-1.5	B081468-MSD1	PE_EL4_200702-130	07/02/20 09:00	
KA-44-S-1.5	B081468-PS1	PE_EL4_200702-131	07/02/20 09:00	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B081467-BLK1	File ID:	PE_EL4_200702-102
Prepared:	07/02/20 09:00	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	07/02/20 16:41	Instrument:	PE-EL4		
Batch:	B081467	Sequence:	2011582	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B081468-BLK1	File ID:	PE_EL4_200702-124
Prepared:	07/02/20 09:00	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	07/02/20 18:12	Instrument:	PE-EL4		
Batch:	B081468	Sequence:	2011583	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

B08-N-3

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081467
Preparation: EPA 3050B
Source Sample Name: B08-N-3

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081467-DUP1
Lab Source ID: 2018704-10
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	5.6950		5.4870		3.72		EPA-6020

* Values outside of QC limits

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Project Number: 60632763.5
Project Manager: Andy Shepard

KA-44-S-1.5

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081468
Preparation: EPA 3050B
Source Sample Name: KA-44-S-1.5

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081468-DUP1
Lab Source ID: 2018704-21
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	13.993		13.094		6.64		EPA-6020

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

B08-N-3

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081467
Preparation: EPA 3050B
Source Sample Number: 2018704-10

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081467-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	5.6950	32.757	108	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	31.415	103	4.18	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

KA-44-S-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081468
Preparation: EPA 3050B
Source Sample Number: 2018704-21

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081468-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	13.993	39.041	100	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	40.643	107	4.02	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081467
Preparation: EPA 3050B

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081467-BS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	28.038	112	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2018704Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B081468
Laboratory ID: B081468-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	27.965	112	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2011582	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2011582-ICV1	PE_EL4_200702-011	07/02/20 08:34
Initial Cal Blank	2011582-ICB1	PE_EL4_200702-012	07/02/20 08:37
MRL Check	2011582-CRL1	PE_EL4_200702-013	07/02/20 08:39
Interference Check B	2011582-IFB1	PE_EL4_200702-017	07/02/20 08:51
Calibration Check	2011582-CCV1	PE_EL4_200702-023	07/02/20 09:05
Calibration Blank	2011582-CCB1	PE_EL4_200702-024	07/02/20 09:08
Calibration Check	2011582-CCV4	PE_EL4_200702-043	07/02/20 09:57
Calibration Blank	2011582-CCB4	PE_EL4_200702-044	07/02/20 09:59
Interference Check A	2011582-IFA1	PE_EL4_200702-046	07/02/20 10:11
Calibration Check	2011582-CCV5	PE_EL4_200702-050	07/02/20 10:22
Calibration Blank	2011582-CCB5	PE_EL4_200702-051	07/02/20 10:24
Calibration Check	2011582-CCVA	PE_EL4_200702-084	07/02/20 15:50
Calibration Blank	2011582-CCBA	PE_EL4_200702-085	07/02/20 15:52
LCS	B081467-BS1	PE_EL4_200702-087	07/02/20 16:00
B08-N-3	2018704-10	PE_EL4_200702-088	07/02/20 16:02
B08-N-3	B081467-DUP1	PE_EL4_200702-089	07/02/20 16:05
B08-N-3	B081467-MS1	PE_EL4_200702-091	07/02/20 16:09
B08-N-3	B081467-MSD1	PE_EL4_200702-092	07/02/20 16:12
B08-N-3	B081467-PS1	PE_EL4_200702-093	07/02/20 16:14
Calibration Check	2011582-CCVB	PE_EL4_200702-094	07/02/20 16:16
Calibration Blank	2011582-CCBB	PE_EL4_200702-095	07/02/20 16:19
KA-10-S-1.5	2018704-01	PE_EL4_200702-096	07/02/20 16:27
KA-10-S-3	2018704-02	PE_EL4_200702-097	07/02/20 16:29
KA-10-S-3-FD	2018704-03	PE_EL4_200702-098	07/02/20 16:31
KA-10-N-1.5	2018704-04	PE_EL4_200702-099	07/02/20 16:34
KA-10-N-3	2018704-05	PE_EL4_200702-100	07/02/20 16:36

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Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2011582	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
KA-10-W-1.5	2018704-06	PE_EL4_200702-101	07/02/20 16:38
Blank	B081467-BLK1	PE_EL4_200702-102	07/02/20 16:41
Calibration Check	2011582-CCVC	PE_EL4_200702-103	07/02/20 16:43
Calibration Blank	2011582-CCBC	PE_EL4_200702-104	07/02/20 16:45
KA-10-W-3	2018704-07	PE_EL4_200702-105	07/02/20 16:48
B08-N-1.5	2018704-08	PE_EL4_200702-106	07/02/20 16:51
B08-N-1.5-FD	2018704-09	PE_EL4_200702-107	07/02/20 16:53
B08-E-1.5	2018704-11	PE_EL4_200702-108	07/02/20 16:55
B08-E-3	2018704-12	PE_EL4_200702-109	07/02/20 16:58
B08-S-1.5	2018704-13	PE_EL4_200702-110	07/02/20 17:00
Calibration Check	2011582-CCVD	PE_EL4_200702-111	07/02/20 17:03
Calibration Blank	2011582-CCBD	PE_EL4_200702-112	07/02/20 17:05
B08-S-3	2018704-14	PE_EL4_200702-113	07/02/20 17:09
B08-W-1.5	2018704-15	PE_EL4_200702-114	07/02/20 17:12
B08-W-3	2018704-16	PE_EL4_200702-115	07/02/20 17:14
KA-44-N-1.5	2018704-17	PE_EL4_200702-116	07/02/20 17:16
KA-44-N-3	2018704-18	PE_EL4_200702-117	07/02/20 17:19
KA-44-E-1.5	2018704-19	PE_EL4_200702-118	07/02/20 17:21
KA-44-E-3	2018704-20	PE_EL4_200702-119	07/02/20 17:23
Calibration Check	2011582-CCVE	PE_EL4_200702-120	07/02/20 17:26
Calibration Blank	2011582-CCBE	PE_EL4_200702-121	07/02/20 17:28

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Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2011583	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2011583-ICV1	PE_EL4_200702-011	07/02/20 08:34
Initial Cal Blank	2011583-ICB1	PE_EL4_200702-012	07/02/20 08:37
MRL Check	2011583-CRL1	PE_EL4_200702-013	07/02/20 08:39
Interference Check B	2011583-IFB1	PE_EL4_200702-017	07/02/20 08:51
Calibration Check	2011583-CCV1	PE_EL4_200702-023	07/02/20 09:05
Calibration Blank	2011583-CCB1	PE_EL4_200702-024	07/02/20 09:08
Calibration Check	2011583-CCV4	PE_EL4_200702-043	07/02/20 09:57
Calibration Blank	2011583-CCB4	PE_EL4_200702-044	07/02/20 09:59
Interference Check A	2011583-IFA1	PE_EL4_200702-046	07/02/20 10:11
Calibration Check	2011583-CCV5	PE_EL4_200702-050	07/02/20 10:22
Calibration Blank	2011583-CCB5	PE_EL4_200702-051	07/02/20 10:24
Calibration Check	2011583-CCVF	PE_EL4_200702-122	07/02/20 18:06
Calibration Blank	2011583-CCBF	PE_EL4_200702-123	07/02/20 18:09
Blank	B081468-BLK1	PE_EL4_200702-124	07/02/20 18:12
LCS	B081468-BS1	PE_EL4_200702-125	07/02/20 18:14
KA-44-S-1.5	2018704-21	PE_EL4_200702-126	07/02/20 18:17
KA-44-S-1.5	B081468-DUP1	PE_EL4_200702-127	07/02/20 18:19
KA-44-S-1.5	B081468-MS1	PE_EL4_200702-129	07/02/20 18:24
KA-44-S-1.5	B081468-MSD1	PE_EL4_200702-130	07/02/20 18:26
KA-44-S-1.5	B081468-PS1	PE_EL4_200702-131	07/02/20 18:28
Calibration Check	2011583-CCVG	PE_EL4_200702-132	07/02/20 18:31
Calibration Blank	2011583-CCBG	PE_EL4_200702-133	07/02/20 18:33
KA-44-S-3	2018704-22	PE_EL4_200702-134	07/02/20 18:36
KA-44-W-1.5	2018704-23	PE_EL4_200702-135	07/02/20 18:38
KA-44-W-1.5-FD	2018704-24	PE_EL4_200702-136	07/02/20 18:40
KA-44-W-3	2018704-25	PE_EL4_200702-137	07/02/20 18:43

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2018704Notes
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2011583	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
KA-17-E-1.5	2018704-26	PE_EL4_200702-138	07/02/20 18:45
Calibration Check	2011583-CCVH	PE_EL4_200702-139	07/02/20 18:47
Calibration Blank	2011583-CCBH	PE_EL4_200702-140	07/02/20 18:50
KA-17-E-3	2018704-27	PE_EL4_200702-141	07/02/20 18:52
KA-17-N-1.5	2018704-28	PE_EL4_200702-142	07/02/20 18:54
KA-17-N-3	2018704-29	PE_EL4_200702-143	07/02/20 18:57
KA-17-W-1.5	2018704-30	PE_EL4_200702-144	07/02/20 18:59
KA-17-W-3	2018704-31	PE_EL4_200702-145	07/02/20 19:01
Calibration Check	2011583-CCVI	PE_EL4_200702-146	07/02/20 19:04
Calibration Blank	2011583-CCBI	PE_EL4_200702-147	07/02/20 19:06

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Project Number: 60632763.5
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2011582

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2011582-ICB1	Arsenic	-0.55300	2.0	ug/L		EPA-6020
2011582-CCB1	Arsenic	0.25600	2.0	ug/L		EPA-6020
2011582-CCB4	Arsenic	-0.58800	2.0	ug/L		EPA-6020
2011582-CCB5	Arsenic	-0.14000	2.0	ug/L		EPA-6020
2011582-CCBA	Arsenic	-0.10500	2.0	ug/L		EPA-6020
2011582-CCBB	Arsenic	-0.030000	2.0	ug/L		EPA-6020
2011582-CCBC	Arsenic	-0.094000	2.0	ug/L		EPA-6020
2011582-CCBD	Arsenic	0.18300	2.0	ug/L		EPA-6020
2011582-CCBE	Arsenic	-0.24900	2.0	ug/L		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2011583

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2011583-ICB1	Arsenic	-0.55300	2.0	ug/L		EPA-6020
2011583-CCB1	Arsenic	0.25600	2.0	ug/L		EPA-6020
2011583-CCB4	Arsenic	-0.58800	2.0	ug/L		EPA-6020
2011583-CCB5	Arsenic	-0.14000	2.0	ug/L		EPA-6020
2011583-CCBF	Arsenic	0.29500	2.0	ug/L		EPA-6020
2011583-CCBG	Arsenic	0.068000	2.0	ug/L		EPA-6020
2011583-CCBH	Arsenic	-0.31200	2.0	ug/L		EPA-6020
2011583-CCBI	Arsenic	-0.35200	2.0	ug/L		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Control Limt: +/- 10.00%

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2011582

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2011582-ICV1	Arsenic	125.00	124.01	99.2	ug/L	EPA-6020
2011582-CCV1	Arsenic	100.00	97.335	97.3	ug/L	EPA-6020
2011582-CCV4	Arsenic	100.00	97.534	97.5	ug/L	EPA-6020
2011582-CCV5	Arsenic	100.00	97.449	97.4	ug/L	EPA-6020
2011582-CCVA	Arsenic	100.00	98.219	98.2	ug/L	EPA-6020
2011582-CCVB	Arsenic	100.00	98.472	98.5	ug/L	EPA-6020
2011582-CCVC	Arsenic	100.00	98.980	99.0	ug/L	EPA-6020
2011582-CCVD	Arsenic	100.00	100.49	100	ug/L	EPA-6020
2011582-CCVE	Arsenic	100.00	98.800	98.8	ug/L	EPA-6020

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Control Limt: +/- 10.00%

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2011583

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2011583-ICV1	Arsenic	125.00	124.01	99.2	ug/L	EPA-6020
2011583-CCV1	Arsenic	100.00	97.335	97.3	ug/L	EPA-6020
2011583-CCV4	Arsenic	100.00	97.534	97.5	ug/L	EPA-6020
2011583-CCV5	Arsenic	100.00	97.449	97.4	ug/L	EPA-6020
2011583-CCVF	Arsenic	100.00	98.360	98.4	ug/L	EPA-6020
2011583-CCVG	Arsenic	100.00	98.924	98.9	ug/L	EPA-6020
2011583-CCVH	Arsenic	100.00	99.174	99.2	ug/L	EPA-6020
2011583-CCVI	Arsenic	100.00	98.835	98.8	ug/L	EPA-6020

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

B08-N-3

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081467
Preparation: EPA 3050B

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081467-PS1
Lab Source ID: 2018704-10
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: B08-N-3
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	124.39	22.324	100.00	102

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

KA-44-S-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B081468
Preparation: EPA 3050B

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B081468-PS1
Lab Source ID: 2018704-21
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: KA-44-S-1.5
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	157.66	54.853	100.00	103

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2011582

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2011582-IFB1	Arsenic	20.000	18.60	93.0	ug/L
2011582-IFA1	Arsenic		-0.24800		ug/L

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2011583

SDG: 2018704Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2011583-IFB1	Arsenic	20.000	18.60	93.0	ug/L
2011583-IFA1	Arsenic		-0.24800		ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL4

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Thursday, July 02, 2020 08:21:28
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.128
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	14.000				ug/L
|	B	11	6402.254				ug/L
|	Al	27	25031.080				ug/L
|>	Sc	45	783218.203				ug/L
|	V	51	4646.850				ug/L
|	Cr	52	8060.239				ug/L
|	Cr	53	42321.687				ug/L
|	Mn	55	786.701				ug/L
|	Co	59	175.557				ug/L
⌊	Ni	60	60.667				ug/L
⌈	Cu	63	157.779				ug/L
|	Cu	65	75.556				ug/L
|	Zn	66	396.898				ug/L
|	Zn	68	459.123				ug/L
|>	Ge	72	649911.345				ug/L
|	As	75	48.780				ug/L
|	Se	77	4103.259				ug/L
|	Se	82	45.416				ug/L
⌊	Sr	88	1166.748				ug/L
⌈	Mo	98	67.287				ug/L
|>	Rh	103	531591.888				ug/L
⌊	Ag	107	463.345				ug/L
⌈	Cd	111	-22.364				ug/L
|	Cd	114	-182.557				ug/L
|>	In	115	674567.164				ug/L
|	Sn	120	5328.186				ug/L
⌊	Sb	121	550.017				ug/L
⌈	Ba	137	68.578				ug/L
|	Ba	138	405.253				ug/L
|>	Tb	159	923205.796				ug/L
|	Tl	205	1136.738				ug/L
⌊	Pb	208	190.001				ug/L
⌈	Hg	200	21.573				ug/L
|	Hg	201	8.667				ug/L
|>	Bi	209	602808.156				ug/L
⌊	U	238	30.000				ug/L
	C	13	8016.867				ug/L
	W	184	66.664				ug/L

	Pd	106	126.147	ug/L
	Kr	83	48.000	ug/L
⌈	Na	23	21371.787	ug/L
|	Mg	24	3600.719	ug/L
|	K	39	172277.210	ug/L
|	Ca	44	5114.796	ug/L
|	Ti	47	266.671	ug/L
⌊	Sc-1	45	783218.203	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero

Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 02, 2020 08:23:34
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.128
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	497.347	**1.000**	0.06	6.3	ug/L
|	B	11	25198.213	**20.000**	0.16	0.8	ug/L
|	Al	27	188195.555	**20.000**	0.31	1.6	ug/L
|>	Sc	45	798168.952				ug/L
|	V	51	19079.700	**3.000**	0.14	4.7	ug/L
|	Cr	52	21228.105	**3.000**	0.21	6.9	ug/L
|	Cr	53	41039.162	**3.000**	1.65	54.9	ug/L
|	Mn	55	8720.849	**1.000**	0.01	1.2	ug/L
|	Co	59	5479.429	**1.000**	0.01	0.8	ug/L
⌊	Ni	60	2244.277	**2.000**	0.07	3.5	ug/L
⌈	Cu	63	5167.247	**2.000**	0.07	3.6	ug/L
|	Cu	65	2457.221	**2.000**	0.08	3.8	ug/L
|	Zn	66	4020.000	**5.000**	0.08	1.6	ug/L
|	Zn	68	2978.266	**5.000**	0.14	2.8	ug/L
|>	Ge	72	654199.103				ug/L
|	As	75	1303.103	**2.000**	0.06	3.0	ug/L
|	Se	77	3806.964	**2.000**	0.48	23.9	ug/L
|	Se	82	176.574	**2.000**	0.13	6.7	ug/L
⌊	Sr	88	2667.078	**0.200**	0.10	49.2	ug/L
⌈	Mo	98	2361.366	**1.000**	0.01	0.6	ug/L
|>	Rh	103	544861.803				ug/L
⌊	Ag	107	5038.062	**1.000**	0.02	1.6	ug/L
⌈	Cd	111	771.852	**1.000**	0.07	7.2	ug/L
|	Cd	114	1483.566	**1.000**	0.05	4.6	ug/L
|>	In	115	678383.128				ug/L
|	Sn	120	7282.748	**1.000**	0.10	9.5	ug/L
⌊	Sb	121	5511.671	**2.000**	0.08	4.0	ug/L
⌈	Ba	137	1476.679	**1.000**	0.06	6.2	ug/L
|	Ba	138	9468.822	**1.000**	0.04	4.0	ug/L
|>	Tb	159	939961.273				ug/L
|	Tl	205	9775.265	**1.000**	0.06	6.0	ug/L
⌊	Pb	208	12536.788	**1.000**	0.04	4.4	ug/L
⌈	Hg	200	140.950	**0.200**	0.04	20.4	ug/L
|	Hg	201	67.334	**0.200**	0.03	14.7	ug/L
|>	Bi	209	628468.790				ug/L
⌊	U	238	9938.765	**1.000**	0.02	1.8	ug/L
	C	13	8203.700				ug/L
	W	184	59.998				ug/L

	Pd	106	240.737				ug/L
	Kr	83	49.333				ug/L
⌈	Na	23	649544.433	**100.000**	3.19	3.2	ug/L
|	Mg	24	411837.089	**100.000**	1.79	1.8	ug/L
|	K	39	730642.916	**100.000**	1.64	1.6	ug/L
|	Ca	44	22146.946	**100.000**	1.50	1.5	ug/L
|	Ti	47	206.669				ug/L
⌊	Sc-1	45	798168.952				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000605	0.000	1.000000	Linear Thru Zero
B	11.009	0.001170	0.000	1.000000	Linear Thru Zero
Al	26.982	0.010191	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005989	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005438	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000873	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009922	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006641	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001367	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003828	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001820	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001107	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000769	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000958	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000247	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000100	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.011388	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004207	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008376	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001171	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002457	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002836	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003656	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001496	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009643	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009171	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013120	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000947	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000465	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.015770	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6281.726462	0.000	1.000000	Linear Thru Zero

Mg	23.985	4082.363692	0.000	1.000000	Linear Thru Zero
K	38.964	5583.657054	0.000	1.000000	Linear Thru Zero
Ca	43.956	170.321501	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 02, 2020 08:25:39
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.128
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	48777.200	**100.000**	3.30	3.3	ug/L
|	B	11	966851.950	**999.990**	23.16	2.3	ug/L
|	Al	27	1562950.270	**249.372**	6.97	2.8	ug/L
|>	Sc	45	842226.401				ug/L
|	V	51	542614.630	**100.006**	3.77	3.8	ug/L
|	Cr	52	471272.168	**100.001**	4.39	4.4	ug/L
|	Cr	53	93521.935	**100.228**	6.29	6.3	ug/L
|	Mn	55	1916852.742	**250.000**	9.85	3.9	ug/L
|	Co	59	557336.220	**100.000**	2.68	2.7	ug/L
⌊	Ni	60	279628.543	**250.000**	7.90	3.2	ug/L
⌈	Cu	63	629937.048	**249.999**	2.01	0.8	ug/L
|	Cu	65	299233.705	**249.999**	0.79	0.3	ug/L
|	Zn	66	168017.129	**249.986**	1.14	0.5	ug/L
|	Zn	68	115633.527	**249.985**	2.01	0.8	ug/L
|>	Ge	72	690908.031				ug/L
|	As	75	155709.660	**249.999**	2.15	0.9	ug/L
|	Se	77	16041.642	**250.074**	2.83	1.1	ug/L
|	Se	82	17640.744	**250.000**	1.50	0.6	ug/L
⌊	Sr	88	4067.580	**19.891**	2.41	12.1	ug/L
⌈	Mo	98	234843.204	**100.000**	0.21	0.2	ug/L
|>	Rh	103	560978.401				ug/L
⌊	Ag	107	402562.060	**99.998**	1.22	1.2	ug/L
⌈	Cd	111	83216.947	**100.000**	2.09	2.1	ug/L
|	Cd	114	181788.547	**100.000**	1.80	1.8	ug/L
|>	In	115	708745.172				ug/L
|	Sn	120	366790.075	**100.004**	2.13	2.1	ug/L
⌊	Sb	121	255412.015	**99.999**	1.93	1.9	ug/L
⌈	Ba	137	130158.112	**99.999**	2.07	2.1	ug/L
|	Ba	138	823463.623	**99.998**	1.85	1.9	ug/L
|>	Tb	159	992049.785				ug/L
|	Tl	205	885490.347	**100.000**	2.05	2.0	ug/L
⌊	Pb	208	2987926.099	**250.000**	5.14	2.1	ug/L
⌈	Hg	200	12438.242	**20.000**	0.56	2.8	ug/L
|	Hg	201	6954.660	**20.000**	0.67	3.3	ug/L
|>	Bi	209	634515.230				ug/L
⌊	U	238	1020420.922	**100.000**	2.99	3.0	ug/L
	C	13	8507.321				ug/L
	W	184	250.002				ug/L

	Pd	106	75.459				ug/L
	Kr	83	52.667				ug/L
⌈	Na	23	64843121.180	**10000.031**	138.78	1.4	ug/L
|	Mg	24	42450183.785	**10000.038**	50.27	0.5	ug/L
|	K	39	57530887.047	**10000.027**	107.84	1.1	ug/L
|	Ca	44	1624958.826	**9999.949**	92.10	0.9	ug/L
|	Ti	47	480.013				ug/L
⌊	Sc-1	45	842226.401				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000579	0.000	1.000000	Linear Thru Zero
B	11.009	0.001140	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007317	0.000	0.999507	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006387	0.000	0.999998	Linear Thru Zero
Cr	51.941	0.005497	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000569	0.000	0.997124	Linear Thru Zero
Mn	54.938	0.009106	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006618	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001328	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003646	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001732	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000970	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000667	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000901	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000068	0.000	0.999308	Linear Thru Zero
Se	81.917	0.000102	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000206	0.000	0.878678	Linear Thru Zero
Mo	97.906	0.004185	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007167	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001175	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002568	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005097	0.000	0.999990	Linear Thru Zero
Sb	120.904	0.003596	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001312	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.008298	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008917	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012052	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000979	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000548	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016093	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6482.154896	0.000	1.000000	Linear Thru Zero

Mg	23.985	4244.642079	0.000	1.000000	Linear Thru Zero
K	38.964	5735.845765	0.000	1.000000	Linear Thru Zero
Ca	43.956	161.985237	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Thursday, July 02, 2020 09:10:23
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.148
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	16.000				ug/L
|	B	11	5768.500				ug/L
|	Al	27	29116.585				ug/L
|>	Sc	45	740822.438				ug/L
|	V	51	2337.738				ug/L
|	Cr	52	6912.631				ug/L
|	Cr	53	39719.974				ug/L
|	Mn	55	613.354				ug/L
|	Co	59	66.667				ug/L
⌊	Ni	60	47.333				ug/L
⌈	Cu	63	145.779				ug/L
|	Cu	65	76.889				ug/L
|	Zn	66	388.897				ug/L
|	Zn	68	425.343				ug/L
|>	Ge	72	631389.346				ug/L
|	As	75	139.666				ug/L
|	Se	77	3861.153				ug/L
|	Se	82	53.647				ug/L
⌊	Sr	88	1466.787				ug/L
⌈	Mo	98	150.238				ug/L
|>	Rh	103	503532.481				ug/L
⌊	Ag	107	350.007				ug/L
⌈	Cd	111	-20.230				ug/L
|	Cd	114	-197.151				ug/L
|>	In	115	649419.332				ug/L
|	Sn	120	3667.407				ug/L
⌊	Sb	121	200.002				ug/L
⌈	Ba	137	53.921				ug/L
|	Ba	138	306.593				ug/L
|>	Tb	159	899987.130				ug/L
|	Tl	205	786.701				ug/L
⌊	Pb	208	146.667				ug/L
⌈	Hg	200	50.325				ug/L
|	Hg	201	30.667				ug/L
|>	Bi	209	571436.758				ug/L
⌊	U	238	16.667				ug/L
	C	13	8187.020				ug/L
	W	184	53.333				ug/L

	Pd	106	132.683	ug/L
	Kr	83	40.667	ug/L
⌈	Na	23	32571.736	ug/L
|	Mg	24	6709.159	ug/L
|	K	39	167271.654	ug/L
|	Ca	44	5001.376	ug/L
|	Ti	47	200.002	ug/L
⌊	Sc-1	45	740822.438	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000579	0.000	1.000000	Linear Thru Zero
B	11.009	0.001140	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007317	0.000	0.999507	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006387	0.000	0.999998	Linear Thru Zero
Cr	51.941	0.005497	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000569	0.000	0.997124	Linear Thru Zero
Mn	54.938	0.009106	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006618	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001328	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003646	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001732	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000970	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000667	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000901	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000068	0.000	0.999308	Linear Thru Zero
Se	81.917	0.000102	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000206	0.000	0.878678	Linear Thru Zero
Mo	97.906	0.004185	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007167	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001175	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002568	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005097	0.000	0.999990	Linear Thru Zero
Sb	120.904	0.003596	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001312	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.008298	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008917	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012052	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000979	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000548	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016093	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6482.154896	0.000	1.000000	Linear Thru Zero

Mg	23.985	4244.642079	0.000	1.000000	Linear Thru Zero
K	38.964	5735.845765	0.000	1.000000	Linear Thru Zero
Ca	43.956	161.985237	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 02, 2020 09:12:29
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.148
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	470.012	**1.000**	0.06	5.5	ug/L
|	B	11	24386.000	**20.000**	0.39	2.0	ug/L
|	Al	27	194164.931	**20.000**	0.56	2.8	ug/L
|>	Sc	45	775071.914				ug/L
|	V	51	19183.855	**3.000**	0.15	5.0	ug/L
|	Cr	52	20285.957	**3.000**	0.03	1.1	ug/L
|	Cr	53	37838.588	**3.000**	0.78	26.1	ug/L
|	Mn	55	8650.783	**1.000**	0.03	2.8	ug/L
|	Co	59	5354.911	**1.000**	0.05	5.0	ug/L
⌊	Ni	60	2223.605	**2.000**	0.04	2.0	ug/L
⌈	Cu	63	5192.150	**2.000**	0.05	2.7	ug/L
|	Cu	65	2366.530	**2.000**	0.01	0.7	ug/L
|	Zn	66	4072.912	**5.000**	0.13	2.7	ug/L
|	Zn	68	2912.911	**5.000**	0.21	4.2	ug/L
|>	Ge	72	656423.274				ug/L
|	As	75	1461.149	**2.000**	0.37	18.5	ug/L
|	Se	77	3619.888	**2.000**	0.56	27.9	ug/L
|	Se	82	187.668	**2.000**	0.18	9.2	ug/L
⌊	Sr	88	3534.037	**0.200**	0.07	34.2	ug/L
⌈	Mo	98	2223.103	**1.000**	0.03	3.3	ug/L
|>	Rh	103	517542.397				ug/L
⌊	Ag	107	4724.561	**1.000**	0.01	1.0	ug/L
⌈	Cd	111	783.945	**1.000**	0.11	10.8	ug/L
|	Cd	114	1352.008	**1.000**	0.06	5.8	ug/L
|>	In	115	670267.287				ug/L
|	Sn	120	6579.049	**1.000**	0.10	10.0	ug/L
⌊	Sb	121	5071.414	**2.000**	0.02	1.1	ug/L
⌈	Ba	137	1401.331	**1.000**	0.04	3.6	ug/L
|	Ba	138	9133.810	**1.000**	0.04	3.5	ug/L
|>	Tb	159	933732.567				ug/L
|	Tl	205	9414.875	**1.000**	0.03	3.5	ug/L
⌊	Pb	208	11679.600	**1.000**	0.02	1.8	ug/L
⌈	Hg	200	153.143	**0.200**	0.08	38.1	ug/L
|	Hg	201	97.334	**0.200**	0.02	10.1	ug/L
|>	Bi	209	594958.422				ug/L
⌊	U	238	9414.879	**1.000**	0.02	1.9	ug/L
	C	13	8347.164				ug/L
	W	184	30.000				ug/L

	Pd	106	220.928				ug/L
	Kr	83	38.500				ug/L
⌈	Na	23	627902.122	**100.000**	1.18	1.2	ug/L
|	Mg	24	396015.886	**100.000**	1.28	1.3	ug/L
|	K	39	710244.076	**100.000**	1.63	1.6	ug/L
|	Ca	44	21351.732	**100.000**	4.56	4.6	ug/L
|	Ti	47	340.006				ug/L
⌊	Sc-1	45	775071.914				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000585	0.000	1.000000	Linear Thru Zero
B	11.009	0.001184	0.000	1.000000	Linear Thru Zero
Al	26.982	0.010565	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007205	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005613	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001592	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010335	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006825	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001403	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003840	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001742	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001118	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000753	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001002	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000300	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000100	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.015309	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003998	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008433	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001200	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002320	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004168	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003629	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001442	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009446	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009212	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012347	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000855	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000550	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.015797	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5953.303858	0.000	1.000000	Linear Thru Zero

Mg	23.985	3893.067268	0.000	1.000000	Linear Thru Zero
K	38.964	5429.724216	0.000	1.000000	Linear Thru Zero
Ca	43.956	163.503562	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 02, 2020 09:14:34
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.148
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	49013.165	**100.000**	1.72	1.7	ug/L
|	B	11	993838.832	**999.991**	5.70	0.6	ug/L
|	Al	27	1551333.030	**249.236**	5.15	2.1	ug/L
|>	Sc	45	851437.422				ug/L
|	V	51	543564.512	**99.988**	4.34	4.3	ug/L
|	Cr	52	481759.545	**99.999**	3.17	3.2	ug/L
|	Cr	53	92448.269	**100.352**	7.83	7.8	ug/L
|	Mn	55	1961530.196	**250.000**	6.99	2.8	ug/L
|	Co	59	565185.416	**100.000**	2.75	2.8	ug/L
⌊	Ni	60	278625.720	**249.999**	5.15	2.1	ug/L
⌈	Cu	63	638434.951	**249.999**	2.37	0.9	ug/L
|	Cu	65	300385.791	**250.000**	3.08	1.2	ug/L
|	Zn	66	171540.081	**249.984**	3.36	1.3	ug/L
|	Zn	68	119174.469	**249.988**	1.03	0.4	ug/L
|>	Ge	72	708446.590				ug/L
|	As	75	156954.131	**249.998**	3.50	1.4	ug/L
|	Se	77	16544.212	**250.086**	4.58	1.8	ug/L
|	Se	82	18047.952	**250.000**	5.11	2.0	ug/L
⌊	Sr	88	3967.564	**19.816**	7.53	38.0	ug/L
⌈	Mo	98	233759.538	**100.001**	2.01	2.0	ug/L
|>	Rh	103	548944.788				ug/L
⌊	Ag	107	393154.556	**99.998**	1.78	1.8	ug/L
⌈	Cd	111	85186.944	**100.000**	1.10	1.1	ug/L
|	Cd	114	184917.518	**100.001**	1.68	1.7	ug/L
|>	In	115	706676.794				ug/L
|	Sn	120	375127.165	**100.002**	1.50	1.5	ug/L
⌊	Sb	121	255889.280	**100.000**	1.51	1.5	ug/L
⌈	Ba	137	132249.247	**99.999**	0.65	0.6	ug/L
|	Ba	138	831308.572	**99.999**	1.46	1.5	ug/L
|>	Tb	159	1002958.318				ug/L
|	Tl	205	888325.884	**100.000**	2.49	2.5	ug/L
⌊	Pb	208	2932957.048	**250.000**	2.31	0.9	ug/L
⌈	Hg	200	12139.603	**20.000**	0.66	3.3	ug/L
|	Hg	201	6992.688	**20.000**	0.48	2.4	ug/L
|>	Bi	209	618159.953				ug/L
⌊	U	238	998968.609	**100.000**	2.22	2.2	ug/L
	C	13	8337.155				ug/L
	W	184	286.671				ug/L

	Pd	106	143.014				ug/L
	Kr	83	42.667				ug/L
⌈	Na	23	63250355.309	**10000.058**	327.88	3.3	ug/L
|	Mg	24	41367270.933	**10000.059**	285.23	2.9	ug/L
|	K	39	57710434.167	**10000.056**	208.58	2.1	ug/L
|	Ca	44	1648431.914	**10000.005**	216.53	2.2	ug/L
|	Ti	47	340.007				ug/L
⌊	Sc-1	45	851437.422				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000575	0.000	1.000000	Linear Thru Zero
B	11.009	0.001159	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007152	0.000	0.999272	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006352	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.005564	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000548	0.000	0.993198	Linear Thru Zero
Mn	54.938	0.009211	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006637	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001309	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003604	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001696	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000966	0.000	0.999995	Linear Thru Zero
Zn	67.925	0.000670	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000885	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000069	0.000	0.999083	Linear Thru Zero
Se	81.917	0.000102	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000165	0.000	0.736458	Linear Thru Zero
Mo	97.906	0.004255	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007157	0.000	0.999998	Linear Thru Zero
Cd	110.904	0.001206	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002621	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005253	0.000	0.999998	Linear Thru Zero
Sb	120.904	0.003618	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001318	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008288	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008854	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011699	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000978	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000563	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016165	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6321.741514	0.000	1.000000	Linear Thru Zero

Mg	23.985	4136.031881	0.000	1.000000	Linear Thru Zero
K	38.964	5754.283795	0.000	1.000000	Linear Thru Zero
Ca	43.956	164.342970	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Thursday, July 02, 2020 09:48:39
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.162
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	13.333				ug/L
|	B	11	5254.853				ug/L
|	Al	27	28501.297				ug/L
|>	Sc	45	774788.653				ug/L
|	V	51	2718.376				ug/L
|	Cr	52	7616.525				ug/L
|	Cr	53	42475.700				ug/L
|	Mn	55	656.691				ug/L
|	Co	59	102.223				ug/L
⌊	Ni	60	36.000				ug/L
⌈	Cu	63	136.445				ug/L
|	Cu	65	74.667				ug/L
|	Zn	66	401.787				ug/L
|	Zn	68	416.898				ug/L
|>	Ge	72	649130.252				ug/L
|	As	75	303.508				ug/L
|	Se	77	4238.154				ug/L
|	Se	82	57.499				ug/L
⌊	Sr	88	1533.465				ug/L
⌈	Mo	98	97.434				ug/L
|>	Rh	103	514139.898				ug/L
⌊	Ag	107	423.343				ug/L
⌈	Cd	111	2.924				ug/L
|	Cd	114	-118.362				ug/L
|>	In	115	672393.137				ug/L
|	Sn	120	3083.815				ug/L
⌊	Sb	121	170.002				ug/L
⌈	Ba	137	41.919				ug/L
|	Ba	138	344.592				ug/L
|>	Tb	159	916188.860				ug/L
|	Tl	205	750.031				ug/L
⌊	Pb	208	133.334				ug/L
⌈	Hg	200	46.928				ug/L
|	Hg	201	19.333				ug/L
|>	Bi	209	576513.734				ug/L
⌊	U	238	20.000				ug/L
	C	13	7769.987				ug/L
	W	184	63.331				ug/L

	Pd	106	112.423	ug/L
	Kr	83	38.500	ug/L
⌈	Na	23	25315.255	ug/L
|	Mg	24	6082.044	ug/L
|	K	39	165078.965	ug/L
|	Ca	44	4961.357	ug/L
|	Ti	47	206.669	ug/L
⌊	Sc-1	45	774788.653	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000575	0.000	1.000000	Linear Thru Zero
B	11.009	0.001159	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007152	0.000	0.999272	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006352	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.005564	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000548	0.000	0.993198	Linear Thru Zero
Mn	54.938	0.009211	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006637	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001309	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003604	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001696	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000966	0.000	0.999995	Linear Thru Zero
Zn	67.925	0.000670	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000885	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000069	0.000	0.999083	Linear Thru Zero
Se	81.917	0.000102	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000165	0.000	0.736458	Linear Thru Zero
Mo	97.906	0.004255	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007157	0.000	0.999998	Linear Thru Zero
Cd	110.904	0.001206	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002621	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005253	0.000	0.999998	Linear Thru Zero
Sb	120.904	0.003618	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001318	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008288	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008854	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011699	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000978	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000563	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016165	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6321.741514	0.000	1.000000	Linear Thru Zero

Mg	23.985	4136.031881	0.000	1.000000	Linear Thru Zero
K	38.964	5754.283795	0.000	1.000000	Linear Thru Zero
Ca	43.956	164.342970	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 02, 2020 09:50:45
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.162
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	460.012	**1.000**	0.05	5.5	ug/L
|	B	11	24008.338	**20.000**	1.13	5.6	ug/L
|	Al	27	201465.400	**20.000**	1.04	5.2	ug/L
|>	Sc	45	768292.031				ug/L
|	V	51	19754.153	**3.000**	0.42	14.0	ug/L
|	Cr	52	20269.253	**3.000**	0.08	2.8	ug/L
|	Cr	53	39837.197	**3.000**	1.78	59.4	ug/L
|	Mn	55	8884.342	**1.000**	0.08	7.7	ug/L
|	Co	59	5346.020	**1.000**	0.02	1.5	ug/L
⌊	Ni	60	2200.266	**2.000**	0.07	3.5	ug/L
⌈	Cu	63	5092.093	**2.000**	0.02	1.1	ug/L
|	Cu	65	2394.093	**2.000**	0.04	2.0	ug/L
|	Zn	66	4080.027	**5.000**	0.13	2.5	ug/L
|	Zn	68	2956.481	**5.000**	0.07	1.4	ug/L
|>	Ge	72	658095.187				ug/L
|	As	75	1180.699	**2.000**	0.42	20.8	ug/L
|	Se	77	3821.136	**2.000**	0.05	2.5	ug/L
|	Se	82	186.310	**2.000**	0.20	9.8	ug/L
⌊	Sr	88	2400.321	**0.200**	0.09	42.5	ug/L
⌈	Mo	98	2205.245	**1.000**	0.03	2.6	ug/L
|>	Rh	103	526306.392				ug/L
⌊	Ag	107	4447.755	**1.000**	0.03	2.6	ug/L
⌈	Cd	111	721.473	**1.000**	0.14	14.0	ug/L
|	Cd	114	1416.792	**1.000**	0.09	9.3	ug/L
|>	In	115	669573.233				ug/L
|	Sn	120	5728.393	**1.000**	0.20	19.9	ug/L
⌊	Sb	121	5008.046	**2.000**	0.07	3.7	ug/L
⌈	Ba	137	1422.642	**1.000**	0.07	7.0	ug/L
|	Ba	138	9014.331	**1.000**	0.01	0.7	ug/L
|>	Tb	159	921389.771				ug/L
|	Tl	205	9441.601	**1.000**	0.10	10.3	ug/L
⌊	Pb	208	12176.506	**1.000**	0.01	0.9	ug/L
⌈	Hg	200	168.887	**0.200**	0.04	21.4	ug/L
|	Hg	201	100.667	**0.200**	0.03	12.7	ug/L
|>	Bi	209	596699.778				ug/L
⌊	U	238	9001.128	**1.000**	0.02	1.9	ug/L
	C	13	8327.149				ug/L
	W	184	69.999				ug/L

	Pd	106	231.117				ug/L
	Kr	83	41.333				ug/L
⌈	Na	23	635280.220	**100.000**	3.96	4.0	ug/L
|	Mg	24	398743.976	**100.000**	3.59	3.6	ug/L
|	K	39	719306.118	**100.000**	4.32	4.3	ug/L
|	Ca	44	20730.302	**100.000**	5.34	5.3	ug/L
|	Ti	47	220.003				ug/L
⌊	Sc-1	45	768292.031				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000583	0.000	1.000000	Linear Thru Zero
B	11.009	0.001225	0.000	1.000000	Linear Thru Zero
Al	26.982	0.011289	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007373	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005522	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000980	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010743	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006823	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001410	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003764	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001762	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001116	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000770	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000664	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000361	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000097	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.006439	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004000	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007632	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001073	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002293	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003979	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003615	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001498	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009407	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009424	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013070	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001010	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000675	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.015048	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6099.649651	0.000	1.000000	Linear Thru Zero

Mg	23.985	3926.619314	0.000	1.000000	Linear Thru Zero
K	38.964	5542.271536	0.000	1.000000	Linear Thru Zero
Ca	43.956	157.689442	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 02, 2020 09:52:50
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.162
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	47889.815	**100.000**	1.44	1.4	ug/L
|	B	11	976434.830	**999.979**	29.57	3.0	ug/L
|	Al	27	1519236.933	**249.078**	5.19	2.1	ug/L
|>	Sc	45	834506.857				ug/L
|	V	51	535113.683	**99.986**	0.57	0.6	ug/L
|	Cr	52	471052.743	**100.000**	1.45	1.5	ug/L
|	Cr	53	91767.767	**100.250**	2.60	2.6	ug/L
|	Mn	55	1916211.408	**249.999**	3.06	1.2	ug/L
|	Co	59	549977.167	**100.000**	1.81	1.8	ug/L
⌊	Ni	60	272059.344	**249.999**	4.69	1.9	ug/L
⌈	Cu	63	619851.814	**249.999**	5.59	2.2	ug/L
|	Cu	65	291203.699	**249.999**	5.80	2.3	ug/L
|	Zn	66	168198.294	**249.985**	8.43	3.4	ug/L
|	Zn	68	116018.115	**249.985**	8.09	3.2	ug/L
|>	Ge	72	691673.382				ug/L
|	As	75	154570.616	**250.004**	5.85	2.3	ug/L
|	Se	77	16457.056	**250.100**	12.74	5.1	ug/L
|	Se	82	17795.102	**250.001**	3.13	1.3	ug/L
⌊	Sr	88	3934.198	**19.925**	4.75	23.9	ug/L
⌈	Mo	98	225991.296	**100.001**	0.89	0.9	ug/L
|>	Rh	103	533478.093				ug/L
⌊	Ag	107	380032.298	**99.999**	0.87	0.9	ug/L
⌈	Cd	111	82844.418	**100.001**	2.54	2.5	ug/L
|	Cd	114	180719.395	**100.001**	3.78	3.8	ug/L
|>	In	115	691405.059				ug/L
|	Sn	120	366637.424	**100.002**	2.27	2.3	ug/L
⌊	Sb	121	251598.844	**100.000**	2.98	3.0	ug/L
⌈	Ba	137	128942.520	**99.999**	1.77	1.8	ug/L
|	Ba	138	809820.448	**99.999**	2.17	2.2	ug/L
|>	Tb	159	985273.005				ug/L
|	Tl	205	868539.202	**99.999**	2.36	2.4	ug/L
⌊	Pb	208	2919663.509	**250.000**	7.08	2.8	ug/L
⌈	Hg	200	11816.397	**20.000**	0.50	2.5	ug/L
|	Hg	201	6787.867	**20.000**	0.25	1.2	ug/L
|>	Bi	209	602048.707				ug/L
⌊	U	238	970227.787	**100.001**	1.42	1.4	ug/L
	C	13	8076.923				ug/L
	W	184	199.999				ug/L

Pd	106	40.760				ug/L
Kr	83	44.333				ug/L
Na	23	62031773.520	**10000.016**	20.03	0.2	ug/L
Mg	24	40362469.828	**10000.027**	180.51	1.8	ug/L
K	39	56258097.466	**10000.012**	98.55	1.0	ug/L
Ca	44	1639957.432	**10000.036**	215.98	2.2	ug/L
Ti	47	453.345				ug/L
Sc-1	45	834506.857				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000574	0.000	1.000000	Linear Thru Zero
B	11.009	0.001164	0.000	0.999999	Linear Thru Zero
Al	26.982	0.007163	0.000	0.998940	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006378	0.000	0.999989	Linear Thru Zero
Cr	51.941	0.005547	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000550	0.000	0.996534	Linear Thru Zero
Mn	54.938	0.009183	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006590	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001304	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003585	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001684	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000971	0.000	0.999995	Linear Thru Zero
Zn	67.925	0.000669	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000892	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000069	0.000	0.998760	Linear Thru Zero
Se	81.917	0.000103	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000167	0.000	0.935822	Linear Thru Zero
Mo	97.906	0.004234	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007115	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001198	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002617	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005258	0.000	0.999997	Linear Thru Zero
Sb	120.904	0.003637	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001309	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.008220	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008812	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011860	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000978	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000562	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016118	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6200.635728	0.000	1.000000	Linear Thru Zero

Mg	23.985	4035.627877	0.000	1.000000	Linear Thru Zero
K	38.964	5609.295148	0.000	1.000000	Linear Thru Zero
Ca	43.956	163.499026	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Thursday, July 02, 2020 10:52:22
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.182
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8.667				ug/L
|	B	11	4851.297				ug/L
|	Al	27	15964.044				ug/L
| >	Sc	45	755746.050				ug/L
|	V	51	2293.324				ug/L
|	Cr	52	7439.714				ug/L
|	Cr	53	39552.661				ug/L
|	Mn	55	736.697				ug/L
|	Co	59	86.667				ug/L
⌊	Ni	60	50.000				ug/L
⌈	Cu	63	180.002				ug/L
|	Cu	65	91.556				ug/L
|	Zn	66	466.234				ug/L
|	Zn	68	461.345				ug/L
| >	Ge	72	641821.278				ug/L
|	As	75	70.447				ug/L
|	Se	77	3889.833				ug/L
|	Se	82	47.310				ug/L
⌊	Sr	88	866.714				ug/L
⌈	Mo	98	38.676				ug/L
| >	Rh	103	511063.272				ug/L
⌊	Ag	107	483.346				ug/L
⌈	Cd	111	-25.489				ug/L
|	Cd	114	-212.604				ug/L
| >	In	115	660545.631				ug/L
|	Sn	120	2473.586				ug/L
⌊	Sb	121	103.334				ug/L
⌈	Ba	137	40.599				ug/L
|	Ba	138	235.269				ug/L
| >	Tb	159	905848.512				ug/L
|	Tl	205	646.690				ug/L
⌊	Pb	208	153.334				ug/L
⌈	Hg	200	62.304				ug/L
|	Hg	201	34.667				ug/L
| >	Bi	209	579981.888				ug/L
⌊	U	238	13.333				ug/L
	C	13	7573.156				ug/L
	W	184	56.666				ug/L
	Pd	106	150.147				ug/L
	Kr	83	41.000				ug/L
⌈	Na	23	23717.605				ug/L
|	Mg	24	3640.731				ug/L

	K	39	168636.568	ug/L
	Ca	44	4434.415	ug/L
	Ti	47	260.004	ug/L
	Sc-1	45	755746.050	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 02, 2020 10:54:28
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.182
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	461.345	**1.000**	0.04	4.4	ug/L
|	B	11	24726.922	**20.000**	0.47	2.4	ug/L
|	Al	27	212860.262	**20.000**	0.87	4.4	ug/L
| >	Sc	45	769572.097				ug/L
|	V	51	17186.236	**3.000**	1.19	39.6	ug/L
|	Cr	52	20579.987	**3.000**	0.19	6.4	ug/L
|	Cr	53	40453.165	**3.000**	23.39	779.6	ug/L
|	Mn	55	8357.174	**1.000**	0.05	4.8	ug/L
|	Co	59	5259.302	**1.000**	0.05	4.6	ug/L
⌊	Ni	60	2110.245	**2.000**	0.08	4.1	ug/L
⌈	Cu	63	5183.701	**2.000**	0.02	0.9	ug/L
|	Cu	65	2357.195	**2.000**	0.05	2.3	ug/L
|	Zn	66	4038.675	**5.000**	0.10	2.0	ug/L
|	Zn	68	2966.262	**5.000**	0.12	2.4	ug/L
| >	Ge	72	664186.719				ug/L
|	As	75	1255.827	**2.000**	0.34	17.1	ug/L
|	Se	77	3921.513	**2.000**	1.54	76.9	ug/L
|	Se	82	176.137	**2.000**	0.17	8.3	ug/L
⌊	Sr	88	2767.092	**0.200**	0.03	13.7	ug/L
⌈	Mo	98	2284.232	**1.000**	0.02	1.9	ug/L
| >	Rh	103	514848.502				ug/L
⌊	Ag	107	4817.944	**1.000**	0.04	3.8	ug/L
⌈	Cd	111	784.621	**1.000**	0.07	6.8	ug/L
|	Cd	114	1469.586	**1.000**	0.06	5.6	ug/L
| >	In	115	664823.565				ug/L
|	Sn	120	5721.801	**1.000**	0.05	4.7	ug/L
⌊	Sb	121	5011.382	**2.000**	0.05	2.6	ug/L
⌈	Ba	137	1392.019	**1.000**	0.07	6.9	ug/L
|	Ba	138	9112.487	**1.000**	0.03	2.5	ug/L
| >	Tb	159	922050.310				ug/L
|	Tl	205	9187.975	**1.000**	0.04	3.6	ug/L
⌊	Pb	208	11929.771	**1.000**	0.01	0.6	ug/L
⌈	Hg	200	183.101	**0.200**	0.04	17.7	ug/L
|	Hg	201	108.667	**0.200**	0.07	37.3	ug/L
| >	Bi	209	585119.348				ug/L
⌊	U	238	9611.747	**1.000**	0.06	5.7	ug/L
	C	13	8033.549				ug/L
	W	184	36.665				ug/L
	Pd	106	199.334				ug/L
	Kr	83	42.000				ug/L
⌈	Na	23	630775.465	**100.000**	3.21	3.2	ug/L
|	Mg	24	403762.545	**100.000**	2.81	2.8	ug/L

K	39	714254.257	**100.000**	1.69	1.7	ug/L
Ca	44	21151.265	**100.000**	4.54	4.5	ug/L
Ti	47	193.336				ug/L
Sc-1	45	769572.097				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000588	0.000	1.000000	Linear Thru Zero
B	11.009	0.001286	0.000	1.000000	Linear Thru Zero
Al	26.982	0.012786	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006416	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005631	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000091	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009894	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006720	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001339	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003762	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001703	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001071	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000750	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000889	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000078	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000096	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.014047	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004362	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008412	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001219	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002531	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004862	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003690	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001464	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009618	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009258	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012769	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001023	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000625	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016427	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6070.578601	0.000	1.000000	Linear Thru Zero
Mg	23.985	4001.218145	0.000	1.000000	Linear Thru Zero
K	38.964	5456.176890	0.000	1.000000	Linear Thru Zero
Ca	43.956	167.168494	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 02, 2020 10:56:33
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.182
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	48295.954	**100.000**	4.07	4.1	ug/L
	B	11	982016.174	**999.974**	62.13	6.2	ug/L
	Al	27	1557070.122	**248.924**	9.83	4.0	ug/L
>	Sc	45	810153.396				ug/L
	V	51	531734.237	**100.002**	4.03	4.0	ug/L
	Cr	52	463013.949	**100.000**	3.64	3.6	ug/L
	Cr	53	91801.239	**100.077**	8.41	8.4	ug/L
	Mn	55	1928546.256	**250.000**	9.45	3.8	ug/L
	Co	59	554293.284	**100.000**	3.06	3.1	ug/L
	Ni	60	275598.956	**250.000**	6.04	2.4	ug/L
	Cu	63	625252.345	**250.000**	4.01	1.6	ug/L
	Cu	65	293995.517	**250.000**	2.03	0.8	ug/L
	Zn	66	169104.114	**249.992**	0.52	0.2	ug/L
	Zn	68	116649.309	**249.990**	2.93	1.2	ug/L
>	Ge	72	680141.312				ug/L
	As	75	154314.273	**250.000**	5.80	2.3	ug/L
	Se	77	16331.328	**250.033**	7.69	3.1	ug/L
	Se	82	17697.408	**250.001**	7.82	3.1	ug/L
	Sr	88	4100.942	**19.882**	3.71	18.7	ug/L
	Mo	98	228246.891	**100.000**	1.25	1.2	ug/L
>	Rh	103	529001.984				ug/L
	Ag	107	379771.147	**99.998**	1.24	1.2	ug/L
	Cd	111	82617.909	**100.000**	1.97	2.0	ug/L
	Cd	114	179773.235	**100.000**	1.85	1.8	ug/L
>	In	115	683810.312				ug/L
	Sn	120	360774.546	**100.001**	2.57	2.6	ug/L
	Sb	121	250128.924	**100.000**	2.52	2.5	ug/L
	Ba	137	128432.243	**99.999**	2.21	2.2	ug/L
	Ba	138	815053.992	**99.999**	3.86	3.9	ug/L
>	Tb	159	958221.696				ug/L
	Tl	205	857710.346	**100.000**	4.30	4.3	ug/L
	Pb	208	2892230.005	**250.000**	10.41	4.2	ug/L
	Hg	200	11920.624	**20.000**	1.38	6.9	ug/L
	Hg	201	6847.912	**20.000**	1.53	7.7	ug/L
>	Bi	209	584396.515				ug/L
	U	238	963203.076	**100.000**	3.49	3.5	ug/L
	C	13	8523.998				ug/L
	W	184	290.002				ug/L
	Pd	106	-118.243				ug/L
	Kr	83	44.833				ug/L
	Na	23	62303305.331	**10000.025**	287.40	2.9	ug/L
	Mg	24	40774331.765	**10000.019**	31.35	0.3	ug/L

	K	39	56557342.665	**10000.032**	237.17	2.4	ug/L
	Ca	44	1610002.506	**9999.959**	214.83	2.1	ug/L
	Ti	47	360.008				ug/L
	Sc-1	45	810153.396				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000597	0.000	1.000000	Linear Thru Zero
B	11.009	0.001208	0.000	0.999999	Linear Thru Zero
Al	26.982	0.007645	0.000	0.998556	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006539	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005623	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000611	0.000	0.999674	Linear Thru Zero
Mn	54.938	0.009529	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006846	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001361	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003677	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001728	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000992	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000683	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000908	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000072	0.000	0.999860	Linear Thru Zero
Se	81.917	0.000104	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000235	0.000	0.861749	Linear Thru Zero
Mo	97.906	0.004314	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007171	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001209	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002634	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005243	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003659	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001341	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008514	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008956	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012090	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001017	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000585	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016504	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6227.943036	0.000	1.000000	Linear Thru Zero
Mg	23.985	4077.061519	0.000	1.000000	Linear Thru Zero
K	38.964	5638.852342	0.000	1.000000	Linear Thru Zero
Ca	43.956	160.557470	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Thursday, July 02, 2020 15:41:34
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.203
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	11.333				ug/L
|	B	11	1096.734				ug/L
|	Al	27	15352.959				ug/L
| >	Sc	45	738868.857				ug/L
|	V	51	2794.335				ug/L
|	Cr	52	8961.083				ug/L
|	Cr	53	46793.474				ug/L
|	Mn	55	670.025				ug/L
|	Co	59	86.667				ug/L
⌊	Ni	60	47.333				ug/L
⌈	Cu	63	153.779				ug/L
|	Cu	65	93.778				ug/L
|	Zn	66	429.344				ug/L
|	Zn	68	420.010				ug/L
| >	Ge	72	623329.904				ug/L
|	As	75	114.604				ug/L
|	Se	77	4711.221				ug/L
|	Se	82	56.695				ug/L
⌊	Sr	88	1300.098				ug/L
⌈	Mo	98	34.310				ug/L
| >	Rh	103	492925.506				ug/L
⌊	Ag	107	440.011				ug/L
⌈	Cd	111	-31.653				ug/L
|	Cd	114	-174.882				ug/L
| >	In	115	636205.269				ug/L
|	Sn	120	1870.108				ug/L
⌊	Sb	121	46.667				ug/L
⌈	Ba	137	40.588				ug/L
|	Ba	138	253.258				ug/L
| >	Tb	159	880752.335				ug/L
|	Tl	205	766.700				ug/L
⌊	Pb	208	106.667				ug/L
⌈	Hg	200	19.744				ug/L
|	Hg	201	12.000				ug/L
| >	Bi	209	574273.912				ug/L
⌊	U	238	10.000				ug/L
	C	13	7506.431				ug/L
	W	184	39.998				ug/L
	Pd	106	123.350				ug/L
	Kr	83	35.167				ug/L
⌈	Na	23	22100.225				ug/L
|	Mg	24	3827.477				ug/L

K	39	169302.089	ug/L
Ca	44	4427.754	ug/L
Ti	47	186.669	ug/L
Sc-1	45	738868.857	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000597	0.000	1.000000	Linear Thru Zero
B	11.009	0.001208	0.000	0.999999	Linear Thru Zero
Al	26.982	0.007645	0.000	0.998556	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006539	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005623	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000611	0.000	0.999674	Linear Thru Zero
Mn	54.938	0.009529	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006846	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001361	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003677	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001728	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000992	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000683	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000908	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000072	0.000	0.999860	Linear Thru Zero
Se	81.917	0.000104	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000235	0.000	0.861749	Linear Thru Zero
Mo	97.906	0.004314	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007171	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001209	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002634	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005243	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003659	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001341	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008514	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.008956	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012090	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001017	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000585	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016504	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6227.943036	0.000	1.000000	Linear Thru Zero
Mg	23.985	4077.061519	0.000	1.000000	Linear Thru Zero
K	38.964	5638.852342	0.000	1.000000	Linear Thru Zero
Ca	43.956	160.557470	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 02, 2020 15:43:40
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.203
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	450.678	**1.000**	0.05	5.0	ug/L
|	B	11	21395.158	**20.000**	0.66	3.3	ug/L
|	Al	27	271761.521	**20.000**	0.31	1.5	ug/L
| >	Sc	45	760802.356				ug/L
|	V	51	18017.427	**3.000**	0.12	4.0	ug/L
|	Cr	52	22187.102	**3.000**	0.25	8.2	ug/L
|	Cr	53	47664.906	**3.000**	3.36	112.1	ug/L
|	Mn	55	8527.347	**1.000**	0.05	5.0	ug/L
|	Co	59	5363.804	**1.000**	0.03	3.5	ug/L
⌊	Ni	60	2276.952	**2.000**	0.07	3.6	ug/L
⌈	Cu	63	5090.759	**2.000**	0.04	2.2	ug/L
|	Cu	65	2394.538	**2.000**	0.05	2.5	ug/L
|	Zn	66	4153.393	**5.000**	0.15	2.9	ug/L
|	Zn	68	3084.524	**5.000**	0.04	0.8	ug/L
| >	Ge	72	655987.545				ug/L
|	As	75	1504.622	**2.000**	0.33	16.4	ug/L
|	Se	77	4651.024	**2.000**	1.02	50.8	ug/L
|	Se	82	185.164	**2.000**	0.29	14.5	ug/L
⌊	Sr	88	3367.293	**0.200**	0.03	15.5	ug/L
⌈	Mo	98	2124.632	**1.000**	0.02	2.0	ug/L
| >	Rh	103	509653.549				ug/L
⌊	Ag	107	4521.125	**1.000**	0.08	8.2	ug/L
⌈	Cd	111	777.723	**1.000**	0.02	2.0	ug/L
|	Cd	114	1449.839	**1.000**	0.03	2.8	ug/L
| >	In	115	658641.899				ug/L
|	Sn	120	4904.614	**1.000**	0.11	10.6	ug/L
⌊	Sb	121	4801.270	**2.000**	0.20	10.1	ug/L
⌈	Ba	137	1420.657	**1.000**	0.03	3.0	ug/L
|	Ba	138	8976.309	**1.000**	0.02	1.7	ug/L
| >	Tb	159	906415.952				ug/L
|	Tl	205	9598.398	**1.000**	0.03	3.1	ug/L
⌊	Pb	208	12186.463	**1.000**	0.02	1.8	ug/L
⌈	Hg	200	149.639	**0.200**	0.04	20.5	ug/L
|	Hg	201	89.334	**0.200**	0.02	11.8	ug/L
| >	Bi	209	582596.421				ug/L
⌊	U	238	9434.903	**1.000**	0.05	5.2	ug/L
	C	13	8010.196				ug/L
	W	184	56.665				ug/L
	Pd	106	229.747				ug/L
	Kr	83	39.000				ug/L
⌈	Na	23	639515.452	**100.000**	2.16	2.2	ug/L
|	Mg	24	405093.153	**100.000**	2.80	2.8	ug/L

K	39	716869.020	**100.000**	4.12	4.1	ug/L
Ca	44	21238.149	**100.000**	5.97	6.0	ug/L
Ti	47	253.337				ug/L
Sc-1	45	760802.356				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000578	0.000	1.000000	Linear Thru Zero
B	11.009	0.001333	0.000	1.000000	Linear Thru Zero
Al	26.982	0.016814	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006626	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005681	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000234	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010295	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006940	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001465	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003759	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001750	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001129	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000806	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001059	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000232	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000096	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.015277	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004101	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007995	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001231	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002476	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004522	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003620	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001521	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009619	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009724	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013328	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001114	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000662	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016177	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6174.152277	0.000	1.000000	Linear Thru Zero
Mg	23.985	4012.656760	0.000	1.000000	Linear Thru Zero
K	38.964	5475.669306	0.000	1.000000	Linear Thru Zero
Ca	43.956	168.103950	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 02, 2020 15:45:46
Sample File: C:\Elandata\Sample\PE_EL4_200702.sam
Blank File: C:\Elandata\Dataset\2020 JUL (01-05)\Blank.203
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200702.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	47822.138	**100.000**	3.64	3.6	ug/L
	B	11	972361.212	**999.958**	32.88	3.3	ug/L
	Al	27	1581603.338	**248.168**	4.37	1.8	ug/L
>	Sc	45	804627.191				ug/L
	V	51	530919.986	**99.999**	2.88	2.9	ug/L
	Cr	52	462552.758	**99.999**	1.81	1.8	ug/L
	Cr	53	93017.139	**100.130**	3.28	3.3	ug/L
	Mn	55	1906208.396	**250.000**	8.14	3.3	ug/L
	Co	59	538990.376	**100.000**	3.84	3.8	ug/L
	Ni	60	269019.526	**249.998**	5.20	2.1	ug/L
	Cu	63	612670.505	**249.999**	2.61	1.0	ug/L
	Cu	65	287316.328	**250.000**	2.42	1.0	ug/L
	Zn	66	165273.787	**249.984**	3.67	1.5	ug/L
	Zn	68	112947.853	**249.979**	4.56	1.8	ug/L
>	Ge	72	675215.395				ug/L
	As	75	151637.086	**249.997**	2.86	1.1	ug/L
	Se	77	16222.639	**250.072**	9.58	3.8	ug/L
	Se	82	17369.915	**250.001**	0.87	0.3	ug/L
	Sr	88	4567.844	**19.872**	5.57	28.0	ug/L
	Mo	98	224308.865	**100.000**	2.13	2.1	ug/L
>	Rh	103	522442.815				ug/L
	Ag	107	372413.481	**99.999**	3.48	3.5	ug/L
	Cd	111	80351.318	**100.000**	2.69	2.7	ug/L
	Cd	114	175866.298	**100.001**	3.78	3.8	ug/L
>	In	115	667070.480				ug/L
	Sn	120	351839.420	**100.001**	3.56	3.6	ug/L
	Sb	121	244380.115	**100.000**	3.87	3.9	ug/L
	Ba	137	126496.620	**99.999**	2.12	2.1	ug/L
	Ba	138	796845.644	**99.999**	2.78	2.8	ug/L
>	Tb	159	939681.503				ug/L
	Tl	205	856685.330	**99.999**	3.19	3.2	ug/L
	Pb	208	2916002.141	**250.000**	7.69	3.1	ug/L
	Hg	200	11892.261	**20.000**	0.61	3.0	ug/L
	Hg	201	6898.619	**20.000**	0.80	4.0	ug/L
>	Bi	209	598175.627				ug/L
	U	238	973353.782	**100.000**	2.51	2.5	ug/L
	C	13	8113.620				ug/L
	W	184	236.667				ug/L
	Pd	106	336.442				ug/L
	Kr	83	48.833				ug/L
	Na	23	61896007.614	**10000.002**	244.22	2.4	ug/L
	Mg	24	40767230.697	**10000.016**	117.80	1.2	ug/L

K	39	55859103.867	**10000.017**	73.53	0.7	ug/L
Ca	44	1609181.684	**9999.952**	39.02	0.4	ug/L
Ti	47	320.006				ug/L
Sc-1	45	804627.191				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000595	0.000	1.000000	Linear Thru Zero
B	11.009	0.001208	0.000	0.999998	Linear Thru Zero
Al	26.982	0.007839	0.000	0.995832	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006563	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005629	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000522	0.000	0.999056	Linear Thru Zero
Mn	54.938	0.009477	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006700	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001337	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003628	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001701	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000976	0.000	0.999995	Linear Thru Zero
Zn	67.925	0.000666	0.000	0.999991	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000898	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000066	0.000	0.999346	Linear Thru Zero
Se	81.917	0.000103	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000235	0.000	0.842620	Linear Thru Zero
Mo	97.906	0.004293	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007120	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001205	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002640	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005246	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.003663	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001346	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.008477	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009112	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012418	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000993	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000576	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.016278	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6187.389415	0.000	1.000000	Linear Thru Zero
Mg	23.985	4076.333954	0.000	1.000000	Linear Thru Zero
K	38.964	5568.970848	0.000	1.000000	Linear Thru Zero
Ca	43.956	160.476156	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Thursday, July 02, 2020 06:35:51
Method File: C:\Elandata\Method\EL4\BCL_EL4-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution - Retry 2.638
Tuning File: C:\Elandata\Tuning\Default.tun
Number of Sweeps: 125
Number of Readings: 1
Number of Replicates: 3
Measurement Unit: cps

Instrument Tuning Report

File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
C	12.000	12.025	2753	2083	0.692	
Mg	23.985	24.025	5666	2098	0.694	
Ar2	75.930	75.875	18313	2164	0.715	
In	114.904	114.875	27784	2222	0.713	
Ce	139.905	139.875	33861	2252	0.697	
Pb	207.977	207.975	50437	2349	0.697	
U	238.050	238.075	57766	2424	0.709	

Complete Mass Scanning Results

Mass	Meas. Intens. Mean	Meas. Intens. SD	Meas. Intens. RSD
11.000	183.469	1.617	0.881
22.000	10.267	1.804	17.569
75.000	231.605	16.633	7.182
114.000	44.667	0.231	0.517
139.000	24.933	0.611	2.451
206.000	1973.621	22.150	1.122
235.000	56.934	5.065	8.896

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, July 02, 2020 07:40:11
Sample Description:
Method File: C:\Elandata\Method\EL4\BCL_EL4_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.646
Tuning File: C:\Elandata\Tuning\Default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	74901.7	74901.714	584.134	0.8
	In	114.9	162289.3	162289.276	1443.640	0.9
	U	238.1	143271.7	143271.730	1214.861	0.8
⌈>	Ba	137.9	120128.2	120128.234	1121.428	0.9
⌊	Ba++	69.0	4036.8	0.034	0.000	0.7
⌈>	Ce	139.9	151200.8	151200.835	1097.988	0.7
⌊	CeO	155.9	2638.0	0.017	0.000	1.2
	220	220.0	0.4	0.400	0.400	100.0

Current Optimization File Data

Current Value	Description
1.07	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.50	Plasma Gas Flow
6.50	Lens Voltage
1300.00	ICP RF Power
-1700.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-16.00	Cell Rod Offset Std [CRO]
74.00	Discriminator Threshold
-13.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-6.00	DRC Mode QRO
-1.00	DRC Mode CRO
-15.00	DRC Mode CPV
0.00	Cell Gas A
200.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
250.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	45	5.0	780161.9
Mg	24	45	5.0	69115.1
In	115	45	6.5	161719.1

Ce	140	45	7.0	149197.7
Pb	208	45	7.8	90649.7

Sample Information

Sample Date/Time: Thursday, July 02, 2020 06:35:51
Method File: C:\Elandata\Method\EL4\BCL_EL4-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution - Retry 2.638
Tuning File: C:\Elandata\Tuning\Default.tun
Number of Sweeps: 125
Number of Readings: 1
Number of Replicates: 3
Measurement Unit: cps

Instrument Tuning Report

File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
C	12.000	12.025	2753	2083	0.692	
Mg	23.985	24.025	5666	2098	0.694	
Ar2	75.930	75.875	18313	2164	0.715	
In	114.904	114.875	27784	2222	0.713	
Ce	139.905	139.875	33861	2252	0.697	
Pb	207.977	207.975	50437	2349	0.697	
U	238.050	238.075	57766	2424	0.709	

Complete Mass Scanning Results

Mass	Meas. Intens. Mean	Meas. Intens. SD	Meas. Intens. RSD
11.000	183.469	1.617	0.881
22.000	10.267	1.804	17.569
75.000	231.605	16.633	7.182
114.000	44.667	0.231	0.517
139.000	24.933	0.611	2.451
206.000	1973.621	22.150	1.122
235.000	56.934	5.065	8.896

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, July 02, 2020 07:40:11
Sample Description:
Method File: C:\Elandata\Method\EL4\BCL_EL4_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.646
Tuning File: C:\Elandata\Tuning\Default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	74901.7	74901.714	584.134	0.8
	In	114.9	162289.3	162289.276	1443.640	0.9
	U	238.1	143271.7	143271.730	1214.861	0.8
⌈>	Ba	137.9	120128.2	120128.234	1121.428	0.9
⌊	Ba++	69.0	4036.8	0.034	0.000	0.7
⌈>	Ce	139.9	151200.8	151200.835	1097.988	0.7
⌊	CeO	155.9	2638.0	0.017	0.000	1.2
	220	220.0	0.4	0.400	0.400	100.0

Current Optimization File Data

Current Value	Description
1.07	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.50	Plasma Gas Flow
6.50	Lens Voltage
1300.00	ICP RF Power
-1700.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-16.00	Cell Rod Offset Std [CRO]
74.00	Discriminator Threshold
-13.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-6.00	DRC Mode QRO
-1.00	DRC Mode CRO
-15.00	DRC Mode CPV
0.00	Cell Gas A
200.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
250.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	45	5.0	780161.9
Mg	24	45	5.0	69115.1
In	115	45	6.5	161719.1

Ce	140	45	7.0	149197.7
Pb	208	45	7.8	90649.7

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 7/21/2020 1:12:57PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2020984

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632763.5

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2020984
COC Number:
Cooler 2 was received at 4 °C
Default Cooler was received at 4 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

Lab Number	Method	Analyte		Concentration
B083042-BLK1	EPA-6020 (TTLC)	Arsenic	J	0.20575 mg/kg

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B083042	EPA-6020 (TTLC)	2020984-04	KA-10-SS-1.5

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

Chain of Custody and Cooler Receipt Form for 2020984 Page 1 of 3

20-20984

CHAIN OF CUSTODY

Page 1 of 1

AECOM

Lab: BC Laboratories

TAT: 6-day

Report results to: Keegan George (Keegan.George@smud.org)
Name: Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

Special instructions and/or specific regulatory requirements:

CHK BY: CAB
DISTRIBUTION: MA RTI RU PM
SUB OUT

Analyses Requested

	Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	SW8020 (Arsenic)	Sample Condition/Comments	Preservative
1	KA-10-WW-1.5	7/20/2020	1350	soil	1	x		2
2	KA-10-WW-1.5-FD		1355	soil	1	x		2
3	KA-10-SW-1.5		1335	soil	1	x		2
4	KA-10-SS-1.5		1315	soil	~~1~~ 2	x	Perform MS/MSD	2
5	KA-17-NN-1.5		0835	soil	1	x		2
6	KA-17-NW-1.5		0920	soil	1	x		2
7	KA-17-WW-1.5		0940	soil	1	x		2
8	B08-NN-1.5		1045	soil	1	x		2
9	B08-EE-1.5		1105	soil	1	x		2
10	B08-EE-3		1120	soil	1	x		2
11	B08-SS-1.5		1145	soil	1	x		2

Relinquished by: [signature] *Date/Time* 7/21/20 @ 1135 *Received by:* [signature] *Date/Time* 7/21/20 @ 1135
Relinquished by: [signature] *Date/Time* 7/21/2020 1230 *Received by:* [signature] *Date/Time* 7-22-20 810
Relinquished by: *Date/Time* *Received by:* *Date/Time*
Method of Shipment: *Sample Condition on Rcpt:*

Chain of Custody and Cooler Receipt Form for 2020984 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 2020984

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: Glass Thermometer ID: 274 Date/Time 7-22-20 610

Temperature: (A) 4.0 °C / (C) 4.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR 402	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE 902 JAR				B						
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMR Date/Time: 7/22/20 1130

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2020984 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 2020984

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 7-22-20 810

Temperature: (A) 4.0 °C / (C) 4.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR 4oz	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: Date/Time: 7/22/20 1130
A = Actual / C = Corrected

Rev 21 05/23/2016
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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2020984Notes**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2020984Notes
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
KA-10-WW-1.5	2020984-01
KA-10-WW-1.5-FD	2020984-02
KA-10-SW-1.5	2020984-03
KA-10-SS-1.5	2020984-04
KA-17-NN-1.5	2020984-05
KA-17-NW-1.5	2020984-06
KA-17-WW-1.5	2020984-07
B08-NN-1.5	2020984-08
B08-EE-1.5	2020984-09
B08-EE-3	2020984-10
B08-SS-1.5	2020984-11

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 08-10-2020
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL2

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-WW-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-01
File ID: PE_EL2_200723-100
Sampled: 07/20/20 13:50
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:01
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	14	0.98		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-WW-1.5-FD

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-02
File ID: PE_EL2_200723-101
Sampled: 07/20/20 13:55
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:03
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	11	1		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-SW-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-03
File ID: PE_EL2_200723-102
Sampled: 07/20/20 13:35
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:05
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	21	0.99		EPA-6020

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-SS-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-04
File ID: PE_EL2_200723-091
Sampled: 07/20/20 13:15
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 15:45
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	38	1		EPA-6020

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-NN-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-05
File ID: PE_EL2_200723-103
Sampled: 07/20/20 08:35
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:06
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	59	0.98		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-NW-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-06
File ID: PE_EL2_200723-104
Sampled: 07/20/20 09:20
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:08
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	37	0.943		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-WW-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-07
File ID: PE_EL2_200723-105
Sampled: 07/20/20 09:40
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:10
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	44	0.952		EPA-6020

AECOM - Sacramento
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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-NN-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-08
File ID: PE_EL2_200723-106
Sampled: 07/20/20 10:45
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:12
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	30	0.971		EPA-6020

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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-EE-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-09
File ID: PE_EL2_200723-109
Sampled: 07/20/20 11:05
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:17
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	99	0.935		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-EE-3

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-10
File ID: PE_EL2_200723-110
Sampled: 07/20/20 11:20
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:19
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.09 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	13	0.917		EPA-6020

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-SS-1.5

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2020984-11
File ID: PE_EL2_200723-111
Sampled: 07/20/20 11:45
Prepared: 07/23/20 09:30
Analyzed: 07/23/20 16:21
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B083042
Sequence: 2012847
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	24	0.971		EPA-6020

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B083042 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
KA-10-WW-1.5	2020984-01	PE_EL2_200723-100	07/23/20 09:30	
KA-10-WW-1.5-FD	2020984-02	PE_EL2_200723-101	07/23/20 09:30	
KA-10-SW-1.5	2020984-03	PE_EL2_200723-102	07/23/20 09:30	
KA-10-SS-1.5	2020984-04	PE_EL2_200723-091	07/23/20 09:30	
KA-17-NN-1.5	2020984-05	PE_EL2_200723-103	07/23/20 09:30	
KA-17-NW-1.5	2020984-06	PE_EL2_200723-104	07/23/20 09:30	
KA-17-WW-1.5	2020984-07	PE_EL2_200723-105	07/23/20 09:30	
B08-NN-1.5	2020984-08	PE_EL2_200723-106	07/23/20 09:30	
B08-EE-1.5	2020984-09	PE_EL2_200723-109	07/23/20 09:30	
B08-EE-3	2020984-10	PE_EL2_200723-110	07/23/20 09:30	
B08-SS-1.5	2020984-11	PE_EL2_200723-111	07/23/20 09:30	
Blank	B083042-BLK1	PE_EL2_200723-090	07/23/20 09:30	
LCS	B083042-BS1	PE_EL2_200723-094	07/23/20 09:30	
KA-10-SS-1.5	B083042-DUP1	PE_EL2_200723-092	07/23/20 09:30	
KA-10-SS-1.5	B083042-MS1	PE_EL2_200723-095	07/23/20 09:30	
KA-10-SS-1.5	B083042-MSD1	PE_EL2_200723-096	07/23/20 09:30	
KA-10-SS-1.5	B083042-PS1	PE_EL2_200723-097	07/23/20 09:30	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories		SDG:	2020984Notes	
Client:	AECOM - Sacramento $AECS		Project:	SMUD 59th St.-CLP III	
Matrix:	Solids	Laboratory ID:	B083042-BLK1	File ID:	PE_EL2_200723-090
Prepared:	07/23/20 09:30	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	07/23/20 15:43	Instrument:	PE-EL2		
Batch:	B083042	Sequence:	2012847	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.20575	J

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

KA-10-SS-1.5

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B083042
Preparation: EPA 3050B
Source Sample Name: KA-10-SS-1.5

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B083042-DUP1
Lab Source ID: 2020984-04
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	38.148		44.127		14.5		EPA-6020

* Values outside of QC limits

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

KA-10-SS-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B083042
Preparation: EPA 3050B
Source Sample Number: 2020984-04

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B083042-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	38.148	68.509	121	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	66.690	114	2.69	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2020984Notes
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B083042
Laboratory ID: B083042-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	28.058	112	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2012847
Matrix: Solids

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Instrument: PE-EL2
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2012847-ICV1	PE_EL2_200723-009	07/23/20 08:12
Initial Cal Blank	2012847-ICB1	PE_EL2_200723-010	07/23/20 08:14
MRL Check	2012847-CRL1	PE_EL2_200723-011	07/23/20 08:16
Interference Check A	2012847-IFA1	PE_EL2_200723-013	07/23/20 08:24
Interference Check B	2012847-IFB1	PE_EL2_200723-014	07/23/20 08:25
Calibration Check	2012847-CCV1	PE_EL2_200723-021	07/23/20 08:38
Calibration Blank	2012847-CCB1	PE_EL2_200723-022	07/23/20 08:39
Calibration Check	2012847-CCVB	PE_EL2_200723-088	07/23/20 15:40
Calibration Blank	2012847-CCBB	PE_EL2_200723-089	07/23/20 15:41
Blank	B083042-BLK1	PE_EL2_200723-090	07/23/20 15:43
KA-10-SS-1.5	2020984-04	PE_EL2_200723-091	07/23/20 15:45
KA-10-SS-1.5	B083042-DUP1	PE_EL2_200723-092	07/23/20 15:47
LCS	B083042-BS1	PE_EL2_200723-094	07/23/20 15:50
KA-10-SS-1.5	B083042-MS1	PE_EL2_200723-095	07/23/20 15:52
KA-10-SS-1.5	B083042-MSD1	PE_EL2_200723-096	07/23/20 15:54
KA-10-SS-1.5	B083042-PS1	PE_EL2_200723-097	07/23/20 15:56
Calibration Check	2012847-CCVC	PE_EL2_200723-098	07/23/20 15:57
Calibration Blank	2012847-CCBC	PE_EL2_200723-099	07/23/20 15:59
KA-10-WW-1.5	2020984-01	PE_EL2_200723-100	07/23/20 16:01
KA-10-WW-1.5-FD	2020984-02	PE_EL2_200723-101	07/23/20 16:03
KA-10-SW-1.5	2020984-03	PE_EL2_200723-102	07/23/20 16:05
KA-17-NN-1.5	2020984-05	PE_EL2_200723-103	07/23/20 16:06
KA-17-NW-1.5	2020984-06	PE_EL2_200723-104	07/23/20 16:08
KA-17-WW-1.5	2020984-07	PE_EL2_200723-105	07/23/20 16:10
B08-NN-1.5	2020984-08	PE_EL2_200723-106	07/23/20 16:12
Calibration Check	2012847-CCVD	PE_EL2_200723-107	07/23/20 16:13

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2020984Notes
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2012847	Instrument:	PE-EL2
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	2012847-CCBD	PE_EL2_200723-108	07/23/20 16:15
B08-EE-1.5	2020984-09	PE_EL2_200723-109	07/23/20 16:17
B08-EE-3	2020984-10	PE_EL2_200723-110	07/23/20 16:19
B08-SS-1.5	2020984-11	PE_EL2_200723-111	07/23/20 16:21
Calibration Check	2012847-CCVE	PE_EL2_200723-113	07/23/20 16:24
Calibration Blank	2012847-CCBE	PE_EL2_200723-114	07/23/20 16:26

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2012847

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2012847-ICB1	Arsenic	-0.057000	2.0	ug/L		EPA-6020
2012847-CCB1	Arsenic	0.70100	2.0	ug/L		EPA-6020
2012847-CCBB	Arsenic	-0.29800	2.0	ug/L		EPA-6020
2012847-CCBC	Arsenic	0.42000	2.0	ug/L		EPA-6020
2012847-CCBD	Arsenic	0.16700	2.0	ug/L		EPA-6020
2012847-CCBE	Arsenic	0.0020000	2.0	ug/L		EPA-6020

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2012847

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2012847-ICV1	Arsenic	125.00	128.27	103	ug/L	EPA-6020
2012847-CCV1	Arsenic	100.00	99.493	99.5	ug/L	EPA-6020
2012847-CCVB	Arsenic	100.00	102.54	103	ug/L	EPA-6020
2012847-CCVC	Arsenic	100.00	102.29	102	ug/L	EPA-6020
2012847-CCVD	Arsenic	100.00	103.02	103	ug/L	EPA-6020
2012847-CCVE	Arsenic	100.00	102.28	102	ug/L	EPA-6020

* Values outside of QC limits

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Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

KA-10-SS-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B083042
Preparation: EPA 3050B

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Laboratory ID: B083042-PS1
Lab Source ID: 2020984-04
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: KA-10-SS-1.5
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	264.36	149.54	100.00	115

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2012847

SDG: 2020984Notes
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2012847-IFA1	Arsenic		-0.094000		ug/L
2012847-IFB1	Arsenic	20.000	19.80	99.0	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, July 23, 2020 08:04:38
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.591
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	3.556				ug/L
|	B	11	208.002				ug/L
|	Al	27	2771.053				ug/L
| >	Sc	45	268699.717				ug/L
|	V	51	1438.583				ug/L
|	Cr	52	2136.229				ug/L
|	Cr	53	14761.562				ug/L
|	Mn	55	309.338				ug/L
|	Co	59	56.000				ug/L
⌊	Ni	60	28.444				ug/L
⌈	Cu	63	90.667				ug/L
|	Cu	65	20.444				ug/L
|	Zn	66	67.556				ug/L
|	Zn	68	112.001				ug/L
| >	Ge	72	171061.462				ug/L
|	As	75	14.096				ug/L
|	Se	77	586.017				ug/L
⌊	Se	82	12.446				ug/L
⌈	Mo	98	55.269				ug/L
| >	Rh	103	233331.377				ug/L
⌊	Ag	107	202.669				ug/L
⌈	Cd	111	-42.596				ug/L
|	Cd	114	-73.526				ug/L
| >	In	115	320313.841				ug/L
|	Sn	120	690.555				ug/L
⌊	Sb	121	88.000				ug/L
⌈	Ba	137	17.276				ug/L
|	Ba	138	129.277				ug/L
| >	Tb	159	532198.827				ug/L
|	Tl	205	190.669				ug/L
⌊	Pb	208	169.334				ug/L
⌈	Hg	200	6.615				ug/L
|	Hg	201	8.000				ug/L
| >	Bi	209	331014.248				ug/L
⌊	U	238	37.333				ug/L
	C	13	2220.248				ug/L
	W	184	8.000				ug/L
	Pd	106	25.365				ug/L
	Kr	83	25.333				ug/L
⌈	Na	23	4774.474				ug/L
|	Mg	24	1373.430				ug/L
|	K	39	72743.808				ug/L

	Ca	44	1213.409	ug/L
	Ti	47	40.000	ug/L
	Sc-1	45	268699.717	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 23, 2020 08:06:43
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.591
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	89.778	**1.000**	0.17	17.1	ug/L
|	B	11	2813.729	**20.000**	0.47	2.4	ug/L
|	Al	27	26127.436	**20.000**	0.56	2.8	ug/L
| >	Sc	45	270320.131				ug/L
|	V	51	6303.528	**3.000**	0.36	11.9	ug/L
|	Cr	52	6338.676	**3.000**	0.13	4.4	ug/L
|	Cr	53	17009.123	**3.000**	0.40	13.3	ug/L
|	Mn	55	2469.639	**1.000**	0.05	5.3	ug/L
|	Co	59	1480.110	**1.000**	0.05	5.4	ug/L
⌊	Ni	60	626.686	**2.000**	0.08	3.8	ug/L
⌈	Cu	63	1310.308	**2.000**	0.13	6.6	ug/L
|	Cu	65	606.241	**2.000**	0.12	6.2	ug/L
|	Zn	66	976.937	**5.000**	0.51	10.1	ug/L
|	Zn	68	804.477	**5.000**	0.11	2.3	ug/L
| >	Ge	72	173999.720				ug/L
|	As	75	346.236	**2.000**	0.98	49.0	ug/L
|	Se	77	676.690	**2.000**	1.39	69.3	ug/L
⌊	Se	82	39.641	**2.000**	0.58	29.0	ug/L
⌈	Mo	98	760.193	**1.000**	0.12	11.6	ug/L
| >	Rh	103	236538.293				ug/L
⌊	Ag	107	1882.844	**1.000**	0.00	0.4	ug/L
⌈	Cd	111	309.622	**1.000**	0.19	19.0	ug/L
|	Cd	114	644.496	**1.000**	0.05	4.7	ug/L
| >	In	115	322063.272				ug/L
|	Sn	120	2640.213	**1.000**	0.04	3.5	ug/L
⌊	Sb	121	2496.312	**2.000**	0.11	5.7	ug/L
⌈	Ba	137	607.961	**1.000**	0.09	8.8	ug/L
|	Ba	138	4195.490	**1.000**	0.05	5.5	ug/L
| >	Tb	159	526915.323				ug/L
|	Tl	205	4314.264	**1.000**	0.01	1.5	ug/L
⌊	Pb	208	5676.635	**1.000**	0.06	5.7	ug/L
⌈	Hg	200	67.898	**0.200**	0.07	33.9	ug/L
|	Hg	201	42.667	**0.200**	0.10	49.2	ug/L
| >	Bi	209	331191.795				ug/L
⌊	U	238	8554.325	**1.000**	0.02	2.1	ug/L
	C	13	2373.619				ug/L
	W	184	16.000				ug/L
	Pd	106	84.583				ug/L
	Kr	83	41.333				ug/L
⌈	Na	23	144165.079	**100.000**	0.27	0.3	ug/L
|	Mg	24	90299.515	**100.000**	3.47	3.5	ug/L
|	K	39	210131.813	**100.000**	2.33	2.3	ug/L

	Ca	44	6188.581	**100.000**	2.02	2.0	ug/L
	Ti	47	120.001				ug/L
	Sc-1	45	270320.131				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000318	0.000	1.000000	Linear Thru Zero
B	11.009	0.000482	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004317	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005994	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005167	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.002663	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.007981	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005264	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001107	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003502	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001683	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001043	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000794	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000958	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000232	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000078	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002975	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007091	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001094	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002231	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006042	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003737	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001121	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007721	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007830	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010457	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000928	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000525	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025719	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1393.906058	0.000	1.000000	Linear Thru Zero
Mg	23.985	889.260843	0.000	1.000000	Linear Thru Zero
K	38.964	1373.880048	0.000	1.000000	Linear Thru Zero
Ca	43.956	49.751720	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 23, 2020 08:08:47
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.591
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	9726.512	**100.001**	3.63	3.6	ug/L
|	B	11	118678.763	**999.971**	11.96	1.2	ug/L
|	Al	27	289411.879	**250.010**	3.59	1.4	ug/L
| >	Sc	45	263948.075				ug/L
|	V	51	146288.271	**99.992**	0.66	0.7	ug/L
|	Cr	52	126406.626	**99.991**	1.32	1.3	ug/L
|	Cr	53	30420.898	**99.694**	6.57	6.6	ug/L
|	Mn	55	493395.356	**250.000**	6.30	2.5	ug/L
|	Co	59	135761.746	**100.000**	2.45	2.4	ug/L
⌊	Ni	60	66839.541	**249.999**	2.38	1.0	ug/L
⌈	Cu	63	138251.625	**249.999**	2.62	1.0	ug/L
|	Cu	65	63811.998	**249.998**	4.12	1.6	ug/L
|	Zn	66	40363.106	**249.992**	2.03	0.8	ug/L
|	Zn	68	28868.289	**249.984**	1.02	0.4	ug/L
| >	Ge	72	167530.628				ug/L
|	As	75	42264.542	**250.001**	2.02	0.8	ug/L
|	Se	77	4337.608	**249.975**	6.05	2.4	ug/L
⌊	Se	82	5217.750	**250.006**	1.27	0.5	ug/L
⌈	Mo	98	67794.981	**100.000**	1.26	1.3	ug/L
| >	Rh	103	222439.028				ug/L
⌊	Ag	107	143272.404	**99.999**	0.79	0.8	ug/L
⌈	Cd	111	34255.450	**100.000**	3.63	3.6	ug/L
|	Cd	114	76934.820	**100.001**	3.04	3.0	ug/L
| >	In	115	302707.556				ug/L
|	Sn	120	140724.593	**99.997**	2.94	2.9	ug/L
⌊	Sb	121	112034.867	**100.000**	2.71	2.7	ug/L
⌈	Ba	137	57633.429	**100.000**	3.96	4.0	ug/L
|	Ba	138	387341.693	**100.000**	2.92	2.9	ug/L
| >	Tb	159	514452.404				ug/L
|	Tl	205	377526.412	**99.999**	2.51	2.5	ug/L
⌊	Pb	208	1291403.141	**250.000**	4.61	1.8	ug/L
⌈	Hg	200	5766.757	**20.000**	0.14	0.7	ug/L
|	Hg	201	3420.585	**20.000**	0.36	1.8	ug/L
| >	Bi	209	308115.590				ug/L
⌊	U	238	796955.805	**100.000**	0.56	0.6	ug/L
	C	13	2273.593				ug/L
	W	184	37.333				ug/L
	Pd	106	-140.637				ug/L
	Kr	83	34.000				ug/L
⌈	Na	23	12568436.524	**9999.891**	126.22	1.3	ug/L
|	Mg	24	8260617.871	**9999.923**	118.37	1.2	ug/L
|	K	39	12800008.804	**9999.921**	105.09	1.1	ug/L

Ca	44	411249.286	**9999.787**	252.69	2.5	ug/L
Ti	47	133.334				ug/L
Sc-1	45	263948.075				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000368	0.000	0.999999	Linear Thru Zero
B	11.009	0.000449	0.000	0.999999	Linear Thru Zero
Al	26.982	0.004345	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005490	0.000	0.999996	Linear Thru Zero
Cr	51.941	0.004711	0.000	0.999996	Linear Thru Zero
Cr	52.941	0.000605	0.000	0.994838	Linear Thru Zero
Mn	54.938	0.007474	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005142	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001013	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003299	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001523	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000962	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000687	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001009	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999920	Linear Thru Zero
Se	81.917	0.000124	0.000	0.999996	Linear Thru Zero
Mo	97.906	0.003046	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006433	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001133	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002544	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004629	0.000	0.999995	Linear Thru Zero
Sb	120.904	0.003699	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001120	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007529	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007335	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010042	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000935	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000554	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025866	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1256.379958	0.000	0.999999	Linear Thru Zero
Mg	23.985	825.930777	0.000	1.000000	Linear Thru Zero
K	38.964	1272.736614	0.000	1.000000	Linear Thru Zero
Ca	43.956	41.004462	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, July 23, 2020 09:14:47
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.620
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10.667				ug/L
|	B	11	453.344				ug/L
|	Al	27	2944.435				ug/L
| >	Sc	45	278217.771				ug/L
|	V	51	2056.000				ug/L
|	Cr	52	2303.599				ug/L
|	Cr	53	15595.486				ug/L
|	Mn	55	298.671				ug/L
|	Co	59	48.000				ug/L
⌊	Ni	60	35.556				ug/L
⌈	Cu	63	40.889				ug/L
|	Cu	65	25.778				ug/L
|	Zn	66	94.223				ug/L
|	Zn	68	135.112				ug/L
| >	Ge	72	173950.844				ug/L
|	As	75	-12.229				ug/L
|	Se	77	581.350				ug/L
⌊	Se	82	11.815				ug/L
⌈	Mo	98	97.060				ug/L
| >	Rh	103	241617.663				ug/L
⌊	Ag	107	213.336				ug/L
⌈	Cd	111	3.807				ug/L
|	Cd	114	-68.665				ug/L
| >	In	115	324992.496				ug/L
|	Sn	120	349.102				ug/L
⌊	Sb	121	50.667				ug/L
⌈	Ba	137	14.653				ug/L
|	Ba	138	133.320				ug/L
| >	Tb	159	541805.773				ug/L
|	Tl	205	61.334				ug/L
⌊	Pb	208	181.334				ug/L
⌈	Hg	200	19.881				ug/L
|	Hg	201	9.333				ug/L
| >	Bi	209	335397.534				ug/L
⌊	U	238	52.000				ug/L
	C	13	2840.403				ug/L
	W	184	18.665				ug/L
	Pd	106	68.813				ug/L
	Kr	83	21.333				ug/L
⌈	Na	23	28654.452				ug/L
|	Mg	24	1893.514				ug/L
|	K	39	80603.874				ug/L

	Ca	44	1213.410	ug/L
	Ti	47	53.334	ug/L
	Sc-1	45	278217.771	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000368	0.000	0.999999	Linear Thru Zero
B	11.009	0.000449	0.000	0.999999	Linear Thru Zero
Al	26.982	0.004345	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005490	0.000	0.999996	Linear Thru Zero
Cr	51.941	0.004711	0.000	0.999996	Linear Thru Zero
Cr	52.941	0.000605	0.000	0.994838	Linear Thru Zero
Mn	54.938	0.007474	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005142	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001013	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003299	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001523	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000962	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000687	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001009	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999920	Linear Thru Zero
Se	81.917	0.000124	0.000	0.999996	Linear Thru Zero
Mo	97.906	0.003046	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006433	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001133	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002544	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004629	0.000	0.999995	Linear Thru Zero
Sb	120.904	0.003699	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001120	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007529	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007335	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010042	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000935	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000554	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025866	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1256.379958	0.000	0.999999	Linear Thru Zero
Mg	23.985	825.930777	0.000	1.000000	Linear Thru Zero
K	38.964	1272.736614	0.000	1.000000	Linear Thru Zero
Ca	43.956	41.004462	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 23, 2020 09:16:52
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.620
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	113.778	**1.000**	0.06	5.6	ug/L
|	B	11	3131.159	**20.000**	2.28	11.4	ug/L
|	Al	27	27635.479	**20.000**	1.01	5.1	ug/L
| >	Sc	45	286045.592				ug/L
|	V	51	5680.386	**3.000**	0.28	9.2	ug/L
|	Cr	52	6514.122	**3.000**	0.01	0.2	ug/L
|	Cr	53	17550.725	**3.000**	0.31	10.3	ug/L
|	Mn	55	2533.655	**1.000**	0.10	9.9	ug/L
|	Co	59	1590.349	**1.000**	0.06	5.9	ug/L
⌊	Ni	60	606.241	**2.000**	0.05	2.3	ug/L
⌈	Cu	63	1358.315	**2.000**	0.10	4.8	ug/L
|	Cu	65	607.130	**2.000**	0.14	7.2	ug/L
|	Zn	66	1063.168	**5.000**	0.41	8.1	ug/L
|	Zn	68	859.593	**5.000**	0.15	3.0	ug/L
| >	Ge	72	178230.791				ug/L
|	As	75	442.692	**2.000**	0.56	27.8	ug/L
|	Se	77	700.025	**2.000**	1.09	54.3	ug/L
⌊	Se	82	61.821	**2.000**	0.41	20.6	ug/L
⌈	Mo	98	758.860	**1.000**	0.13	13.1	ug/L
| >	Rh	103	246298.221				ug/L
⌊	Ag	107	1933.520	**1.000**	0.04	4.4	ug/L
⌈	Cd	111	339.959	**1.000**	0.25	24.7	ug/L
|	Cd	114	663.715	**1.000**	0.16	15.6	ug/L
| >	In	115	332334.743				ug/L
|	Sn	120	1944.019	**1.000**	0.04	4.5	ug/L
⌊	Sb	121	2525.653	**2.000**	0.11	5.3	ug/L
⌈	Ba	137	711.972	**1.000**	0.01	0.9	ug/L
|	Ba	138	4339.554	**1.000**	0.03	3.3	ug/L
| >	Tb	159	545046.079				ug/L
|	Tl	205	4268.912	**1.000**	0.06	6.0	ug/L
⌊	Pb	208	5717.982	**1.000**	0.02	2.1	ug/L
⌈	Hg	200	99.855	**0.200**	0.03	12.6	ug/L
|	Hg	201	50.667	**0.200**	0.08	42.3	ug/L
| >	Bi	209	340148.069				ug/L
⌊	U	238	8679.767	**1.000**	0.02	2.5	ug/L
	C	13	2733.710				ug/L
	W	184	22.660				ug/L
	Pd	106	120.032				ug/L
	Kr	83	20.667				ug/L
⌈	Na	23	172854.804	**100.000**	2.22	2.2	ug/L
|	Mg	24	97028.700	**100.000**	2.87	2.9	ug/L
|	K	39	224464.897	**100.000**	2.12	2.1	ug/L

Ca	44	5935.104	**100.000**	11.45	11.4	ug/L
Ti	47	0.000				ug/L
Sc-1	45	286045.592				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000359	0.000	1.000000	Linear Thru Zero
B	11.009	0.000466	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004305	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004158	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.004831	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001769	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.007795	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005387	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000996	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003695	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001628	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001084	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000809	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001281	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000291	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000139	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002682	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006970	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001013	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002211	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004775	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003721	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001279	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007720	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007724	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010159	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001174	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000612	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025373	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1442.003523	0.000	1.000000	Linear Thru Zero
Mg	23.985	951.351858	0.000	1.000000	Linear Thru Zero
K	38.964	1438.610226	0.000	1.000000	Linear Thru Zero
Ca	43.956	47.216938	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 23, 2020 09:18:56
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.620
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10534.435	**100.001**	1.41	1.4	ug/L
|	B	11	130110.305	**1000.000**	19.43	1.9	ug/L
|	Al	27	308290.919	**250.031**	2.56	1.0	ug/L
| >	Sc	45	278160.462				ug/L
|	V	51	150268.841	**100.020**	1.27	1.3	ug/L
|	Cr	52	132194.726	**99.997**	1.23	1.2	ug/L
|	Cr	53	32303.439	**99.826**	6.89	6.9	ug/L
|	Mn	55	533055.239	**250.000**	6.27	2.5	ug/L
|	Co	59	142534.000	**99.999**	1.12	1.1	ug/L
⌊	Ni	60	69435.819	**250.000**	1.22	0.5	ug/L
⌈	Cu	63	143649.382	**249.998**	4.44	1.8	ug/L
|	Cu	65	66602.426	**249.999**	3.23	1.3	ug/L
|	Zn	66	42274.951	**249.990**	5.36	2.1	ug/L
|	Zn	68	30023.682	**249.984**	7.58	3.0	ug/L
| >	Ge	72	171108.162				ug/L
|	As	75	43268.998	**249.996**	4.16	1.7	ug/L
|	Se	77	4437.653	**249.964**	14.52	5.8	ug/L
⌊	Se	82	5451.979	**249.998**	2.60	1.0	ug/L
⌈	Mo	98	71176.932	**100.001**	0.98	1.0	ug/L
| >	Rh	103	231079.982				ug/L
⌊	Ag	107	147458.018	**99.999**	1.56	1.6	ug/L
⌈	Cd	111	36008.782	**100.001**	1.71	1.7	ug/L
|	Cd	114	80488.651	**100.001**	1.64	1.6	ug/L
| >	In	115	320016.512				ug/L
|	Sn	120	145320.412	**99.999**	0.68	0.7	ug/L
⌊	Sb	121	115058.189	**99.999**	0.70	0.7	ug/L
⌈	Ba	137	59496.337	**99.998**	4.05	4.1	ug/L
|	Ba	138	399749.503	**100.000**	3.29	3.3	ug/L
| >	Tb	159	537516.672				ug/L
|	Tl	205	389267.582	**99.999**	3.40	3.4	ug/L
⌊	Pb	208	1324380.420	**250.000**	7.70	3.1	ug/L
⌈	Hg	200	5730.754	**19.999**	0.22	1.1	ug/L
|	Hg	201	3272.536	**20.000**	0.45	2.3	ug/L
| >	Bi	209	323453.175				ug/L
⌊	U	238	826257.687	**100.000**	2.16	2.2	ug/L
	C	13	2613.677				ug/L
	W	184	34.663				ug/L
	Pd	106	-231.620				ug/L
	Kr	83	21.333				ug/L
⌈	Na	23	13844870.344	**9999.956**	139.06	1.4	ug/L
|	Mg	24	8871589.728	**9999.927**	85.75	0.9	ug/L
|	K	39	13719542.824	**9999.945**	27.87	0.3	ug/L

Ca	44	426981.418	**9999.891**	228.86	2.3	ug/L
Ti	47	53.334				ug/L
Sc-1	45	278160.462				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000378	0.000	1.000000	Linear Thru Zero
B	11.009	0.000466	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004391	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005328	0.000	0.999978	Linear Thru Zero
Cr	51.941	0.004671	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000602	0.000	0.998315	Linear Thru Zero
Mn	54.938	0.007663	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005123	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000998	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003358	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001557	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000987	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000699	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001012	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999842	Linear Thru Zero
Se	81.917	0.000127	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003076	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006373	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001125	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002518	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004530	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003594	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001107	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.007437	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007244	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009858	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000883	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000504	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025554	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1381.627627	0.000	1.000000	Linear Thru Zero
Mg	23.985	886.976059	0.000	1.000000	Linear Thru Zero
K	38.964	1363.901366	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.577265	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, July 23, 2020 15:08:28
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.659
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10.667				ug/L
|	B	11	114.667				ug/L
|	Al	27	3171.170				ug/L
| >	Sc	45	278787.585				ug/L
|	V	51	1454.587				ug/L
|	Cr	52	2332.939				ug/L
|	Cr	53	15592.826				ug/L
|	Mn	55	218.669				ug/L
|	Co	59	25.778				ug/L
⌊	Ni	60	29.333				ug/L
⌈	Cu	63	49.778				ug/L
|	Cu	65	20.444				ug/L
|	Zn	66	85.334				ug/L
|	Zn	68	153.779				ug/L
| >	Ge	72	182560.896				ug/L
|	As	75	-34.567				ug/L
|	Se	77	593.351				ug/L
⌊	Se	82	24.487				ug/L
⌈	Mo	98	78.831				ug/L
| >	Rh	103	239791.424				ug/L
⌊	Ag	107	192.002				ug/L
⌈	Cd	111	-36.368				ug/L
|	Cd	114	-134.471				ug/L
| >	In	115	338842.116				ug/L
|	Sn	120	293.168				ug/L
⌊	Sb	121	16.000				ug/L
⌈	Ba	137	30.628				ug/L
|	Ba	138	115.962				ug/L
| >	Tb	159	541167.668				ug/L
|	Tl	205	24.000				ug/L
⌊	Pb	208	137.334				ug/L
⌈	Hg	200	6.436				ug/L
|	Hg	201	1.333				ug/L
| >	Bi	209	339202.856				ug/L
⌊	U	238	10.667				ug/L
	C	13	2520.318				ug/L
	W	184	35.998				ug/L
	Pd	106	47.219				ug/L
	Kr	83	20.667				ug/L
⌈	Na	23	4227.593				ug/L
|	Mg	24	1386.765				ug/L
|	K	39	76236.374				ug/L

	Ca	44	1093.393	ug/L
	Ti	47	66.667	ug/L
	Sc-1	45	278787.585	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000378	0.000	1.000000	Linear Thru Zero
B	11.009	0.000466	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004391	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005328	0.000	0.999978	Linear Thru Zero
Cr	51.941	0.004671	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000602	0.000	0.998315	Linear Thru Zero
Mn	54.938	0.007663	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005123	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000998	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003358	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001557	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000987	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000699	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001012	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999842	Linear Thru Zero
Se	81.917	0.000127	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003076	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006373	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001125	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002518	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004530	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003594	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001107	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.007437	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007244	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009858	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000883	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000504	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025554	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1381.627627	0.000	1.000000	Linear Thru Zero
Mg	23.985	886.976059	0.000	1.000000	Linear Thru Zero
K	38.964	1363.901366	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.577265	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 23, 2020 15:10:32
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.659
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	126.223	**1.000**	0.19	19.1	ug/L
|	B	11	3040.462	**20.000**	0.60	3.0	ug/L
|	Al	27	28533.985	**20.000**	0.31	1.5	ug/L
| >	Sc	45	275531.479				ug/L
|	V	51	5551.912	**3.000**	0.61	20.3	ug/L
|	Cr	52	6544.808	**3.000**	0.03	0.8	ug/L
|	Cr	53	17759.089	**3.000**	0.13	4.3	ug/L
|	Mn	55	2573.665	**1.000**	0.05	5.0	ug/L
|	Co	59	1464.996	**1.000**	0.02	2.4	ug/L
⌊	Ni	60	600.907	**2.000**	0.10	5.0	ug/L
⌈	Cu	63	1271.192	**2.000**	0.04	2.2	ug/L
|	Cu	65	567.127	**2.000**	0.17	8.7	ug/L
|	Zn	66	1033.831	**5.000**	0.51	10.3	ug/L
|	Zn	68	883.595	**5.000**	1.00	20.0	ug/L
| >	Ge	72	179604.940				ug/L
|	As	75	275.021	**2.000**	0.85	42.4	ug/L
|	Se	77	710.025	**2.000**	0.70	35.2	ug/L
⌊	Se	82	73.821	**2.000**	0.38	18.8	ug/L
⌈	Mo	98	759.006	**1.000**	0.19	18.6	ug/L
| >	Rh	103	237151.194				ug/L
⌊	Ag	107	2002.867	**1.000**	0.06	5.5	ug/L
⌈	Cd	111	410.167	**1.000**	0.14	14.1	ug/L
|	Cd	114	729.882	**1.000**	0.14	14.5	ug/L
| >	In	115	337567.735				ug/L
|	Sn	120	2021.436	**1.000**	0.04	4.4	ug/L
⌊	Sb	121	2453.637	**2.000**	0.22	11.1	ug/L
⌈	Ba	137	639.973	**1.000**	0.09	9.4	ug/L
|	Ba	138	4310.215	**1.000**	0.02	2.2	ug/L
| >	Tb	159	554786.034				ug/L
|	Tl	205	4148.861	**1.000**	0.02	2.2	ug/L
⌊	Pb	208	5645.968	**1.000**	0.04	3.9	ug/L
⌈	Hg	200	74.522	**0.200**	0.10	49.6	ug/L
|	Hg	201	36.000	**0.200**	0.05	23.3	ug/L
| >	Bi	209	335571.026				ug/L
⌊	U	238	8833.235	**1.000**	0.03	2.8	ug/L
	C	13	2233.585				ug/L
	W	184	22.663				ug/L
	Pd	106	93.292				ug/L
	Kr	83	20.667				ug/L
⌈	Na	23	157686.974	**100.000**	1.18	1.2	ug/L
|	Mg	24	98456.130	**100.000**	3.98	4.0	ug/L
|	K	39	222228.888	**100.000**	1.03	1.0	ug/L

Ca	44	6442.086	**100.000**	11.17	11.2	ug/L
Ti	47	120.001				ug/L
Sc-1	45	275531.479				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000421	0.000	1.000000	Linear Thru Zero
B	11.009	0.000531	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004610	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004972	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005129	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.002842	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.008552	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005224	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001038	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003404	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001521	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001060	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000818	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000864	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000353	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000138	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002876	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007652	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001323	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002561	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005125	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003612	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001095	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007558	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007437	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009929	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001014	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000517	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026292	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1534.593801	0.000	1.000000	Linear Thru Zero
Mg	23.985	970.693654	0.000	1.000000	Linear Thru Zero
K	38.964	1459.925144	0.000	1.000000	Linear Thru Zero
Ca	43.956	53.486930	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 23, 2020 15:12:37
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.659
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	11016.735	**100.000**	5.79	5.8	ug/L
	B	11	136006.848	**999.993**	50.89	5.1	ug/L
	Al	27	304844.197	**250.012**	13.25	5.3	ug/L
>	Sc	45	260362.753				ug/L
	V	51	147543.617	**100.010**	4.54	4.5	ug/L
	Cr	52	127297.837	**99.994**	4.82	4.8	ug/L
	Cr	53	30923.082	**99.685**	8.64	8.7	ug/L
	Mn	55	514564.507	**250.000**	13.60	5.4	ug/L
	Co	59	136523.052	**100.000**	5.49	5.5	ug/L
	Ni	60	67480.291	**250.000**	14.66	5.9	ug/L
	Cu	63	140181.225	**250.000**	23.84	9.5	ug/L
	Cu	65	64993.829	**250.001**	22.35	8.9	ug/L
	Zn	66	42034.879	**249.998**	20.74	8.3	ug/L
	Zn	68	30298.305	**249.990**	21.40	8.6	ug/L
>	Ge	72	162495.912				ug/L
	As	75	44309.895	**250.003**	23.15	9.3	ug/L
	Se	77	4343.611	**249.956**	22.48	9.0	ug/L
	Se	82	5584.640	**250.000**	26.98	10.8	ug/L
	Mo	98	72836.477	**100.001**	11.51	11.5	ug/L
>	Rh	103	216779.522				ug/L
	Ag	107	147486.187	**99.999**	10.97	11.0	ug/L
	Cd	111	36725.261	**99.999**	5.49	5.5	ug/L
	Cd	114	81642.463	**100.000**	7.36	7.4	ug/L
>	In	115	304728.107				ug/L
	Sn	120	145521.792	**99.999**	8.73	8.7	ug/L
	Sb	121	118554.856	**100.003**	6.38	6.4	ug/L
	Ba	137	59946.946	**100.000**	5.82	5.8	ug/L
	Ba	138	401128.695	**100.000**	6.16	6.2	ug/L
>	Tb	159	523589.971				ug/L
	Tl	205	396669.445	**100.000**	7.02	7.0	ug/L
	Pb	208	1358019.766	**250.000**	16.52	6.6	ug/L
	Hg	200	5949.437	**20.000**	0.99	4.9	ug/L
	Hg	201	3443.260	**20.000**	1.37	6.8	ug/L
>	Bi	209	313242.409				ug/L
	U	238	842992.665	**100.000**	6.06	6.1	ug/L
	C	13	2546.993				ug/L
	W	184	52.000				ug/L
	Pd	106	-160.289				ug/L
	Kr	83	31.333				ug/L
	Na	23	13708763.497	**9999.880**	159.03	1.6	ug/L
	Mg	24	9036617.459	**9999.926**	90.03	0.9	ug/L
	K	39	13450842.297	**9999.908**	160.79	1.6	ug/L

Ca	44	428857.351	**9999.750**	140.74	1.4	ug/L
Ti	47	146.668				ug/L
Sc-1	45	260362.753				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000423	0.000	1.000000	Linear Thru Zero
B	11.009	0.000523	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004644	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005621	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.004812	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000632	0.000	0.994535	Linear Thru Zero
Mn	54.938	0.007914	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005250	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001038	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003461	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001604	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001036	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000745	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001095	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999759	Linear Thru Zero
Se	81.917	0.000137	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003374	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006829	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001208	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002688	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004779	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003897	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001146	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007669	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007587	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010388	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000950	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000550	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026943	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1370.470003	0.000	0.999999	Linear Thru Zero
Mg	23.985	903.529786	0.000	1.000000	Linear Thru Zero
K	38.964	1337.472838	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.777467	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, July 23, 2020 15:16:43
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.663
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7.111				ug/L
|	B	11	432.009				ug/L
|	Al	27	3072.475				ug/L
| >	Sc	45	271884.460				ug/L
|	V	51	2039.838				ug/L
|	Cr	52	2211.578				ug/L
|	Cr	53	14891.754				ug/L
|	Mn	55	256.003				ug/L
|	Co	59	34.667				ug/L
⌊	Ni	60	19.556				ug/L
⌈	Cu	63	46.222				ug/L
|	Cu	65	24.000				ug/L
|	Zn	66	93.334				ug/L
|	Zn	68	152.001				ug/L
| >	Ge	72	175212.643				ug/L
|	As	75	-62.042				ug/L
|	Se	77	533.348				ug/L
⌊	Se	82	24.510				ug/L
⌈	Mo	98	84.165				ug/L
| >	Rh	103	235436.730				ug/L
⌊	Ag	107	248.003				ug/L
⌈	Cd	111	5.075				ug/L
|	Cd	114	-102.449				ug/L
| >	In	115	326963.717				ug/L
|	Sn	120	282.603				ug/L
⌊	Sb	121	56.000				ug/L
⌈	Ba	137	17.283				ug/L
|	Ba	138	141.284				ug/L
| >	Tb	159	548076.755				ug/L
|	Tl	205	49.333				ug/L
⌊	Pb	208	170.667				ug/L
⌈	Hg	200	18.590				ug/L
|	Hg	201	8.000				ug/L
| >	Bi	209	340279.896				ug/L
⌊	U	238	58.667				ug/L
	C	13	2446.968				ug/L
	W	184	12.000				ug/L
	Pd	106	78.698				ug/L
	Kr	83	18.000				ug/L
⌈	Na	23	4094.181				ug/L
|	Mg	24	2066.882				ug/L
|	K	39	75712.261				ug/L

Ca	44	1466.775		ug/L
Ti	47	80.000		ug/L
Sc-1	45	271884.460		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000423	0.000	1.000000	Linear Thru Zero
B	11.009	0.000523	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004644	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005621	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.004812	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000632	0.000	0.994535	Linear Thru Zero
Mn	54.938	0.007914	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005250	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001038	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003461	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001604	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001036	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000745	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001095	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999759	Linear Thru Zero
Se	81.917	0.000137	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003374	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006829	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001208	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002688	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004779	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003897	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001146	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007669	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007587	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010388	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000950	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000550	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026943	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1370.470003	0.000	0.999999	Linear Thru Zero
Mg	23.985	903.529786	0.000	1.000000	Linear Thru Zero
K	38.964	1337.472838	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.777467	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 23, 2020 15:18:47
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.663
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	126.223	**1.000**	0.09	8.7	ug/L
|	B	11	2984.446	**20.000**	1.43	7.1	ug/L
|	Al	27	27833.354	**20.000**	0.92	4.6	ug/L
| >	Sc	45	272790.622				ug/L
|	V	51	5735.629	**3.000**	1.24	41.3	ug/L
|	Cr	52	6432.068	**3.000**	0.15	5.0	ug/L
|	Cr	53	17212.135	**3.000**	0.98	32.7	ug/L
|	Mn	55	2429.629	**1.000**	0.04	4.1	ug/L
|	Co	59	1494.334	**1.000**	0.06	5.8	ug/L
⌊	Ni	60	601.796	**2.000**	0.02	1.0	ug/L
⌈	Cu	63	1273.859	**2.000**	0.18	9.1	ug/L
|	Cu	65	562.683	**2.000**	0.16	8.1	ug/L
|	Zn	66	965.380	**5.000**	0.60	12.0	ug/L
|	Zn	68	800.032	**5.000**	0.17	3.4	ug/L
| >	Ge	72	173245.712				ug/L
|	As	75	376.446	**2.000**	0.28	13.9	ug/L
|	Se	77	688.024	**2.000**	0.66	33.0	ug/L
⌊	Se	82	72.511	**2.000**	0.92	46.1	ug/L
⌈	Mo	98	816.490	**1.000**	0.09	8.9	ug/L
| >	Rh	103	237513.433				ug/L
⌊	Ag	107	1805.498	**1.000**	0.14	14.1	ug/L
⌈	Cd	111	370.274	**1.000**	0.19	19.4	ug/L
|	Cd	114	693.840	**1.000**	0.03	2.8	ug/L
| >	In	115	326551.014				ug/L
|	Sn	120	1783.958	**1.000**	0.19	19.1	ug/L
⌊	Sb	121	2469.638	**2.000**	0.07	3.6	ug/L
⌈	Ba	137	615.973	**1.000**	0.05	5.2	ug/L
|	Ba	138	4300.879	**1.000**	0.05	4.8	ug/L
| >	Tb	159	553425.264				ug/L
|	Tl	205	4255.573	**1.000**	0.02	2.0	ug/L
⌊	Pb	208	5733.974	**1.000**	0.03	3.5	ug/L
⌈	Hg	200	50.530	**0.200**	0.06	29.2	ug/L
|	Hg	201	52.000	**0.200**	0.02	9.5	ug/L
| >	Bi	209	338136.483				ug/L
⌊	U	238	8745.157	**1.000**	0.02	2.2	ug/L
	C	13	2486.977				ug/L
	W	184	21.330				ug/L
	Pd	106	113.136				ug/L
	Kr	83	18.000				ug/L
⌈	Na	23	152013.829	**100.000**	2.56	2.6	ug/L
|	Mg	24	95305.959	**100.000**	4.65	4.7	ug/L
|	K	39	217922.867	**100.000**	3.05	3.1	ug/L

Ca	44	6188.601	**100.000**	16.22	16.2	ug/L
Ti	47	80.000				ug/L
Sc-1	45	272790.622				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000437	0.000	1.000000	Linear Thru Zero
B	11.009	0.000468	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004541	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004537	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005154	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.002794	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.007971	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005357	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001067	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003550	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001554	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001006	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000750	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001266	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000465	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000140	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003077	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006551	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001117	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002439	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004603	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003697	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001081	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007517	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007599	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.010049	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000474	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000652	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025689	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1479.196483	0.000	1.000000	Linear Thru Zero
Mg	23.985	932.390772	0.000	1.000000	Linear Thru Zero
K	38.964	1422.106059	0.000	1.000000	Linear Thru Zero
Ca	43.956	47.218252	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 23, 2020 15:20:52
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.663
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10866.346	**99.999**	1.85	1.8	ug/L
|	B	11	135633.682	**1000.037**	18.12	1.8	ug/L
|	Al	27	295895.416	**249.973**	6.17	2.5	ug/L
| >	Sc	45	262446.144				ug/L
|	V	51	144992.969	**100.015**	2.75	2.7	ug/L
|	Cr	52	126909.172	**99.992**	2.49	2.5	ug/L
|	Cr	53	30814.101	**99.690**	8.24	8.3	ug/L
|	Mn	55	510072.834	**250.000**	8.77	3.5	ug/L
|	Co	59	135686.849	**100.000**	3.18	3.2	ug/L
⌊	Ni	60	66040.570	**249.999**	8.68	3.5	ug/L
⌈	Cu	63	136788.823	**249.999**	6.45	2.6	ug/L
|	Cu	65	62956.703	**250.000**	5.66	2.3	ug/L
|	Zn	66	40987.829	**249.998**	7.81	3.1	ug/L
|	Zn	68	29511.942	**249.994**	2.98	1.2	ug/L
| >	Ge	72	166384.470				ug/L
|	As	75	42859.548	**249.996**	7.70	3.1	ug/L
|	Se	77	4368.955	**249.936**	8.27	3.3	ug/L
⌊	Se	82	5470.569	**249.999**	5.70	2.3	ug/L
⌈	Mo	98	70251.912	**100.000**	0.65	0.6	ug/L
| >	Rh	103	220550.656				ug/L
⌊	Ag	107	145161.056	**100.000**	1.87	1.9	ug/L
⌈	Cd	111	36667.376	**100.000**	1.43	1.4	ug/L
|	Cd	114	79951.549	**100.000**	1.04	1.0	ug/L
| >	In	115	312902.260				ug/L
|	Sn	120	142458.222	**100.000**	2.44	2.4	ug/L
⌊	Sb	121	114864.016	**100.000**	1.89	1.9	ug/L
⌈	Ba	137	58946.350	**100.000**	4.34	4.3	ug/L
|	Ba	138	394237.348	**100.000**	3.09	3.1	ug/L
| >	Tb	159	539633.076				ug/L
|	Tl	205	387935.867	**99.999**	2.23	2.2	ug/L
⌊	Pb	208	1338778.700	**250.000**	5.67	2.3	ug/L
⌈	Hg	200	5672.071	**20.001**	0.67	3.4	ug/L
|	Hg	201	3483.273	**20.000**	0.33	1.6	ug/L
| >	Bi	209	315586.919				ug/L
⌊	U	238	826220.125	**100.000**	2.35	2.3	ug/L
	C	13	2426.963				ug/L
	W	184	31.997				ug/L
	Pd	106	-397.491				ug/L
	Kr	83	32.000				ug/L
⌈	Na	23	13467151.438	**9999.901**	120.71	1.2	ug/L
|	Mg	24	8806544.375	**9999.941**	206.16	2.1	ug/L
|	K	39	13304587.579	**9999.925**	243.65	2.4	ug/L

Ca	44	414289.254	**9999.856**	174.91	1.7	ug/L
Ti	47	80.000				ug/L
Sc-1	45	262446.144				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000414	0.000	1.000000	Linear Thru Zero
B	11.009	0.000515	0.000	0.999998	Linear Thru Zero
Al	26.982	0.004467	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005449	0.000	0.999987	Linear Thru Zero
Cr	51.941	0.004756	0.000	0.999997	Linear Thru Zero
Cr	52.941	0.000629	0.000	0.994708	Linear Thru Zero
Mn	54.938	0.007773	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005172	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001007	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003289	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001514	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000984	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000706	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001032	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999487	Linear Thru Zero
Se	81.917	0.000131	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003182	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006572	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001172	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002558	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004545	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003670	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001093	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007307	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007191	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009926	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000896	0.000	0.999989	Linear Thru Zero
Hg	200.970	0.000551	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026181	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1346.319014	0.000	1.000000	Linear Thru Zero
Mg	23.985	880.452943	0.000	1.000000	Linear Thru Zero
K	38.964	1322.897453	0.000	1.000000	Linear Thru Zero
Ca	43.956	41.282841	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Thursday, July 23, 2020 15:32:04
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.671
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	9.778				ug/L
|	B	11	378.674				ug/L
|	Al	27	3067.138				ug/L
| >	Sc	45	271038.513				ug/L
|	V	51	863.798				ug/L
|	Cr	52	2046.209				ug/L
|	Cr	53	14810.963				ug/L
|	Mn	55	229.336				ug/L
|	Co	59	40.889				ug/L
⌊	Ni	60	32.889				ug/L
⌈	Cu	63	48.000				ug/L
|	Cu	65	19.556				ug/L
|	Zn	66	76.445				ug/L
|	Zn	68	120.001				ug/L
| >	Ge	72	171281.547				ug/L
|	As	75	9.828				ug/L
|	Se	77	567.349				ug/L
⌊	Se	82	31.194				ug/L
⌈	Mo	98	44.895				ug/L
| >	Rh	103	234283.544				ug/L
⌊	Ag	107	194.669				ug/L
⌈	Cd	111	17.170				ug/L
|	Cd	114	-94.968				ug/L
| >	In	115	328841.823				ug/L
|	Sn	120	455.843				ug/L
⌊	Sb	121	24.000				ug/L
⌈	Ba	137	23.941				ug/L
|	Ba	138	115.942				ug/L
| >	Tb	159	542466.309				ug/L
|	Tl	205	32.000				ug/L
⌊	Pb	208	152.000				ug/L
⌈	Hg	200	10.547				ug/L
|	Hg	201	9.333				ug/L
| >	Bi	209	337134.123				ug/L
⌊	U	238	26.667				ug/L
	C	13	2560.329				ug/L
	W	184	18.667				ug/L
	Pd	106	84.813				ug/L
	Kr	83	16.000				ug/L
⌈	Na	23	3854.076				ug/L
|	Mg	24	1346.759				ug/L
|	K	39	71521.993				ug/L

Ca	44	1440.106		ug/L
Ti	47	80.000		ug/L
Sc-1	45	271038.513		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000414	0.000	1.000000	Linear Thru Zero
B	11.009	0.000515	0.000	0.999998	Linear Thru Zero
Al	26.982	0.004467	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005449	0.000	0.999987	Linear Thru Zero
Cr	51.941	0.004756	0.000	0.999997	Linear Thru Zero
Cr	52.941	0.000629	0.000	0.994708	Linear Thru Zero
Mn	54.938	0.007773	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005172	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001007	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003289	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001514	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000984	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000706	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001032	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999487	Linear Thru Zero
Se	81.917	0.000131	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003182	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006572	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001172	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002558	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004545	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003670	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001093	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007307	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007191	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009926	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000896	0.000	0.999989	Linear Thru Zero
Hg	200.970	0.000551	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026181	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1346.319014	0.000	1.000000	Linear Thru Zero
Mg	23.985	880.452943	0.000	1.000000	Linear Thru Zero
K	38.964	1322.897453	0.000	1.000000	Linear Thru Zero
Ca	43.956	41.282841	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Thursday, July 23, 2020 15:34:08
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.671
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	119.112	**1.000**	0.17	17.4	ug/L
|	B	11	3056.467	**20.000**	0.19	0.9	ug/L
|	Al	27	27378.794	**20.000**	0.70	3.5	ug/L
| >	Sc	45	270632.093				ug/L
|	V	51	5504.517	**3.000**	0.95	31.6	ug/L
|	Cr	52	6112.535	**3.000**	0.08	2.6	ug/L
|	Cr	53	16940.340	**3.000**	0.49	16.4	ug/L
|	Mn	55	2565.663	**1.000**	0.05	4.9	ug/L
|	Co	59	1486.333	**1.000**	0.02	1.5	ug/L
⌊	Ni	60	609.796	**2.000**	0.17	8.3	ug/L
⌈	Cu	63	1228.520	**2.000**	0.04	1.8	ug/L
|	Cu	65	522.680	**2.000**	0.11	5.5	ug/L
|	Zn	66	937.822	**5.000**	0.23	4.6	ug/L
|	Zn	68	808.922	**5.000**	0.48	9.5	ug/L
| >	Ge	72	173799.444				ug/L
|	As	75	274.002	**2.000**	0.79	39.4	ug/L
|	Se	77	671.356	**2.000**	0.87	43.4	ug/L
⌊	Se	82	58.481	**2.000**	0.81	40.7	ug/L
⌈	Mo	98	779.300	**1.000**	0.07	7.3	ug/L
| >	Rh	103	234523.599				ug/L
⌊	Ag	107	1896.181	**1.000**	0.10	9.8	ug/L
⌈	Cd	111	334.105	**1.000**	0.16	15.6	ug/L
|	Cd	114	704.438	**1.000**	0.09	9.2	ug/L
| >	In	115	321709.311				ug/L
|	Sn	120	1845.437	**1.000**	0.16	15.9	ug/L
⌊	Sb	121	2210.912	**2.000**	0.11	5.4	ug/L
⌈	Ba	137	626.644	**1.000**	0.08	7.7	ug/L
|	Ba	138	4219.514	**1.000**	0.01	0.6	ug/L
| >	Tb	159	548354.016				ug/L
|	Tl	205	4147.527	**1.000**	0.03	2.7	ug/L
⌊	Pb	208	5545.944	**1.000**	0.06	6.0	ug/L
⌈	Hg	200	53.240	**0.200**	0.06	28.7	ug/L
|	Hg	201	38.667	**0.200**	0.08	42.1	ug/L
| >	Bi	209	333622.232				ug/L
⌊	U	238	8611.707	**1.000**	0.01	0.5	ug/L
	C	13	2526.992				ug/L
	W	184	14.662				ug/L
	Pd	106	46.531				ug/L
	Kr	83	21.333				ug/L
⌈	Na	23	151188.278	**100.000**	2.97	3.0	ug/L
|	Mg	24	94242.025	**100.000**	1.02	1.0	ug/L
|	K	39	209206.073	**100.000**	2.45	2.5	ug/L

Ca	44	5641.634	**100.000**	27.13	27.1	ug/L
Ti	47	26.667				ug/L
Sc-1	45	270632.093				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000404	0.000	1.000000	Linear Thru Zero
B	11.009	0.000495	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004492	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005729	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005012	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.002651	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.008635	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005342	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001065	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003393	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001448	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000991	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000792	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000765	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000278	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000078	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003131	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007255	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000987	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002476	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004349	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003398	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001100	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007481	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007506	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009841	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000640	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000442	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025733	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1473.342019	0.000	1.000000	Linear Thru Zero
Mg	23.985	928.952665	0.000	1.000000	Linear Thru Zero
K	38.964	1376.840802	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.015282	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Thursday, July 23, 2020 15:36:13
Sample File: C:\Elandata\Sample\PE_EL2_200723.sam
Blank File: C:\Elandata\Dataset\2020 JUL (20-26)\Blank.671
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200723.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10678.590	**100.000**	4.01	4.0	ug/L
|	B	11	134003.958	**1000.013**	26.68	2.7	ug/L
|	Al	27	296351.187	**249.998**	5.92	2.4	ug/L
| >	Sc	45	261673.458				ug/L
|	V	51	145128.886	**99.997**	2.27	2.3	ug/L
|	Cr	52	126155.569	**99.995**	2.90	2.9	ug/L
|	Cr	53	30494.428	**99.706**	5.05	5.1	ug/L
|	Mn	55	509835.830	**250.000**	7.36	2.9	ug/L
|	Co	59	133307.762	**100.000**	3.39	3.4	ug/L
⌊	Ni	60	65322.062	**249.999**	7.31	2.9	ug/L
⌈	Cu	63	135591.315	**249.999**	1.81	0.7	ug/L
|	Cu	65	62093.536	**250.001**	1.19	0.5	ug/L
|	Zn	66	40582.638	**249.999**	1.06	0.4	ug/L
|	Zn	68	28904.840	**249.986**	5.67	2.3	ug/L
| >	Ge	72	165589.256				ug/L
|	As	75	41890.870	**250.004**	5.15	2.1	ug/L
|	Se	77	4268.245	**249.967**	8.47	3.4	ug/L
⌊	Se	82	5491.275	**250.007**	3.52	1.4	ug/L
⌈	Mo	98	68563.415	**100.000**	0.72	0.7	ug/L
| >	Rh	103	220803.746				ug/L
⌊	Ag	107	142939.802	**99.999**	0.64	0.6	ug/L
⌈	Cd	111	36027.951	**100.001**	2.85	2.8	ug/L
|	Cd	114	79493.232	**100.000**	0.95	1.0	ug/L
| >	In	115	312479.441				ug/L
|	Sn	120	142450.079	**100.000**	2.77	2.8	ug/L
⌊	Sb	121	115244.358	**100.003**	1.81	1.8	ug/L
⌈	Ba	137	58769.361	**100.000**	2.56	2.6	ug/L
|	Ba	138	389147.440	**100.000**	3.00	3.0	ug/L
| >	Tb	159	534373.659				ug/L
|	Tl	205	385596.395	**100.000**	3.30	3.3	ug/L
⌊	Pb	208	1317354.658	**250.000**	6.56	2.6	ug/L
⌈	Hg	200	5712.078	**20.001**	1.01	5.0	ug/L
|	Hg	201	3361.899	**20.000**	0.71	3.5	ug/L
| >	Bi	209	311613.252				ug/L
⌊	U	238	828048.415	**100.000**	1.49	1.5	ug/L
	C	13	2506.982				ug/L
	W	184	34.663				ug/L
	Pd	106	-252.333				ug/L
	Kr	83	28.667				ug/L
⌈	Na	23	13471120.688	**9999.906**	208.62	2.1	ug/L
|	Mg	24	8798449.211	**9999.944**	151.69	1.5	ug/L
|	K	39	13425842.944	**9999.969**	105.51	1.1	ug/L

Ca	44	423350.734	**10000.004**	182.99	1.8	ug/L
Ti	47	146.668				ug/L
Sc-1	45	261673.458				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000408	0.000	1.000000	Linear Thru Zero
B	11.009	0.000511	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004486	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005516	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.004747	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000621	0.000	0.995227	Linear Thru Zero
Mn	54.938	0.007792	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005095	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000998	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003274	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001500	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000979	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000696	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001012	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000090	0.000	0.999860	Linear Thru Zero
Se	81.917	0.000132	0.000	0.999995	Linear Thru Zero
Mo	97.906	0.003103	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.006466	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001153	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002547	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.004546	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003688	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001100	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.007284	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.007219	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.009864	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000915	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000538	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026575	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1346.739321	0.000	1.000000	Linear Thru Zero
Mg	23.985	879.715169	0.000	1.000000	Linear Thru Zero
K	38.964	1335.436236	0.000	1.000000	Linear Thru Zero
Ca	43.956	42.191045	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Thursday, July 23, 2020 06:42:28
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.1074
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	6.977	1567	2089	0.716	
Mg	23.985	23.978	5672	2115	0.718	
Rh	102.905	102.879	24813	2278	0.725	
Ce	139.905	139.977	33798	2351	0.724	
Pb	207.977	208.029	50327	2520	0.701	
U	238.050	238.028	57617	2575	0.703	

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, July 23, 2020 06:55:23
Sample Description:
Method File: C:\Elandata\Method\BC Methods\OTHER\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.1076
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 50
Current Dead Time (ns): 50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	20498.3	20498.270	262.924	1.3
	In	114.9	71931.2	71931.220	322.272	0.4
	U	238.1	135437.6	135437.590	899.504	0.7
⌈>	Ba	137.9	64894.0	64893.950	499.323	0.8
⌊	Ba++	69.0	1145.3	0.018	0.001	3.1
⌈>	Ce	139.9	80095.8	80095.810	277.125	0.3
⌊	CeO	155.9	2114.0	0.026	0.000	0.9
	220	220.0	2.0	2.000	0.849	42.4
	8.5	8.5	10.6	10.640	2.256	21.2

Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
7.75	Lens Voltage
1500.00	ICP RF Power
-1800.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	69	6.3	216859.5
Mg	24	69	6.3	17779.1
In	115	69	7.8	71662.5
Ce	140	69	8.0	82606.5
Pb	208	69	8.5	50068.4

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/10/2020 12:38:06PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2022938

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60570043.5

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2022938
COC Number:
Default Cooler was received at 3 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL4

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B084663	EPA-6020 (TTLC)	2022938-01	B08-3-N-1.5

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

Discussion

EPA Method 6020 client requested sample 20-22938-03 was not used for QC sample.

Chain of Custody and Cooler Receipt Form for 2022938 Page 1 of 2

CHAIN OF CUSTODY

Page 1 of 1

AECOM 20-22938

Lab: BC Laboratories

TAT: 6-day

Report results to: Keegan George (Keegan.George@smud.org)
Name: Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

IMPORTANT: Date results required:
Rush charges authorized?
Phone results?
Fax results?

Special instructions and/or specific regulatory requirements:

Requires a level III data package

Analyses Requested

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	SW6010 (Arsenic)	Sample Condition/Comments	Preservative
B08-3-N-1.5 -1	8/7/20	1027	soil	1	x		
B08-3-N-1.5-FD -2	8/7/20	1027	soil	1	x		
B08-3-E-1.5 -3	8/7/20	1044	soil	~~1~~ 2	x	Perform MS/MSD	
B08-3-S-1.5 -4	8/7/20	1101	soil	1	x		
KA-17-3-W-1.5 -5	8/7/20	0841	soil	1	x		
KA-17-3-NW-1.5 -6	8/7/20	0817	soil	1	x		
KA-17-3-N-1.5 -7	8/7/20	0904	soil	1	x		
KA-17-3-NE-1.5 -8	8/7/20	0921	soil	1	x		
KA-10-3-S -9	8/7/20	1146	soil	1	x		

CHK BY DISTRIBUTION SUB OUT

Relinquished by: [signature] *Date/Time* 8/7/20 / 1200
Relinquished by: [signature] *Date/Time* 8/7/2020 / 12:30
Relinquished by: *Date/Time*
Method of Shipment:

Received by: [signature] *Date/Time* 8/7/2020 12:00
Received by: [signature] *Date/Time* 8/10/20 9:45
Received by: *Date/Time*
Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2022938 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20 - 22938

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☒ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ SOIL Description(s) match COC? Yes ☒ No ☐ DMF 8/10

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: Heat Block Thermometer ID: 209

Temperature: (A) 3.0 °C / (C) 3.0 °C

Date/Time 8/10/20 9:45

Analyst Init JRB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR 4oz Y10	A	A	AB	A	A	A	A	A	A	
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: ~~KA-17c3cNE-1.5~~ DMF 8/10

Sample Numbering Completed By: JAG Date/Time: 8/10/20 0750

A = Actual / C = Corrected

Rev 21 05/23/2016

I:\MWPDocs\WordPerfect\LAB_DOCS\FORMS\SANREC rev 20

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Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2022938**
Class: **METALS-PPM**
Method: **EPA-6020**

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2022938
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
B08-3-N-1.5	2022938-01
B08-3-N-1.5-FD	2022938-02
B08-3-E-1.5	2022938-03
B08-3-S-1.5	2022938-04
KA-17-3-W-1.5	2022938-05
KA-17-3-NW-1.5	2022938-06
KA-17-3-N-1.5	2022938-07
KA-17-3-NE-1.5	2022938-08
KA-10-3-S	2022938-09

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 08-25-2020
Title: QA/QC Manager

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL4

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-3-N-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-01
File ID: PE_EL4_200812-124
Sampled: 08/07/20 10:27
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 15:34
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	39	1		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-3-N-1.5-FD

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-02
File ID: PE_EL4_200812-133
Sampled: 08/07/20 10:27
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 15:56
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	42	0.98		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-3-E-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-03
File ID: PE_EL4_200812-134
Sampled: 08/07/20 10:44
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 15:58
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	9.1	0.971		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

B08-3-S-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-04
File ID: PE_EL4_200812-135
Sampled: 08/07/20 11:01
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:00
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	48	0.971		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-3-W-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-05
File ID: PE_EL4_200812-136
Sampled: 08/07/20 08:41
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:03
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	60	0.99		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-3-NW-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-06
File ID: PE_EL4_200812-137
Sampled: 08/07/20 08:17
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:05
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.9	0.935		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-3-N-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-07
File ID: PE_EL4_200812-138
Sampled: 08/07/20 09:04
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:07
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.4	0.943		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-3-NE-1.5

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-08
File ID: PE_EL4_200812-141
Sampled: 08/07/20 09:21
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:15
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	140	0.98		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-10-3-S

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2022938-09
File ID: PE_EL4_200812-142
Sampled: 08/07/20 11:48
Prepared: 08/12/20 08:30
Analyzed: 08/12/20 16:17
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B084663
Sequence: 2014120
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	16	1		EPA-6020

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Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B084663 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
B08-3-N-1.5	2022938-01	PE_EL4_200812-124	08/12/20 08:30	
B08-3-N-1.5-FD	2022938-02	PE_EL4_200812-133	08/12/20 08:30	
B08-3-E-1.5	2022938-03	PE_EL4_200812-134	08/12/20 08:30	
B08-3-S-1.5	2022938-04	PE_EL4_200812-135	08/12/20 08:30	
KA-17-3-W-1.5	2022938-05	PE_EL4_200812-136	08/12/20 08:30	
KA-17-3-NW-1.5	2022938-06	PE_EL4_200812-137	08/12/20 08:30	
KA-17-3-N-1.5	2022938-07	PE_EL4_200812-138	08/12/20 08:30	
KA-17-3-NE-1.5	2022938-08	PE_EL4_200812-141	08/12/20 08:30	
KA-10-3-S	2022938-09	PE_EL4_200812-142	08/12/20 08:30	
Blank	B084663-BLK1	PE_EL4_200812-127	08/12/20 08:30	
LCS	B084663-BS1	PE_EL4_200812-123	08/12/20 08:30	
B08-3-N-1.5	B084663-DUP1	PE_EL4_200812-125	08/12/20 08:30	
B08-3-N-1.5	B084663-MS1	PE_EL4_200812-128	08/12/20 08:30	
B08-3-N-1.5	B084663-MSD1	PE_EL4_200812-129	08/12/20 08:30	
B08-3-N-1.5	B084663-PS1	PE_EL4_200812-130	08/12/20 08:30	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2022938
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B084663-BLK1	File ID:	PE_EL4_200812-127
Prepared:	08/12/20 08:30	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	08/12/20 15:41	Instrument:	PE-EL4		
Batch:	B084663	Sequence:	2014120	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

B08-3-N-1.5

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B084663
Preparation: EPA 3050B
Source Sample Name: B08-3-N-1.5

SDG: 2022938
Project: SMUD 59th St.-CLP III
Laboratory ID: B084663-DUP1
Lab Source ID: 2022938-01
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	39.452		40.764		3.27		EPA-6020

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

B08-3-N-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B084663
Preparation: EPA 3050B
Source Sample Number: 2022938-01

SDG: 2022938
Project: SMUD 59th St.-CLP III
Laboratory ID: B084663-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	39.452	68.933	118	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	68.894	118	0.0566	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2022938
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B084663
Laboratory ID: B084663-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	27.990	112	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2022938
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2014120	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2014120-ICV1	PE_EL4_200812-020	08/12/20 08:56
Initial Cal Blank	2014120-ICB1	PE_EL4_200812-021	08/12/20 08:58
MRL Check	2014120-CRL2	PE_EL4_200812-023	08/12/20 09:15
Calibration Check	2014120-CCV1	PE_EL4_200812-026	08/12/20 09:23
Calibration Blank	2014120-CCB1	PE_EL4_200812-027	08/12/20 09:25
Interference Check A	2014120-IFA1	PE_EL4_200812-028	08/12/20 09:36
Interference Check B	2014120-IFB1	PE_EL4_200812-029	08/12/20 09:40
Calibration Check	2014120-CCV2	PE_EL4_200812-036	08/12/20 09:57
Calibration Blank	2014120-CCB2	PE_EL4_200812-037	08/12/20 09:59
Calibration Check	2014120-CCVB	PE_EL4_200812-120	08/12/20 15:22
Calibration Blank	2014120-CCBB	PE_EL4_200812-121	08/12/20 15:24
LCS	B084663-BS1	PE_EL4_200812-123	08/12/20 15:32
B08-3-N-1.5	2022938-01	PE_EL4_200812-124	08/12/20 15:34
B08-3-N-1.5	B084663-DUP1	PE_EL4_200812-125	08/12/20 15:37
Blank	B084663-BLK1	PE_EL4_200812-127	08/12/20 15:41
B08-3-N-1.5	B084663-MS1	PE_EL4_200812-128	08/12/20 15:44
B08-3-N-1.5	B084663-MSD1	PE_EL4_200812-129	08/12/20 15:46
B08-3-N-1.5	B084663-PS1	PE_EL4_200812-130	08/12/20 15:48
Calibration Check	2014120-CCVC	PE_EL4_200812-131	08/12/20 15:51
Calibration Blank	2014120-CCBC	PE_EL4_200812-132	08/12/20 15:53
B08-3-N-1.5-FD	2022938-02	PE_EL4_200812-133	08/12/20 15:56
B08-3-E-1.5	2022938-03	PE_EL4_200812-134	08/12/20 15:58
B08-3-S-1.5	2022938-04	PE_EL4_200812-135	08/12/20 16:00
KA-17-3-W-1.5	2022938-05	PE_EL4_200812-136	08/12/20 16:03
KA-17-3-NW-1.5	2022938-06	PE_EL4_200812-137	08/12/20 16:05
KA-17-3-N-1.5	2022938-07	PE_EL4_200812-138	08/12/20 16:07

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Project Number: 60570043.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2022938
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2014120	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2014120-CCVD	PE_EL4_200812-139	08/12/20 16:10
Calibration Blank	2014120-CCBD	PE_EL4_200812-140	08/12/20 16:12
KA-17-3-NE-1.5	2022938-08	PE_EL4_200812-141	08/12/20 16:15
KA-10-3-S	2022938-09	PE_EL4_200812-142	08/12/20 16:17
Calibration Check	2014120-CCVE	PE_EL4_200812-148	08/12/20 16:31
Calibration Blank	2014120-CCBE	PE_EL4_200812-149	08/12/20 16:34

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Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2014120

SDG: 2022938
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2014120-ICB1	Arsenic	0.34200	2.0	ug/L		EPA-6020
2014120-CCB1	Arsenic	0.44700	2.0	ug/L		EPA-6020
2014120-CCB2	Arsenic	-0.056000	2.0	ug/L		EPA-6020
2014120-CCBB	Arsenic	-0.44800	2.0	ug/L		EPA-6020
2014120-CCBC	Arsenic	-0.44800	2.0	ug/L		EPA-6020
2014120-CCBD	Arsenic	-0.072000	2.0	ug/L		EPA-6020
2014120-CCBE	Arsenic	-0.25300	2.0	ug/L		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Control Limt: +/- 10.00%

SDG: 2022938
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2014120

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2014120-ICV1	Arsenic	125.00	127.21	102	ug/L	EPA-6020
2014120-CCV1	Arsenic	100.00	101.18	101	ug/L	EPA-6020
2014120-CCV2	Arsenic	100.00	102.67	103	ug/L	EPA-6020
2014120-CCVB	Arsenic	100.00	99.902	99.9	ug/L	EPA-6020
2014120-CCVC	Arsenic	100.00	100.46	100	ug/L	EPA-6020
2014120-CCVD	Arsenic	100.00	102.50	102	ug/L	EPA-6020
2014120-CCVE	Arsenic	100.00	104.11	104	ug/L	EPA-6020

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

B08-3-N-1.5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B084663
Preparation: EPA 3050B

SDG: 2022938
Project: SMUD 59th St.-CLP III
Laboratory ID: B084663-PS1
Lab Source ID: 2022938-01
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: B08-3-N-1.5
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	258.84	154.65	100.00	104

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2014120

SDG: 2022938
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2014120-IFA1	Arsenic		-0.014000		ug/L
2014120-IFB1	Arsenic	20.000	19.35	96.8	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL4

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Wednesday, August 12, 2020 08:20:40
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.524
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8.667				ug/L
|	B	11	7002.700				ug/L
|	Al	27	11383.797				ug/L
| >	Sc	45	957516.225				ug/L
|	V	51	1114.499				ug/L
|	Cr	52	6542.355				ug/L
|	Cr	53	35469.113				ug/L
|	Mn	55	513.348				ug/L
|	Co	59	111.112				ug/L
⌊	Ni	60	57.334				ug/L
⌈	Cu	63	120.890				ug/L
|	Cu	65	52.000				ug/L
|	Zn	66	128.001				ug/L
|	Zn	68	250.670				ug/L
| >	Ge	72	672756.563				ug/L
|	As	75	95.208				ug/L
|	Se	77	3567.867				ug/L
|	Se	82	48.705				ug/L
⌊	Sr	88	1500.124				ug/L
⌈	Mo	98	48.155				ug/L
| >	Rh	103	667771.469				ug/L
⌊	Ag	107	453.345				ug/L
⌈	Cd	111	2.953				ug/L
|	Cd	114	-140.815				ug/L
| >	In	115	828232.264				ug/L
|	Sn	120	1673.445				ug/L
⌊	Sb	121	100.001				ug/L
⌈	Ba	137	28.610				ug/L
|	Ba	138	143.944				ug/L
| >	Tb	159	1124293.692				ug/L
|	Tl	205	633.355				ug/L
⌊	Pb	208	63.333				ug/L
⌈	Hg	200	39.968				ug/L
|	Hg	201	13.333				ug/L
| >	Bi	209	688759.185				ug/L
⌊	U	238	30.000				ug/L
	C	13	6812.552				ug/L
	W	184	213.334				ug/L
	Pd	106	133.074				ug/L
	Kr	83	53.167				ug/L
⌈	Na	23	19313.863				ug/L
|	Mg	24	4774.591				ug/L

	K	39	147866.356	ug/L
	Ca	44	4047.570	ug/L
	Ti	47	126.668	ug/L
	Sc-1	45	957516.225	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Wednesday, August 12, 2020 08:22:46
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.524
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	384.008	**1.000**	0.08	8.3	ug/L
	B	11	22801.935	**20.000**	0.56	2.8	ug/L
	Al	27	130807.952	**20.000**	0.59	3.0	ug/L
>	Sc	45	956177.851				ug/L
	V	51	7199.440	**3.000**	1.14	37.8	ug/L
	Cr	52	15813.744	**3.000**	0.21	6.9	ug/L
	Cr	53	36074.783	**3.000**	8.39	279.5	ug/L
	Mn	55	6372.233	**1.000**	0.05	5.3	ug/L
	Co	59	4083.139	**1.000**	0.06	6.4	ug/L
	Ni	60	1655.484	**2.000**	0.12	6.0	ug/L
	Cu	63	3822.581	**2.000**	0.05	2.5	ug/L
	Cu	65	1807.291	**2.000**	0.11	5.7	ug/L
	Zn	66	2793.763	**5.000**	0.27	5.3	ug/L
	Zn	68	2085.573	**5.000**	0.38	7.5	ug/L
>	Ge	72	670895.222				ug/L
	As	75	986.925	**2.000**	1.06	53.2	ug/L
	Se	77	3493.672	**2.000**	3.09	154.7	ug/L
	Se	82	157.359	**2.000**	0.10	4.9	ug/L
	Sr	88	4567.818	**0.200**	0.03	13.6	ug/L
	Mo	98	1560.298	**1.000**	0.04	4.5	ug/L
>	Rh	103	664993.047				ug/L
	Ag	107	3370.625	**1.000**	0.08	7.9	ug/L
	Cd	111	487.544	**1.000**	0.07	6.6	ug/L
	Cd	114	933.065	**1.000**	0.04	4.5	ug/L
>	In	115	825696.436				ug/L
	Sn	120	3994.173	**1.000**	0.14	13.7	ug/L
	Sb	121	3403.971	**2.000**	0.10	5.0	ug/L
	Ba	137	983.220	**1.000**	0.04	4.4	ug/L
	Ba	138	6296.686	**1.000**	0.04	4.3	ug/L
>	Tb	159	1113928.179				ug/L
	Tl	205	6228.805	**1.000**	0.05	4.7	ug/L
	Pb	208	7724.613	**1.000**	0.02	2.4	ug/L
	Hg	200	114.678	**0.200**	0.02	12.1	ug/L
	Hg	201	56.000	**0.200**	0.03	13.4	ug/L
>	Bi	209	682763.028				ug/L
	U	238	6852.584	**1.000**	0.04	4.1	ug/L
	C	13	7419.697				ug/L
	W	184	206.668				ug/L
	Pd	106	150.095				ug/L
	Kr	83	54.834				ug/L
	Na	23	508895.492	**100.000**	2.81	2.8	ug/L
	Mg	24	321132.355	**100.000**	3.99	4.0	ug/L

K	39	584343.938	**100.000**	3.67	3.7	ug/L
Ca	44	20255.900	**100.000**	5.13	5.1	ug/L
Ti	47	140.001				ug/L
Sc-1	45	956177.851				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000394	0.000	1.000000	Linear Thru Zero
B	11.009	0.000827	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006252	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.002111	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.003242	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000249	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.006138	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004162	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000837	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002760	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001309	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000795	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000547	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000668	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000049	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000081	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.022940	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002275	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004397	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000587	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001301	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002814	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002002	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000857	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.005521	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005026	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006881	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000548	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000314	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009996	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4895.816292	0.000	1.000000	Linear Thru Zero
Mg	23.985	3163.577636	0.000	1.000000	Linear Thru Zero
K	38.964	4364.775814	0.000	1.000000	Linear Thru Zero
Ca	43.956	162.083302	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Wednesday, August 12, 2020 08:24:51
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.524
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	36311.747	**99.999**	2.26	2.3	ug/L
|	B	11	737170.850	**999.940**	39.42	3.9	ug/L
|	Al	27	1066496.709	**249.200**	6.07	2.4	ug/L
| >	Sc	45	1015826.410				ug/L
|	V	51	378593.662	**100.039**	3.86	3.9	ug/L
|	Cr	52	336280.753	**100.000**	3.09	3.1	ug/L
|	Cr	53	72374.038	**100.024**	2.51	2.5	ug/L
|	Mn	55	1404477.126	**250.000**	7.11	2.8	ug/L
|	Co	59	407391.291	**100.000**	2.84	2.8	ug/L
⌊	Ni	60	201469.822	**249.999**	6.79	2.7	ug/L
⌈	Cu	63	459550.017	**249.999**	1.82	0.7	ug/L
|	Cu	65	216088.537	**249.999**	1.52	0.6	ug/L
|	Zn	66	124933.731	**249.989**	1.04	0.4	ug/L
|	Zn	68	87673.825	**249.991**	4.71	1.9	ug/L
| >	Ge	72	698481.939				ug/L
|	As	75	113894.769	**250.000**	5.35	2.1	ug/L
|	Se	77	13236.971	**250.030**	11.49	4.6	ug/L
|	Se	82	13438.349	**249.999**	8.92	3.6	ug/L
⌊	Sr	88	3033.845	**19.580**	6.54	33.4	ug/L
⌈	Mo	98	160719.519	**100.000**	1.53	1.5	ug/L
| >	Rh	103	672252.576				ug/L
⌊	Ag	107	263278.712	**99.999**	0.80	0.8	ug/L
⌈	Cd	111	55934.531	**100.001**	3.72	3.7	ug/L
|	Cd	114	121141.817	**100.001**	4.15	4.2	ug/L
| >	In	115	839835.434				ug/L
|	Sn	120	247777.235	**100.000**	3.05	3.0	ug/L
⌊	Sb	121	169304.086	**100.000**	2.22	2.2	ug/L
⌈	Ba	137	90825.036	**99.999**	2.93	2.9	ug/L
|	Ba	138	572892.906	**99.999**	1.67	1.7	ug/L
| >	Tb	159	1153542.445				ug/L
|	Tl	205	557131.775	**100.000**	2.74	2.7	ug/L
⌊	Pb	208	1865263.143	**250.000**	5.18	2.1	ug/L
⌈	Hg	200	7623.368	**20.000**	0.51	2.6	ug/L
|	Hg	201	4315.024	**20.000**	1.07	5.3	ug/L
| >	Bi	209	690150.062				ug/L
⌊	U	238	658975.642	**100.000**	2.16	2.2	ug/L
	C	13	7229.541				ug/L
	W	184	390.007				ug/L
	Pd	106	14.142				ug/L
	Kr	83	57.000				ug/L
⌈	Na	23	48665122.382	**9999.994**	286.33	2.9	ug/L
|	Mg	24	31034991.809	**9999.980**	240.93	2.4	ug/L

K	39	43783962.614	**10000.000**	388.13	3.9	ug/L
Ca	44	1207880.782	**9999.654**	76.25	0.8	ug/L
Ti	47	173.335				ug/L
Sc-1	45	1015826.410				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000358	0.000	0.999999	Linear Thru Zero
B	11.009	0.000719	0.000	0.999996	Linear Thru Zero
Al	26.982	0.004167	0.000	0.999200	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003716	0.000	0.999916	Linear Thru Zero
Cr	51.941	0.003243	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000342	0.000	0.999967	Linear Thru Zero
Mn	54.938	0.005530	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004010	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000793	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002631	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001237	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000715	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000500	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000652	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000055	0.000	0.999885	Linear Thru Zero
Se	81.917	0.000077	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000109	0.000	0.430137	Linear Thru Zero
Mo	97.906	0.002389	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.003909	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000666	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.001443	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002929	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002014	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000787	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.004964	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004827	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006471	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000550	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000312	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009552	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4864.583975	0.000	1.000000	Linear Thru Zero
Mg	23.985	3103.027777	0.000	1.000000	Linear Thru Zero
K	38.964	4363.609742	0.000	1.000000	Linear Thru Zero
Ca	43.956	120.387491	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Wednesday, August 12, 2020 08:42:05
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.533
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6.000				ug/L
|	B	11	7546.469				ug/L
|	Al	27	12161.467				ug/L
| >	Sc	45	966443.834				ug/L
|	V	51	2022.046				ug/L
|	Cr	52	6325.538				ug/L
|	Cr	53	36034.783				ug/L
|	Mn	55	520.015				ug/L
|	Co	59	115.556				ug/L
⌊	Ni	60	54.667				ug/L
⌈	Cu	63	116.890				ug/L
|	Cu	65	61.778				ug/L
|	Zn	66	114.667				ug/L
|	Zn	68	252.892				ug/L
| >	Ge	72	674025.282				ug/L
|	As	75	37.831				ug/L
|	Se	77	3541.691				ug/L
|	Se	82	45.332				ug/L
⌊	Sr	88	933.386				ug/L
⌈	Mo	98	27.123				ug/L
| >	Rh	103	665998.062				ug/L
⌊	Ag	107	370.008				ug/L
⌈	Cd	111	-22.073				ug/L
|	Cd	114	-168.955				ug/L
| >	In	115	815623.196				ug/L
|	Sn	120	1453.450				ug/L
⌊	Sb	121	50.000				ug/L
⌈	Ba	137	27.931				ug/L
|	Ba	138	139.266				ug/L
| >	Tb	159	1103548.387				ug/L
|	Tl	205	590.019				ug/L
⌊	Pb	208	63.333				ug/L
⌈	Hg	200	54.437				ug/L
|	Hg	201	28.667				ug/L
| >	Bi	209	677526.630				ug/L
⌊	U	238	46.667				ug/L
	C	13	6992.690				ug/L
	W	184	140.001				ug/L
	Pd	106	130.277				ug/L
	Kr	83	57.667				ug/L
⌈	Na	23	20977.636				ug/L
|	Mg	24	4547.804				ug/L

K	39	148876.205	ug/L
Ca	44	4501.116	ug/L
Ti	47	106.667	ug/L
Sc-1	45	966443.834	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000358	0.000	0.999999	Linear Thru Zero
B	11.009	0.000719	0.000	0.999996	Linear Thru Zero
Al	26.982	0.004167	0.000	0.999200	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003716	0.000	0.999916	Linear Thru Zero
Cr	51.941	0.003243	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000342	0.000	0.999967	Linear Thru Zero
Mn	54.938	0.005530	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004010	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000793	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002631	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001237	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000715	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000500	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000652	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000055	0.000	0.999885	Linear Thru Zero
Se	81.917	0.000077	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000109	0.000	0.430137	Linear Thru Zero
Mo	97.906	0.002389	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.003909	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000666	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.001443	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002929	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002014	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000787	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.004964	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004827	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006471	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000550	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000312	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009552	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4864.583975	0.000	1.000000	Linear Thru Zero
Mg	23.985	3103.027777	0.000	1.000000	Linear Thru Zero
K	38.964	4363.609742	0.000	1.000000	Linear Thru Zero
Ca	43.956	120.387491	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Wednesday, August 12, 2020 08:44:11
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.533
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	383.341	**1.000**	0.10	9.6	ug/L
	B	11	23674.122	**20.000**	0.97	4.9	ug/L
	Al	27	132022.563	**20.000**	1.00	5.0	ug/L
>	Sc	45	964919.128				ug/L
	V	51	10551.358	**3.000**	0.47	15.6	ug/L
	Cr	52	16064.181	**3.000**	0.25	8.5	ug/L
	Cr	53	35780.416	**3.000**	10.75	358.2	ug/L
	Mn	55	6478.979	**1.000**	0.04	4.0	ug/L
	Co	59	4005.329	**1.000**	0.09	9.0	ug/L
	Ni	60	1700.159	**2.000**	0.14	7.1	ug/L
	Cu	63	3935.519	**2.000**	0.03	1.4	ug/L
	Cu	65	1806.402	**2.000**	0.12	5.8	ug/L
	Zn	66	2791.095	**5.000**	0.05	1.1	ug/L
	Zn	68	2113.579	**5.000**	0.27	5.5	ug/L
>	Ge	72	676501.750				ug/L
	As	75	1120.799	**2.000**	0.84	42.2	ug/L
	Se	77	3462.326	**2.000**	0.25	12.7	ug/L
	Se	82	157.860	**2.000**	0.08	3.9	ug/L
	Sr	88	4234.349	**0.200**	0.06	31.3	ug/L
	Mo	98	1586.741	**1.000**	0.02	2.3	ug/L
>	Rh	103	672109.453				ug/L
	Ag	107	3243.914	**1.000**	0.07	7.0	ug/L
	Cd	111	525.613	**1.000**	0.03	2.6	ug/L
	Cd	114	925.009	**1.000**	0.11	11.3	ug/L
>	In	115	830130.322				ug/L
	Sn	120	3644.021	**1.000**	0.05	4.7	ug/L
	Sb	121	3157.215	**2.000**	0.03	1.5	ug/L
	Ba	137	1027.881	**1.000**	0.03	3.2	ug/L
	Ba	138	6426.095	**1.000**	0.02	2.4	ug/L
>	Tb	159	1118283.543				ug/L
	Tl	205	5955.286	**1.000**	0.02	1.9	ug/L
	Pb	208	7771.292	**1.000**	0.05	5.0	ug/L
	Hg	200	112.934	**0.200**	0.04	21.7	ug/L
	Hg	201	76.667	**0.200**	0.03	14.3	ug/L
>	Bi	209	688728.500				ug/L
	U	238	6508.997	**1.000**	0.02	2.1	ug/L
	C	13	7573.154				ug/L
	W	184	166.668				ug/L
	Pd	106	166.157				ug/L
	Kr	83	54.667				ug/L
	Na	23	517457.619	**100.000**	2.42	2.4	ug/L
	Mg	24	320920.163	**100.000**	4.58	4.6	ug/L

	K	39	584821.415	**100.000**	6.08	6.1	ug/L
	Ca	44	19414.073	**100.000**	6.26	6.3	ug/L
	Ti	47	173.335				ug/L
	Sc-1	45	964919.128				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000392	0.000	1.000000	Linear Thru Zero
B	11.009	0.000838	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006218	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.002957	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.003377	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000070	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.006177	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004040	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000853	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002823	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001291	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000791	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000551	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000804	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000068	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000083	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.024558	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002321	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004271	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000660	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001324	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002609	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.001870	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000893	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.005620	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004789	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006888	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000418	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000345	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009381	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4964.799825	0.000	1.000000	Linear Thru Zero
Mg	23.985	3163.723594	0.000	1.000000	Linear Thru Zero
K	38.964	4359.452106	0.000	1.000000	Linear Thru Zero
Ca	43.956	149.129569	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Wednesday, August 12, 2020 08:46:16
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.533
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	37375.349	**99.999**	1.75	1.7	ug/L
|	B	11	759761.623	**999.943**	30.73	3.1	ug/L
|	Al	27	1092937.130	**249.243**	6.18	2.5	ug/L
| >	Sc	45	1026616.589				ug/L
|	V	51	385501.943	**100.019**	2.63	2.6	ug/L
|	Cr	52	339499.153	**99.996**	2.02	2.0	ug/L
|	Cr	53	72790.670	**100.109**	4.05	4.0	ug/L
|	Mn	55	1408809.884	**249.999**	4.82	1.9	ug/L
|	Co	59	407446.401	**100.000**	0.88	0.9	ug/L
⌊	Ni	60	202537.276	**249.999**	6.14	2.5	ug/L
⌈	Cu	63	466674.758	**249.999**	4.39	1.8	ug/L
|	Cu	65	219974.135	**249.999**	2.40	1.0	ug/L
|	Zn	66	128115.628	**249.989**	1.53	0.6	ug/L
|	Zn	68	89673.901	**249.990**	1.33	0.5	ug/L
| >	Ge	72	716383.655				ug/L
|	As	75	116550.741	**249.996**	1.45	0.6	ug/L
|	Se	77	13432.424	**250.036**	1.50	0.6	ug/L
|	Se	82	13874.819	**249.999**	5.79	2.3	ug/L
⌊	Sr	88	3233.917	**19.694**	4.78	24.2	ug/L
⌈	Mo	98	162710.163	**100.000**	1.61	1.6	ug/L
| >	Rh	103	687532.324				ug/L
⌊	Ag	107	264475.447	**99.999**	1.82	1.8	ug/L
⌈	Cd	111	57314.800	**100.000**	1.61	1.6	ug/L
|	Cd	114	123808.235	**100.001**	0.28	0.3	ug/L
| >	In	115	853872.303				ug/L
|	Sn	120	253848.781	**100.001**	1.80	1.8	ug/L
⌊	Sb	121	167163.309	**100.002**	2.24	2.2	ug/L
⌈	Ba	137	92418.898	**99.999**	2.07	2.1	ug/L
|	Ba	138	582557.308	**99.999**	2.77	2.8	ug/L
| >	Tb	159	1173636.139				ug/L
|	Tl	205	558898.802	**100.000**	3.12	3.1	ug/L
⌊	Pb	208	1875675.442	**250.000**	5.76	2.3	ug/L
⌈	Hg	200	7656.964	**20.000**	0.90	4.5	ug/L
|	Hg	201	4419.074	**20.000**	0.60	3.0	ug/L
| >	Bi	209	695605.344				ug/L
⌊	U	238	658295.650	**100.000**	2.80	2.8	ug/L
	C	13	6362.227				ug/L
	W	184	353.339				ug/L
	Pd	106	-39.425				ug/L
	Kr	83	60.334				ug/L
⌈	Na	23	49556149.877	**9999.998**	247.70	2.5	ug/L
|	Mg	24	31821235.646	**10000.006**	217.09	2.2	ug/L

K	39	44994416.622	**10000.028**	195.34	2.0	ug/L
Ca	44	1231884.222	**9999.785**	370.82	3.7	ug/L
Ti	47	200.002				ug/L
Sc-1	45	1026616.589				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000364	0.000	1.000000	Linear Thru Zero
B	11.009	0.000733	0.000	0.999996	Linear Thru Zero
Al	26.982	0.004222	0.000	0.999285	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003734	0.000	0.999981	Linear Thru Zero
Cr	51.941	0.003241	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000336	0.000	0.999344	Linear Thru Zero
Mn	54.938	0.005487	0.000	1.000000	Linear Thru Zero
Co	58.933	0.003967	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000789	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002604	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001228	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000715	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000499	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000650	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000054	0.000	0.999836	Linear Thru Zero
Se	81.917	0.000077	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000159	0.000	0.546925	Linear Thru Zero
Mo	97.906	0.002366	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.003841	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000671	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001452	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002955	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.001958	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000787	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.004965	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004761	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006397	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000547	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000316	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009469	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4953.518352	0.000	1.000000	Linear Thru Zero
Mg	23.985	3181.666990	0.000	1.000000	Linear Thru Zero
K	38.964	4484.541533	0.000	1.000000	Linear Thru Zero
Ca	43.956	122.740949	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Wednesday, August 12, 2020 11:23:31
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.586
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6.667				ug/L
|	B	11	31330.596				ug/L
|	Al	27	13633.562				ug/L
| >	Sc	45	923126.370				ug/L
|	V	51	1272.800				ug/L
|	Cr	52	6675.787				ug/L
|	Cr	53	37259.731				ug/L
|	Mn	55	983.387				ug/L
|	Co	59	55.556				ug/L
⌊	Ni	60	73.334				ug/L
⌈	Cu	63	151.557				ug/L
|	Cu	65	110.667				ug/L
|	Zn	66	198.224				ug/L
|	Zn	68	237.336				ug/L
| >	Ge	72	627874.928				ug/L
|	As	75	120.737				ug/L
|	Se	77	3628.058				ug/L
|	Se	82	46.889				ug/L
⌊	Sr	88	1400.114				ug/L
⌈	Mo	98	102.457				ug/L
| >	Rh	103	593425.358				ug/L
⌊	Ag	107	336.673				ug/L
⌈	Cd	111	-52.798				ug/L
|	Cd	114	-188.463				ug/L
| >	In	115	756972.985				ug/L
|	Sn	120	1396.351				ug/L
⌊	Sb	121	63.334				ug/L
⌈	Ba	137	29.263				ug/L
|	Ba	138	156.598				ug/L
| >	Tb	159	1006376.193				ug/L
|	Tl	205	583.352				ug/L
⌊	Pb	208	76.667				ug/L
⌈	Hg	200	62.267				ug/L
|	Hg	201	46.000				ug/L
| >	Bi	209	602759.090				ug/L
⌊	U	238	66.667				ug/L
	C	13	7486.415				ug/L
	W	184	166.668				ug/L
	Pd	106	110.667				ug/L
	Kr	83	51.167				ug/L
⌈	Na	23	122843.391				ug/L
|	Mg	24	11767.775				ug/L

K	39	148150.856	ug/L
Ca	44	4767.926	ug/L
Ti	47	126.668	ug/L
Sc-1	45	923126.370	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000364	0.000	1.000000	Linear Thru Zero
B	11.009	0.000733	0.000	0.999996	Linear Thru Zero
Al	26.982	0.004222	0.000	0.999285	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003734	0.000	0.999981	Linear Thru Zero
Cr	51.941	0.003241	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000336	0.000	0.999344	Linear Thru Zero
Mn	54.938	0.005487	0.000	1.000000	Linear Thru Zero
Co	58.933	0.003967	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000789	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002604	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001228	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000715	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000499	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000650	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000054	0.000	0.999836	Linear Thru Zero
Se	81.917	0.000077	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000159	0.000	0.546925	Linear Thru Zero
Mo	97.906	0.002366	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.003841	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000671	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001452	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002955	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.001958	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000787	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.004965	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004761	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006397	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000547	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000316	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009469	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4953.518352	0.000	1.000000	Linear Thru Zero
Mg	23.985	3181.666990	0.000	1.000000	Linear Thru Zero
K	38.964	4484.541533	0.000	1.000000	Linear Thru Zero
Ca	43.956	122.740949	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Wednesday, August 12, 2020 11:25:37
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.586
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	396.009	**1.000**	0.09	8.6	ug/L
|	B	11	47624.612	**20.000**	1.00	5.0	ug/L
|	Al	27	138864.136	**20.000**	0.13	0.7	ug/L
| >	Sc	45	951624.371				ug/L
|	V	51	10884.002	**3.000**	0.73	24.3	ug/L
|	Cr	52	16194.419	**3.000**	0.09	3.0	ug/L
|	Cr	53	38166.716	**3.000**	5.85	194.9	ug/L
|	Mn	55	8607.467	**1.000**	0.12	12.3	ug/L
|	Co	59	3838.589	**1.000**	0.01	1.1	ug/L
⌊	Ni	60	1643.482	**2.000**	0.07	3.6	ug/L
⌈	Cu	63	3820.804	**2.000**	0.07	3.7	ug/L
|	Cu	65	1840.186	**2.000**	0.07	3.7	ug/L
|	Zn	66	2910.689	**5.000**	0.31	6.1	ug/L
|	Zn	68	2114.913	**5.000**	0.26	5.2	ug/L
| >	Ge	72	653685.551				ug/L
|	As	75	1287.822	**2.000**	0.39	19.6	ug/L
|	Se	77	3714.593	**2.000**	4.26	213.0	ug/L
|	Se	82	151.698	**2.000**	0.04	1.8	ug/L
⌊	Sr	88	6302.188	**0.200**	0.01	3.4	ug/L
⌈	Mo	98	1574.365	**1.000**	0.03	3.1	ug/L
| >	Rh	103	615161.815				ug/L
⌊	Ag	107	3117.202	**1.000**	0.02	2.2	ug/L
⌈	Cd	111	497.605	**1.000**	0.05	5.0	ug/L
|	Cd	114	982.634	**1.000**	0.11	11.0	ug/L
| >	In	115	774194.481				ug/L
|	Sn	120	3413.720	**1.000**	0.07	7.2	ug/L
⌊	Sb	121	3317.276	**2.000**	0.15	7.7	ug/L
⌈	Ba	137	957.923	**1.000**	0.05	4.5	ug/L
|	Ba	138	6208.661	**1.000**	0.02	1.5	ug/L
| >	Tb	159	1041478.722				ug/L
|	Tl	205	5985.317	**1.000**	0.09	8.7	ug/L
⌊	Pb	208	7544.542	**1.000**	0.01	1.5	ug/L
⌈	Hg	200	118.118	**0.200**	0.05	23.4	ug/L
|	Hg	201	75.334	**0.200**	0.10	50.4	ug/L
| >	Bi	209	629487.078				ug/L
⌊	U	238	5915.258	**1.000**	0.03	2.6	ug/L
	C	13	7576.495				ug/L
	W	184	190.002				ug/L
	Pd	106	146.386				ug/L
	Kr	83	54.167				ug/L
⌈	Na	23	1097482.214	**100.000**	25.04	25.0	ug/L
|	Mg	24	401291.201	**100.000**	11.22	11.2	ug/L

	K	39	593732.343	**100.000**	3.95	3.9	ug/L
	Ca	44	24426.291	**100.000**	11.50	11.5	ug/L
	Ti	47	140.001				ug/L
	Sc-1	45	951624.371				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000410	0.000	1.000000	Linear Thru Zero
B	11.009	0.000805	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006557	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003376	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.003265	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000084	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.007954	0.000	1.000000	Linear Thru Zero
Co	58.933	0.003975	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000824	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002801	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001320	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000828	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000572	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000892	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000047	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000079	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.037031	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002387	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004498	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000712	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001521	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002568	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002097	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000890	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.005804	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005161	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007167	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000423	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000215	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009287	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	9746.388231	0.000	1.000000	Linear Thru Zero
Mg	23.985	3895.234254	0.000	1.000000	Linear Thru Zero
K	38.964	4455.814871	0.000	1.000000	Linear Thru Zero
Ca	43.956	196.583651	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Wednesday, August 12, 2020 11:27:42
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.586
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	40106.950	**100.000**	2.64	2.6	ug/L
|	B	11	859830.306	**1000.003**	51.27	5.1	ug/L
|	Al	27	1135306.446	**249.227**	8.83	3.5	ug/L
| >	Sc	45	1017622.089				ug/L
|	V	51	389510.095	**100.010**	3.63	3.6	ug/L
|	Cr	52	348587.463	**100.002**	1.34	1.3	ug/L
|	Cr	53	73372.106	**100.114**	4.68	4.7	ug/L
|	Mn	55	1461032.498	**249.998**	6.57	2.6	ug/L
|	Co	59	405254.071	**100.000**	1.35	1.3	ug/L
⌊	Ni	60	203270.652	**250.000**	4.71	1.9	ug/L
⌈	Cu	63	457830.052	**249.999**	4.87	1.9	ug/L
|	Cu	65	215223.220	**249.999**	4.61	1.8	ug/L
|	Zn	66	129151.266	**249.990**	3.89	1.6	ug/L
|	Zn	68	90487.656	**249.992**	2.06	0.8	ug/L
| >	Ge	72	684044.028				ug/L
|	As	75	116011.810	**249.995**	1.76	0.7	ug/L
|	Se	77	13660.770	**250.029**	6.00	2.4	ug/L
|	Se	82	13884.901	**250.000**	8.04	3.2	ug/L
⌊	Sr	88	3467.337	**19.494**	5.04	25.9	ug/L
⌈	Mo	98	159468.388	**100.001**	0.77	0.8	ug/L
| >	Rh	103	630280.074				ug/L
⌊	Ag	107	254896.599	**99.999**	0.34	0.3	ug/L
⌈	Cd	111	56631.169	**100.000**	1.59	1.6	ug/L
|	Cd	114	122958.427	**100.000**	1.05	1.1	ug/L
| >	In	115	811239.771				ug/L
|	Sn	120	247481.638	**100.002**	1.47	1.5	ug/L
⌊	Sb	121	168970.722	**100.000**	1.40	1.4	ug/L
⌈	Ba	137	88481.985	**99.999**	1.77	1.8	ug/L
|	Ba	138	562747.993	**99.999**	1.09	1.1	ug/L
| >	Tb	159	1101930.688				ug/L
|	Tl	205	547332.080	**100.000**	1.75	1.7	ug/L
⌊	Pb	208	1807320.415	**250.000**	2.60	1.0	ug/L
⌈	Hg	200	7476.900	**20.001**	0.52	2.6	ug/L
|	Hg	201	4293.014	**20.001**	0.82	4.1	ug/L
| >	Bi	209	639451.340				ug/L
⌊	U	238	610249.077	**100.000**	0.66	0.7	ug/L
	C	13	6639.101				ug/L
	W	184	340.005				ug/L
	Pd	106	135.140				ug/L
	Kr	83	50.500				ug/L
⌈	Na	23	51399655.039	**9999.099**	53.19	0.5	ug/L
|	Mg	24	33263884.887	**9999.829**	59.05	0.6	ug/L

	K	39	45726956.750	**10000.022**	254.10	2.5	ug/L
	Ca	44	1276483.084	**9999.454**	97.28	1.0	ug/L
	Ti	47	286.672				ug/L
	Sc-1	45	1017622.089				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000394	0.000	1.000000	Linear Thru Zero
B	11.009	0.000812	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004420	0.000	0.999253	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003816	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.003354	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000317	0.000	0.999282	Linear Thru Zero
Mn	54.938	0.005742	0.000	0.999999	Linear Thru Zero
Co	58.933	0.003983	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000799	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002677	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001258	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000754	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000528	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000678	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000057	0.000	0.999893	Linear Thru Zero
Se	81.917	0.000081	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000146	0.000	0.367535	Linear Thru Zero
Mo	97.906	0.002529	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004039	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000699	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001518	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003032	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.002082	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000803	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.005105	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004963	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006561	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000580	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000332	0.000	0.999994	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009542	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5128.142989	0.000	0.999959	Linear Thru Zero
Mg	23.985	3325.268708	0.000	0.999999	Linear Thru Zero
K	38.964	4557.870384	0.000	1.000000	Linear Thru Zero
Ca	43.956	127.178456	0.000	0.999985	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Wednesday, August 12, 2020 15:00:17
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.629
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6.000				ug/L
|	B	11	11470.579				ug/L
|	Al	27	13984.107				ug/L
| >	Sc	45	851734.834				ug/L
|	V	51	-56.207				ug/L
|	Cr	52	5508.344				ug/L
|	Cr	53	32568.293				ug/L
|	Mn	55	680.025				ug/L
|	Co	59	53.333				ug/L
⌊	Ni	60	56.667				ug/L
⌈	Cu	63	137.334				ug/L
|	Cu	65	80.445				ug/L
|	Zn	66	177.780				ug/L
|	Zn	68	213.336				ug/L
| >	Ge	72	573451.103				ug/L
|	As	75	373.677				ug/L
|	Se	77	3293.930				ug/L
|	Se	82	44.147				ug/L
⌊	Sr	88	1000.055				ug/L
⌈	Mo	98	16.082				ug/L
| >	Rh	103	519928.864				ug/L
⌊	Ag	107	293.338				ug/L
⌈	Cd	111	10.444				ug/L
|	Cd	114	-147.491				ug/L
| >	In	115	668087.327				ug/L
|	Sn	120	1376.640				ug/L
⌊	Sb	121	46.667				ug/L
⌈	Ba	137	18.614				ug/L
|	Ba	138	143.282				ug/L
| >	Tb	159	880964.512				ug/L
|	Tl	205	636.689				ug/L
⌊	Pb	208	36.667				ug/L
⌈	Hg	200	35.387				ug/L
|	Hg	201	22.667				ug/L
| >	Bi	209	530688.017				ug/L
⌊	U	238	16.667				ug/L
	C	13	8180.347				ug/L
	W	184	200.001				ug/L
	Pd	106	133.496				ug/L
	Kr	83	40.667				ug/L
⌈	Na	23	24078.528				ug/L
|	Mg	24	4928.009				ug/L

K	39	145841.279	ug/L
Ca	44	3760.778	ug/L
Ti	47	133.334	ug/L
Sc-1	45	851734.834	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000394	0.000	1.000000	Linear Thru Zero
B	11.009	0.000812	0.000	1.000000	Linear Thru Zero
Al	26.982	0.004420	0.000	0.999253	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003816	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.003354	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000317	0.000	0.999282	Linear Thru Zero
Mn	54.938	0.005742	0.000	0.999999	Linear Thru Zero
Co	58.933	0.003983	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000799	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002677	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001258	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000754	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000528	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000678	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000057	0.000	0.999893	Linear Thru Zero
Se	81.917	0.000081	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000146	0.000	0.367535	Linear Thru Zero
Mo	97.906	0.002529	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004039	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.000699	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001518	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003032	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.002082	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000803	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.005105	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.004963	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006561	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000580	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000332	0.000	0.999994	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009542	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5128.142989	0.000	0.999959	Linear Thru Zero
Mg	23.985	3325.268708	0.000	0.999999	Linear Thru Zero
K	38.964	4557.870384	0.000	1.000000	Linear Thru Zero
Ca	43.956	127.178456	0.000	0.999985	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Wednesday, August 12, 2020 15:02:23
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.629
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	424.010	**1.000**	0.09	8.6	ug/L
|	B	11	28454.467	**20.000**	1.57	7.8	ug/L
|	Al	27	133818.095	**20.000**	1.34	6.7	ug/L
| >	Sc	45	848623.384				ug/L
|	V	51	11318.832	**3.000**	0.90	29.9	ug/L
|	Cr	52	14735.295	**3.000**	0.11	3.7	ug/L
|	Cr	53	32912.953	**3.000**	1.34	44.6	ug/L
|	Mn	55	6278.837	**1.000**	0.05	4.9	ug/L
|	Co	59	3698.531	**1.000**	0.03	2.8	ug/L
⌊	Ni	60	1579.471	**2.000**	0.09	4.5	ug/L
⌈	Cu	63	3639.841	**2.000**	0.02	1.0	ug/L
|	Cu	65	1715.718	**2.000**	0.08	3.8	ug/L
|	Zn	66	2644.386	**5.000**	0.16	3.2	ug/L
|	Zn	68	1896.642	**5.000**	0.22	4.5	ug/L
| >	Ge	72	579825.596				ug/L
|	As	75	976.842	**2.000**	0.21	10.3	ug/L
|	Se	77	3205.232	**2.000**	1.08	54.2	ug/L
|	Se	82	142.303	**2.000**	0.24	11.8	ug/L
⌊	Sr	88	4367.725	**0.200**	0.02	11.3	ug/L
⌈	Mo	98	1349.672	**1.000**	0.08	8.3	ug/L
| >	Rh	103	529876.414				ug/L
⌊	Ag	107	2720.410	**1.000**	0.08	7.6	ug/L
⌈	Cd	111	524.645	**1.000**	0.03	2.6	ug/L
|	Cd	114	944.606	**1.000**	0.10	9.5	ug/L
| >	In	115	668540.936				ug/L
|	Sn	120	2617.044	**1.000**	0.07	6.8	ug/L
⌊	Sb	121	3080.524	**2.000**	0.11	5.4	ug/L
⌈	Ba	137	863.933	**1.000**	0.07	7.4	ug/L
|	Ba	138	5494.221	**1.000**	0.01	1.3	ug/L
| >	Tb	159	900222.237				ug/L
|	Tl	205	5628.412	**1.000**	0.05	4.8	ug/L
⌊	Pb	208	6644.275	**1.000**	0.10	9.6	ug/L
⌈	Hg	200	110.763	**0.200**	0.02	10.5	ug/L
|	Hg	201	51.333	**0.200**	0.07	33.3	ug/L
| >	Bi	209	539970.012				ug/L
⌊	U	238	5414.948	**1.000**	0.01	1.4	ug/L
	C	13	8240.400				ug/L
	W	184	193.334				ug/L
	Pd	106	146.225				ug/L
	Kr	83	42.000				ug/L
⌈	Na	23	538794.553	**100.000**	1.03	1.0	ug/L
|	Mg	24	333425.806	**100.000**	1.94	1.9	ug/L

K	39	577715.223	**100.000**	5.28	5.3	ug/L
Ca	44	18939.735	**100.000**	5.54	5.5	ug/L
Ti	47	133.334				ug/L
Sc-1	45	848623.384				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000494	0.000	1.000000	Linear Thru Zero
B	11.009	0.001006	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007080	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004437	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.003633	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000181	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.006608	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004299	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000899	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003020	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001411	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000850	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000581	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000518	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000106	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000084	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.028905	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002511	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004563	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000769	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001634	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.001852	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002268	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000940	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.005940	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005532	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007360	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000692	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000261	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.009994	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5147.160246	0.000	1.000000	Linear Thru Zero
Mg	23.985	3284.977971	0.000	1.000000	Linear Thru Zero
K	38.964	4318.739437	0.000	1.000000	Linear Thru Zero
Ca	43.956	151.789565	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Wednesday, August 12, 2020 15:04:28
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.629
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	36459.042	**99.998**	1.85	1.9	ug/L
|	B	11	719179.218	**999.911**	12.72	1.3	ug/L
|	Al	27	1006277.532	**249.157**	3.47	1.4	ug/L
| >	Sc	45	859030.894				ug/L
|	V	51	358072.845	**99.994**	3.04	3.0	ug/L
|	Cr	52	313830.124	**99.999**	2.34	2.3	ug/L
|	Cr	53	65126.616	**100.047**	8.53	8.5	ug/L
|	Mn	55	1321969.478	**250.000**	2.38	1.0	ug/L
|	Co	59	368655.367	**100.000**	2.61	2.6	ug/L
⌊	Ni	60	183230.968	**249.999**	5.34	2.1	ug/L
⌈	Cu	63	420330.305	**249.999**	4.17	1.7	ug/L
|	Cu	65	196222.751	**249.999**	2.66	1.1	ug/L
|	Zn	66	119863.627	**249.995**	2.15	0.9	ug/L
|	Zn	68	83092.566	**249.996**	3.34	1.3	ug/L
| >	Ge	72	591733.289				ug/L
|	As	75	107595.389	**250.005**	4.16	1.7	ug/L
|	Se	77	12206.365	**250.045**	6.87	2.7	ug/L
|	Se	82	12873.705	**250.001**	7.54	3.0	ug/L
⌊	Sr	88	2867.130	**19.633**	4.19	21.3	ug/L
⌈	Mo	98	144484.292	**100.001**	2.45	2.4	ug/L
| >	Rh	103	542207.305				ug/L
⌊	Ag	107	232554.209	**99.999**	1.95	2.0	ug/L
⌈	Cd	111	52007.584	**100.000**	0.49	0.5	ug/L
|	Cd	114	113506.707	**100.000**	1.18	1.2	ug/L
| >	In	115	700989.348				ug/L
|	Sn	120	226337.305	**100.004**	1.22	1.2	ug/L
⌊	Sb	121	157723.892	**100.000**	0.65	0.6	ug/L
⌈	Ba	137	82083.662	**99.999**	0.05	0.0	ug/L
|	Ba	138	517386.369	**99.999**	1.15	1.1	ug/L
| >	Tb	159	976418.017				ug/L
|	Tl	205	503411.217	**99.999**	1.31	1.3	ug/L
⌊	Pb	208	1708053.119	**250.000**	2.89	1.2	ug/L
⌈	Hg	200	7105.397	**20.000**	0.14	0.7	ug/L
|	Hg	201	4062.908	**20.001**	0.48	2.4	ug/L
| >	Bi	209	577240.523				ug/L
⌊	U	238	578702.594	**100.000**	1.04	1.0	ug/L
	C	13	6852.594				ug/L
	W	184	320.004				ug/L
	Pd	106	41.606				ug/L
	Kr	83	56.500				ug/L
⌈	Na	23	45227326.645	**9999.861**	495.36	5.0	ug/L
|	Mg	24	29282172.981	**9999.878**	370.97	3.7	ug/L

K	39	40818546.160	**9999.938**	359.64	3.6	ug/L
Ca	44	1142119.484	**9999.667**	352.50	3.5	ug/L
Ti	47	220.003				ug/L
Sc-1	45	859030.894				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000424	0.000	0.999999	Linear Thru Zero
B	11.009	0.000824	0.000	0.999990	Linear Thru Zero
Al	26.982	0.004636	0.000	0.999112	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004167	0.000	0.999998	Linear Thru Zero
Cr	51.941	0.003588	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000375	0.000	0.999879	Linear Thru Zero
Mn	54.938	0.006151	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004289	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000853	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002842	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001326	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000809	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000560	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000725	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000060	0.000	0.999752	Linear Thru Zero
Se	81.917	0.000087	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000157	0.000	0.478949	Linear Thru Zero
Mo	97.906	0.002666	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004284	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000742	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001621	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003209	0.000	0.999991	Linear Thru Zero
Sb	120.904	0.002250	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000840	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.005298	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005150	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006998	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000612	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000350	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.010023	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4520.387489	0.000	0.999999	Linear Thru Zero
Mg	23.985	2927.760219	0.000	0.999999	Linear Thru Zero
K	38.964	4067.295633	0.000	1.000000	Linear Thru Zero
Ca	43.956	113.839666	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Wednesday, August 12, 2020 15:13:35
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.635
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 10
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10.000				ug/L
|	B	11	12742.260				ug/L
|	Al	27	12505.278				ug/L
| >	Sc	45	800791.409				ug/L
|	V	51	842.542				ug/L
|	Cr	52	4731.232				ug/L
|	Cr	53	29430.953				ug/L
|	Mn	55	563.351				ug/L
|	Co	59	88.889				ug/L
⌊	Ni	60	52.000				ug/L
⌈	Cu	63	127.556				ug/L
|	Cu	65	71.556				ug/L
|	Zn	66	158.668				ug/L
|	Zn	68	203.113				ug/L
| >	Ge	72	550487.220				ug/L
|	As	75	217.481				ug/L
|	Se	77	2973.653				ug/L
|	Se	82	38.590				ug/L
⌊	Sr	88	800.036				ug/L
⌈	Mo	98	34.749				ug/L
| >	Rh	103	504843.115				ug/L
⌊	Ag	107	380.008				ug/L
⌈	Cd	111	-31.143				ug/L
|	Cd	114	-166.130				ug/L
| >	In	115	645072.039				ug/L
|	Sn	120	993.303				ug/L
⌊	Sb	121	93.334				ug/L
⌈	Ba	137	21.275				ug/L
|	Ba	138	163.276				ug/L
| >	Tb	159	862587.224				ug/L
|	Tl	205	583.352				ug/L
⌊	Pb	208	60.000				ug/L
⌈	Hg	200	73.814				ug/L
|	Hg	201	54.000				ug/L
| >	Bi	209	529446.696				ug/L
⌊	U	238	20.000				ug/L
	C	13	7489.752				ug/L
	W	184	133.333				ug/L
	Pd	106	114.667				ug/L
	Kr	83	47.167				ug/L
⌈	Na	23	22100.311				ug/L
|	Mg	24	4954.687				ug/L

	K	39	144242.629	ug/L
	Ca	44	3694.090	ug/L
	Ti	47	153.335	ug/L
	Sc-1	45	800791.409	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000424	0.000	0.999999	Linear Thru Zero
B	11.009	0.000824	0.000	0.999990	Linear Thru Zero
Al	26.982	0.004636	0.000	0.999112	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004167	0.000	0.999998	Linear Thru Zero
Cr	51.941	0.003588	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000375	0.000	0.999879	Linear Thru Zero
Mn	54.938	0.006151	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004289	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000853	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002842	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001326	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000809	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000560	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000725	0.000	0.999997	Linear Thru Zero
Se	76.920	0.000060	0.000	0.999752	Linear Thru Zero
Se	81.917	0.000087	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000157	0.000	0.478949	Linear Thru Zero
Mo	97.906	0.002666	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004284	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000742	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001621	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003209	0.000	0.999991	Linear Thru Zero
Sb	120.904	0.002250	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000840	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.005298	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005150	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.006998	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000612	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000350	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.010023	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4520.387489	0.000	0.999999	Linear Thru Zero
Mg	23.985	2927.760219	0.000	0.999999	Linear Thru Zero
K	38.964	4067.295633	0.000	1.000000	Linear Thru Zero
Ca	43.956	113.839666	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Wednesday, August 12, 2020 15:15:41
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.635
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	389.342	**1.000**	0.04	4.0	ug/L
	B	11	29066.397	**20.000**	1.47	7.4	ug/L
	Al	27	130866.089	**20.000**	0.13	0.7	ug/L
>	Sc	45	802448.248				ug/L
	V	51	9020.158	**3.000**	0.65	21.6	ug/L
	Cr	52	14491.561	**3.000**	0.12	3.9	ug/L
	Cr	53	29892.563	**3.000**	9.38	312.6	ug/L
	Mn	55	6228.801	**1.000**	0.07	7.4	ug/L
	Co	59	3722.985	**1.000**	0.02	2.1	ug/L
	Ni	60	1508.125	**2.000**	0.07	3.5	ug/L
	Cu	63	3571.368	**2.000**	0.07	3.7	ug/L
	Cu	65	1663.263	**2.000**	0.05	2.5	ug/L
	Zn	66	2643.941	**5.000**	0.11	2.3	ug/L
	Zn	68	1898.865	**5.000**	0.12	2.4	ug/L
>	Ge	72	552133.473				ug/L
	As	75	1099.127	**2.000**	0.31	15.5	ug/L
	Se	77	2981.823	**2.000**	128.42	6421.0	ug/L
	Se	82	139.079	**2.000**	0.28	14.0	ug/L
	Sr	88	4734.569	**0.200**	0.03	13.1	ug/L
	Mo	98	1378.780	**1.000**	0.03	3.0	ug/L
>	Rh	103	506615.658				ug/L
	Ag	107	2757.085	**1.000**	0.00	0.0	ug/L
	Cd	111	511.134	**1.000**	0.09	9.0	ug/L
	Cd	114	1019.518	**1.000**	0.06	6.0	ug/L
>	In	115	654976.097				ug/L
	Sn	120	2917.051	**1.000**	0.02	2.5	ug/L
	Sb	121	3197.231	**2.000**	0.10	5.0	ug/L
	Ba	137	827.881	**1.000**	0.04	4.0	ug/L
	Ba	138	5532.861	**1.000**	0.03	3.2	ug/L
>	Tb	159	872661.295				ug/L
	Tl	205	5291.544	**1.000**	0.02	2.1	ug/L
	Pb	208	6427.550	**1.000**	0.02	1.8	ug/L
	Hg	200	118.310	**0.200**	0.05	24.5	ug/L
	Hg	201	65.334	**0.200**	0.21	104.1	ug/L
>	Bi	209	531848.730				ug/L
	U	238	5358.246	**1.000**	0.05	4.5	ug/L
	C	13	7709.936				ug/L
	W	184	160.001				ug/L
	Pd	106	122.906				ug/L
	Kr	83	48.667				ug/L
	Na	23	517432.894	**100.000**	3.15	3.1	ug/L
	Mg	24	319631.697	**100.000**	2.98	3.0	ug/L

K	39	564627.441	**100.000**	4.98	5.0	ug/L
Ca	44	18238.298	**100.000**	5.23	5.2	ug/L
Ti	47	160.002				ug/L
Sc-1	45	802448.248				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000473	0.000	1.000000	Linear Thru Zero
B	11.009	0.001018	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007375	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003396	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.004050	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000160	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.007073	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004531	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000908	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003122	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001442	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000900	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000614	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000799	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000000	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000091	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.035771	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002653	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004689	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000831	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001815	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.002914	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002367	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000923	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.006154	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005384	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007298	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000416	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000106	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.010045	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4953.325834	0.000	1.000000	Linear Thru Zero
Mg	23.985	3146.770103	0.000	1.000000	Linear Thru Zero
K	38.964	4203.848111	0.000	1.000000	Linear Thru Zero
Ca	43.956	145.442082	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Wednesday, August 12, 2020 15:17:47
Sample File: C:\Elandata\Sample\PE_EL4_200812.sam
Blank File: C:\Elandata\Dataset\2020 AUG (10-16)\Blank.635
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_200812.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	36587.558	**99.999**	2.16	2.2	ug/L
|	B	11	733212.450	**999.927**	64.69	6.5	ug/L
|	Al	27	1010767.667	**249.132**	10.64	4.3	ug/L
| >	Sc	45	838087.025				ug/L
|	V	51	354544.224	**100.018**	3.35	3.3	ug/L
|	Cr	52	314725.010	**99.991**	2.82	2.8	ug/L
|	Cr	53	64414.745	**100.054**	5.06	5.1	ug/L
|	Mn	55	1330279.603	**250.000**	7.27	2.9	ug/L
|	Co	59	371173.718	**100.000**	3.63	3.6	ug/L
⌊	Ni	60	184214.549	**249.999**	5.42	2.2	ug/L
⌈	Cu	63	416947.924	**249.999**	5.91	2.4	ug/L
|	Cu	65	194942.123	**249.999**	4.75	1.9	ug/L
|	Zn	66	118259.433	**249.990**	2.43	1.0	ug/L
|	Zn	68	82805.290	**249.993**	2.70	1.1	ug/L
| >	Ge	72	576479.036				ug/L
|	As	75	106450.651	**249.999**	4.16	1.7	ug/L
|	Se	77	12158.797	**250.016**	8.75	3.5	ug/L
|	Se	82	12679.425	**249.999**	9.93	4.0	ug/L
⌊	Sr	88	3367.295	**19.682**	3.52	17.9	ug/L
⌈	Mo	98	145632.681	**100.000**	2.04	2.0	ug/L
| >	Rh	103	537298.549				ug/L
⌊	Ag	107	231877.841	**99.999**	1.10	1.1	ug/L
⌈	Cd	111	52521.973	**99.999**	1.45	1.5	ug/L
|	Cd	114	114173.001	**99.999**	0.50	0.5	ug/L
| >	In	115	691750.998				ug/L
|	Sn	120	226364.501	**100.001**	2.05	2.1	ug/L
⌊	Sb	121	160081.047	**99.999**	1.77	1.8	ug/L
⌈	Ba	137	82301.056	**99.999**	1.35	1.4	ug/L
|	Ba	138	524582.311	**99.999**	0.57	0.6	ug/L
| >	Tb	159	943894.225				ug/L
|	Tl	205	502284.499	**100.000**	1.59	1.6	ug/L
⌊	Pb	208	1688950.083	**250.000**	1.52	0.6	ug/L
⌈	Hg	200	7077.504	**20.001**	0.28	1.4	ug/L
|	Hg	201	4035.563	**20.001**	0.25	1.3	ug/L
| >	Bi	209	563710.893				ug/L
⌊	U	238	578103.708	**100.000**	0.46	0.5	ug/L
	C	13	6755.848				ug/L
	W	184	300.004				ug/L
	Pd	106	21.721				ug/L
	Kr	83	56.834				ug/L
⌈	Na	23	45862311.756	**9999.919**	334.96	3.3	ug/L
|	Mg	24	29776280.346	**9999.943**	437.58	4.4	ug/L

K	39	41351302.617	**9999.980**	429.97	4.3	ug/L
Ca	44	1146536.323	**9999.727**	560.66	5.6	ug/L
Ti	47	246.670				ug/L
Sc-1	45	838087.025				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000437	0.000	1.000000	Linear Thru Zero
B	11.009	0.000861	0.000	0.999993	Linear Thru Zero
Al	26.982	0.004781	0.000	0.999059	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004219	0.000	0.999983	Linear Thru Zero
Cr	51.941	0.003695	0.000	0.999996	Linear Thru Zero
Cr	52.941	0.000400	0.000	0.999838	Linear Thru Zero
Mn	54.938	0.006344	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004427	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.000879	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002892	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001352	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000820	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000573	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000737	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000063	0.000	0.999968	Linear Thru Zero
Se	81.917	0.000088	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000224	0.000	0.532799	Linear Thru Zero
Mo	97.906	0.002710	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.004309	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000759	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001653	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.003259	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.002314	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.000871	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.005556	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.005316	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.007158	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000621	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000353	0.000	0.999976	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.010254	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	4584.058071	0.000	1.000000	Linear Thru Zero
Mg	23.985	2977.149528	0.000	1.000000	Linear Thru Zero
K	38.964	4120.714312	0.000	1.000000	Linear Thru Zero
Ca	43.956	114.287339	0.000	0.999996	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Wednesday, August 12, 2020 06:52:33
Method File: C:\Elandata\Method\EL4\BCL_EL4-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.820
Tuning File: C:\Elandata\Tuning\Default.tun
Number of Sweeps: 125
Number of Readings: 1
Number of Replicates: 3
Measurement Unit: cps

Instrument Tuning Report

File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
C	12.000	11.975	2753	2087	0.681	
Mg	23.985	24.025	5666	2106	0.676	
Ar2	75.930	75.925	18301	2161	0.704	
In	114.904	114.875	27787	2225	0.702	
Ce	139.905	139.875	33861	2250	0.701	
Pb	207.977	207.975	50437	2349	0.698	
U	238.050	238.075	57768	2420	0.708	

Complete Mass Scanning Results

Mass	Meas. Intens. Mean	Meas. Intens. SD	Meas. Intens. RSD
11.000	3215.391	54.520	1.696
22.000	12.933	2.603	20.123
75.000	4801.463	41.498	0.864
114.000	169.883	12.295	7.237
139.000	82.937	8.895	10.725
206.000	11440.229	191.210	1.671
235.000	258.541	15.953	6.170

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Wednesday, August 12, 2020 07:29:41
Sample Description:
Method File: C:\Elandata\Method\EL4\BCL_EL4_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.823
Tuning File: C:\Elandata\Tuning\Default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 55
Current Dead Time (ns): 55

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	76842.9	76842.937	639.294	0.8
	In	114.9	135301.6	135301.598	568.688	0.4
	U	238.1	119558.0	119558.010	457.759	0.4
⌈>	Ba	137.9	101060.7	101060.656	697.895	0.7
⌊	Ba++	69.0	4452.3	0.044	0.000	0.8
⌈>	Ce	139.9	124119.1	124119.070	1270.659	1.0
⌊	CeO	155.9	3051.6	0.025	0.000	1.5
	220	220.0	0.5	0.480	0.179	37.3

Current Optimization File Data

Current Value	Description
1.07	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.50	Plasma Gas Flow
7.50	Lens Voltage
1300.00	ICP RF Power
-1700.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-16.00	Cell Rod Offset Std [CRO]
74.00	Discriminator Threshold
-13.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-6.00	DRC Mode QRO
-1.00	DRC Mode CRO
-15.00	DRC Mode CPV
0.00	Cell Gas A
200.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
250.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	45	5.8	670779.8
Mg	24	45	5.5	67143.7
In	115	45	7.5	128603.2
Ce	140	45	7.8	115229.0
Pb	208	45	8.3	68470.2

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 8/25/2020 4:26:34PM
Project: SMUD 59th St.-CLP III
Project Number: 60570043.5
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2025110

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632763.5

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Case Narrative

Sample Receipt

Work Order: 2025110
COC Number:
Default Cooler was received at 2 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B086188	EPA-6020 (TTLC)	2025083-01	<Not Client Sample>

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

Chain of Custody and Cooler Receipt Form for 2025110 Page 1 of 2

AECOM 20-15110

CHAIN OF CUSTODY

Page 1 of 1

Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street Corporation Yard
AECOM No.: 60632763.5

Special instructions and/or specific regulatory requirements:

Requires a level III data package

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	SW6010 (Arsenic)	Sample Condition/Comments	Preservative
KA-17-4-NE-1.5	28-Aug-20	0730	soil	1	x		N

Analyses Requested

CHK BY DISTRIBUTION
SUB OUT

Relinquished by: Date/Time 8/28/2020 1244 Received by: Date/Time 8/28/2020 1244
Relinquished by: Date/Time 8/28/2020 1654 Received by: Date/Time 8/28/2020 0915
Relinquished by: Date/Time Received by: Date/Time
Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2025110 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-25110

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) GSO	Other ☐ (Specify)	W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Clear glass Thermometer ID: 204 Date/Time 8/29/20 @ 0915

Temperature: (A) 2.2 °C / (C) 2.0 °C Analyst Init MVL

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PR UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz (JAR) 4oz x10	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 8/31/20 0820

A = Actual / C = Corrected

Rev 21 05/23/2016

I:\LIMS\Dell\WordPerfect\LAB DOCS\FORMS\SAMREC rev 20

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2025110**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2025110
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
KA-17-4-NE-1.5	2025110-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 09-14-2020
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2025110
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL2

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

KA-17-4-NE-1.5

Laboratory: BC Laboratories
SDG: 2025110
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2025110-01
File ID: PE_EL2_200901-113
Sampled: 08/28/20 07:30
Prepared: 09/01/20 09:00
Analyzed: 09/01/20 16:03
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B086188
Sequence: 2015430
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	14	0.971		EPA-6020

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2025110
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B086188 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
KA-17-4-NE-1.5	2025110-01	PE_EL2_200901-113	09/01/20 09:00	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
Blank	B086188-BLK1	PE_EL2_200901-086	09/01/20 09:00	
LCS	B086188-BS1	PE_EL2_200901-087	09/01/20 09:00	
Duplicate	B086188-DUP1	PE_EL2_200901-089	09/01/20 09:00	
Matrix Spike	B086188-MS1	PE_EL2_200901-091	09/01/20 09:00	
Matrix Spike Dup	B086188-MSD1	PE_EL2_200901-092	09/01/20 09:00	
Post Spike	B086188-PS1	PE_EL2_200901-093	09/01/20 09:00	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2025110
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B086188-BLK1	File ID:	PE_EL2_200901-086
Prepared:	09/01/20 09:00	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	09/01/20 15:12	Instrument:	PE-EL2		
Batch:	B086188	Sequence:	2015430	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

Duplicate

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B086188
Preparation: EPA 3050B
Source Sample Name: Duplicate

SDG: 2025110
Project: SMUD 59th St.-CLP III
Laboratory ID: B086188-DUP1
Lab Source ID: 2025083-01
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	5.4078		5.4142		0.120		EPA-6020

* Values outside of QC limits

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

Matrix Spike

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B086188
Preparation: EPA 3050B
Source Sample Number: 2025083-01

SDG: 2025110
Project: SMUD 59th St.-CLP III
Laboratory ID: B086188-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	5.4078	31.605	105	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	31.604	105	0.00237	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2025110
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B086188
Laboratory ID: B086188-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	28.394	114	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2015430
Matrix: Solids

SDG: 2025110
Project: SMUD 59th St.-CLP III
Instrument: PE-EL2
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2015430-ICV1	PE_EL2_200901-015	09/01/20 09:33
Initial Cal Blank	2015430-ICB1	PE_EL2_200901-016	09/01/20 09:34
Calibration Check	2015430-CCV2	PE_EL2_200901-026	09/01/20 09:56
Calibration Blank	2015430-CCB2	PE_EL2_200901-027	09/01/20 09:58
Interference Check A	2015430-IFA1	PE_EL2_200901-030	09/01/20 10:10
Interference Check B	2015430-IFB1	PE_EL2_200901-031	09/01/20 10:11
Calibration Check	2015430-CCV3	PE_EL2_200901-038	09/01/20 10:24
Calibration Blank	2015430-CCB3	PE_EL2_200901-039	09/01/20 10:25
MRL Check	2015430-CRL6	PE_EL2_200901-040	09/01/20 10:27
Calibration Check	2015430-CCVA	PE_EL2_200901-084	09/01/20 15:07
Calibration Blank	2015430-CCBA	PE_EL2_200901-085	09/01/20 15:09
Blank	B086188-BLK1	PE_EL2_200901-086	09/01/20 15:12
LCS	B086188-BS1	PE_EL2_200901-087	09/01/20 15:14
Duplicate	B086188-DUP1	PE_EL2_200901-089	09/01/20 15:18
Matrix Spike	B086188-MS1	PE_EL2_200901-091	09/01/20 15:21
Matrix Spike Dup	B086188-MSD1	PE_EL2_200901-092	09/01/20 15:23
Post Spike	B086188-PS1	PE_EL2_200901-093	09/01/20 15:25
Calibration Check	2015430-CCVB	PE_EL2_200901-094	09/01/20 15:26
Calibration Blank	2015430-CCBB	PE_EL2_200901-095	09/01/20 15:28
Calibration Check	2015430-CCVD	PE_EL2_200901-111	09/01/20 15:59
Calibration Blank	2015430-CCBD	PE_EL2_200901-112	09/01/20 16:01
KA-17-4-NE-1.5	2025110-01	PE_EL2_200901-113	09/01/20 16:03
Calibration Check	2015430-CCVE	PE_EL2_200901-114	09/01/20 16:05
Calibration Blank	2015430-CCBE	PE_EL2_200901-115	09/01/20 16:07

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2015430

SDG: 2025110
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2015430-ICB1	Arsenic	-0.60000	2.0	ug/L		EPA-6020
2015430-CCB2	Arsenic	0.75600	2.0	ug/L		EPA-6020
2015430-CCB3	Arsenic	0.98600	2.0	ug/L		EPA-6020
2015430-CCBA	Arsenic	0.44600	2.0	ug/L		EPA-6020
2015430-CCBB	Arsenic	0.53200	2.0	ug/L		EPA-6020
2015430-CCBD	Arsenic	0.97300	2.0	ug/L		EPA-6020
2015430-CCBE	Arsenic	0.45300	2.0	ug/L		EPA-6020

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Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2025110
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2015430

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2015430-ICV1	Arsenic	125.00	125.68	101	ug/L	EPA-6020
2015430-CCV2	Arsenic	100.00	104.01	104	ug/L	EPA-6020
2015430-CCV3	Arsenic	100.00	102.38	102	ug/L	EPA-6020
2015430-CCVA	Arsenic	100.00	103.03	103	ug/L	EPA-6020
2015430-CCVB	Arsenic	100.00	103.70	104	ug/L	EPA-6020
2015430-CCVD	Arsenic	100.00	100.31	100	ug/L	EPA-6020
2015430-CCVE	Arsenic	100.00	101.07	101	ug/L	EPA-6020

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

Post Spike

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B086188
Preparation: EPA 3050B

SDG: 2025110
Project: SMUD 59th St.-CLP III
Laboratory ID: B086188-PS1
Lab Source ID: 2025083-01
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: Post Spike
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	124.95	21.198	100.00	104

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2015430

SDG: 2025110
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2015430-IFA1	Arsenic		0.56400		ug/L
2015430-IFB1	Arsenic	20.000	17.88	89.4	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Tuesday, September 01, 2020 09:13:27
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.006
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	56.889				ug/L
|	B	11	1082.726				ug/L
|	Al	27	11070.139				ug/L
|>	Sc	45	372787.329				ug/L
|	V	51	9191.005				ug/L
|	Cr	52	16442.177				ug/L
|	Cr	53	53089.346				ug/L
|	Mn	55	909.375				ug/L
|	Co	59	120.001				ug/L
⌊	Ni	60	158.223				ug/L
⌈	Cu	63	269.337				ug/L
|	Cu	65	188.446				ug/L
|	Zn	66	574.239				ug/L
|	Zn	68	597.351				ug/L
|>	Ge	72	396669.465				ug/L
|	As	75	284.842				ug/L
|	Se	77	3397.245				ug/L
⌊	Se	82	62.482				ug/L
⌈	Mo	98	206.613				ug/L
|>	Rh	103	245141.548				ug/L
⌊	Ag	107	746.695				ug/L
⌈	Cd	111	-42.924				ug/L
|	Cd	114	-369.890				ug/L
|>	In	115	317579.454				ug/L
|	Sn	120	519.233				ug/L
⌊	Sb	121	501.346				ug/L
⌈	Ba	137	91.742				ug/L
|	Ba	138	421.084				ug/L
|>	Tb	159	405926.511				ug/L
|	Tl	205	868.038				ug/L
⌊	Pb	208	278.668				ug/L
⌈	Hg	200	44.890				ug/L
|	Hg	201	56.000				ug/L
|>	Bi	209	259292.840				ug/L
⌊	U	238	100.001				ug/L
	C	13	1713.480				ug/L
	W	184	69.315				ug/L
	Pd	106	235.055				ug/L

	Kr	83	98.000	ug/L
⌈	Na	23	14303.652	ug/L
|	Mg	24	1866.841	ug/L
|	K	39	176246.353	ug/L
|	Ca	44	18684.150	ug/L
|	Ti	47	253.337	ug/L
⌊	Sc-1	45	372787.329	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Tuesday, September 01, 2020 09:15:31
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.006
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	176.002	**1.000**	0.19	18.9	ug/L
|	B	11	5246.713	**20.000**	0.88	4.4	ug/L
|	Al	27	59282.018	**20.000**	0.27	1.3	ug/L
|>	Sc	45	317161.009				ug/L
|	V	51	21140.794	**3.000**	0.57	19.1	ug/L
|	Cr	52	25563.969	**3.000**	0.11	3.8	ug/L
|	Cr	53	49514.315	**3.000**	0.29	9.6	ug/L
|	Mn	55	6428.736	**1.000**	0.03	3.5	ug/L
|	Co	59	3876.308	**1.000**	0.04	3.9	ug/L
⌊	Ni	60	1610.797	**2.000**	0.08	4.0	ug/L
⌈	Cu	63	3686.014	**2.000**	0.10	5.2	ug/L
|	Cu	65	1808.163	**2.000**	0.02	0.9	ug/L
|	Zn	66	2683.027	**5.000**	0.18	3.7	ug/L
|	Zn	68	1986.865	**5.000**	0.42	8.4	ug/L
|>	Ge	72	348379.638				ug/L
|	As	75	958.265	**2.000**	0.63	31.7	ug/L
|	Se	77	3393.909	**2.000**	0.12	6.2	ug/L
⌊	Se	82	153.742	**2.000**	1.12	56.2	ug/L
⌈	Mo	98	1606.174	**1.000**	0.06	6.4	ug/L
|>	Rh	103	209627.945				ug/L
⌊	Ag	107	4091.505	**1.000**	0.05	5.0	ug/L
⌈	Cd	111	665.071	**1.000**	0.09	8.8	ug/L
|	Cd	114	1133.424	**1.000**	0.08	7.7	ug/L
|>	In	115	271104.367				ug/L
|	Sn	120	3506.501	**1.000**	0.01	1.4	ug/L
⌊	Sb	121	4955.896	**2.000**	0.10	5.2	ug/L
⌈	Ba	137	1381.097	**1.000**	0.02	1.8	ug/L
|	Ba	138	9175.877	**1.000**	0.03	2.9	ug/L
|>	Tb	159	335320.082				ug/L
|	Tl	205	7190.587	**1.000**	0.05	4.8	ug/L
⌊	Pb	208	9002.932	**1.000**	0.04	4.1	ug/L
⌈	Hg	200	174.080	**0.200**	0.06	27.9	ug/L
|	Hg	201	80.000	**0.200**	0.06	28.0	ug/L
|>	Bi	209	220995.843				ug/L
⌊	U	238	12649.329	**1.000**	0.03	3.2	ug/L
	C	13	1533.453				ug/L
	W	184	91.961				ug/L
	Pd	106	229.908				ug/L

	Kr	83	106.667				ug/L
⌈	Na	23	277038.499	**100.000**	0.60	0.6	ug/L
|	Mg	24	164289.178	**100.000**	6.79	6.8	ug/L
|	K	39	465453.203	**100.000**	1.47	1.5	ug/L
|	Ca	44	28413.806	**100.000**	22.76	22.8	ug/L
|	Ti	47	240.003				ug/L
⌊	Sc-1	45	317161.009				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000404	0.000	1.000000	Linear Thru Zero
B	11.009	0.000681	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007859	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.014028	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.012173	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.004573	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.017822	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011899	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002327	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004948	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002358	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001250	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000839	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001018	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000589	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000143	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006823	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.016467	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002590	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005347	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.011300	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008353	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003894	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.026337	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.019311	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.026176	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.003093	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000728	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.056894	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2627.348476	0.000	1.000000	Linear Thru Zero
Mg	23.985	1624.223364	0.000	1.000000	Linear Thru Zero
K	38.964	2892.068499	0.000	1.000000	Linear Thru Zero
Ca	43.956	97.296558	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Tuesday, September 01, 2020 09:17:36
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.006
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	11207.178	**99.999**	4.50	4.5	ug/L
|	B	11	172439.427	**999.905**	54.99	5.5	ug/L
|	Al	27	600634.249	**249.943**	2.92	1.2	ug/L
|>	Sc	45	311724.591				ug/L
|	V	51	392719.271	**99.988**	2.20	2.2	ug/L
|	Cr	52	340722.227	**99.986**	4.36	4.4	ug/L
|	Cr	53	78738.810	**99.719**	9.66	9.7	ug/L
|	Mn	55	1283378.310	**250.000**	9.09	3.6	ug/L
|	Co	59	354741.607	**100.000**	4.49	4.5	ug/L
⌊	Ni	60	179990.410	**250.000**	12.80	5.1	ug/L
⌈	Cu	63	390116.872	**249.999**	1.97	0.8	ug/L
|	Cu	65	180179.520	**249.998**	1.83	0.7	ug/L
|	Zn	66	103628.585	**249.997**	3.69	1.5	ug/L
|	Zn	68	74523.843	**250.004**	1.44	0.6	ug/L
|>	Ge	72	339459.865				ug/L
|	As	75	108014.882	**250.003**	2.10	0.8	ug/L
|	Se	77	11840.342	**249.927**	2.70	1.1	ug/L
⌊	Se	82	12738.577	**250.001**	2.44	1.0	ug/L
⌈	Mo	98	142796.987	**100.000**	0.56	0.6	ug/L
|>	Rh	103	205071.501				ug/L
⌊	Ag	107	304237.327	**99.999**	0.40	0.4	ug/L
⌈	Cd	111	67662.471	**100.000**	2.37	2.4	ug/L
|	Cd	114	153578.414	**100.001**	1.65	1.6	ug/L
|>	In	115	267067.546				ug/L
|	Sn	120	291148.009	**100.000**	2.05	2.0	ug/L
⌊	Sb	121	220121.773	**99.999**	1.46	1.5	ug/L
⌈	Ba	137	123405.711	**100.000**	1.26	1.3	ug/L
|	Ba	138	801730.406	**99.999**	1.90	1.9	ug/L
|>	Tb	159	328206.821				ug/L
|	Tl	205	588717.199	**99.999**	1.09	1.1	ug/L
⌊	Pb	208	2011837.446	**250.000**	3.09	1.2	ug/L
⌈	Hg	200	8688.473	**19.999**	0.63	3.2	ug/L
|	Hg	201	5169.336	**20.001**	0.32	1.6	ug/L
|>	Bi	209	205243.992				ug/L
⌊	U	238	1208990.426	**100.000**	1.03	1.0	ug/L
	C	13	1326.755				ug/L
	W	184	99.939				ug/L
	Pd	106	-184.663				ug/L

	Kr	83	117.334				ug/L
⌈	Na	23	22045252.135	**9999.807**	710.88	7.1	ug/L
|	Mg	24	14548434.443	**9999.883**	338.53	3.4	ug/L
|	K	39	26326494.885	**9999.894**	315.94	3.2	ug/L
|	Ca	44	869934.615	**9999.857**	166.80	1.7	ug/L
|	Ti	47	226.669				ug/L
⌊	Sc-1	45	311724.591				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000358	0.000	0.999999	Linear Thru Zero
B	11.009	0.000550	0.000	0.999989	Linear Thru Zero
Al	26.982	0.007588	0.000	0.999996	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012362	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.010505	0.000	0.999989	Linear Thru Zero
Cr	52.941	0.001108	0.000	0.995631	Linear Thru Zero
Mn	54.938	0.016474	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011392	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002312	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004595	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002121	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001215	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000872	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001270	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000105	0.000	0.999327	Linear Thru Zero
Se	81.917	0.000149	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006954	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.014806	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.002535	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005764	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010888	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008228	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003758	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.024422	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017915	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024515	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002107	0.000	0.999989	Linear Thru Zero
Hg	200.970	0.001248	0.000	0.999991	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.058908	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2203.137269	0.000	0.999998	Linear Thru Zero
Mg	23.985	1454.673715	0.000	0.999999	Linear Thru Zero
K	38.964	2615.052555	0.000	0.999999	Linear Thru Zero
Ca	43.956	85.126263	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Tuesday, September 01, 2020 09:25:06
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.012
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	63.111				ug/L
|	B	11	1541.453				ug/L
|	Al	27	8803.881				ug/L
|>	Sc	45	322194.078				ug/L
|	V	51	9498.426				ug/L
|	Cr	52	14020.498				ug/L
|	Cr	53	41111.669				ug/L
|	Mn	55	744.028				ug/L
|	Co	59	164.446				ug/L
⌊	Ni	60	112.890				ug/L
⌈	Cu	63	261.337				ug/L
|	Cu	65	187.557				ug/L
|	Zn	66	321.783				ug/L
|	Zn	68	387.563				ug/L
|>	Ge	72	345739.831				ug/L
|	As	75	418.318				ug/L
|	Se	77	3017.789				ug/L
⌊	Se	82	63.004				ug/L
⌈	Mo	98	200.110				ug/L
|>	Rh	103	216926.049				ug/L
⌊	Ag	107	565.350				ug/L
⌈	Cd	111	-13.181				ug/L
|	Cd	114	-373.166				ug/L
|>	In	115	274674.832				ug/L
|	Sn	120	487.435				ug/L
⌊	Sb	121	312.005				ug/L
⌈	Ba	137	99.713				ug/L
|	Ba	138	447.722				ug/L
|>	Tb	159	344895.776				ug/L
|	Tl	205	460.011				ug/L
⌊	Pb	208	340.002				ug/L
⌈	Hg	200	95.625				ug/L
|	Hg	201	73.334				ug/L
|>	Bi	209	219666.089				ug/L
⌊	U	238	188.002				ug/L
	C	13	1500.115				ug/L
	W	184	58.621				ug/L
	Pd	106	211.961				ug/L

	Kr	83	114.667	ug/L
⌈	Na	23	11086.153	ug/L
|	Mg	24	1520.119	ug/L
|	K	39	165112.044	ug/L
|	Ca	44	16547.013	ug/L
|	Ti	47	200.002	ug/L
⌊	Sc-1	45	322194.078	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000358	0.000	0.999999	Linear Thru Zero
B	11.009	0.000550	0.000	0.999989	Linear Thru Zero
Al	26.982	0.007588	0.000	0.999996	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012362	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.010505	0.000	0.999989	Linear Thru Zero
Cr	52.941	0.001108	0.000	0.995631	Linear Thru Zero
Mn	54.938	0.016474	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011392	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002312	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004595	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002121	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001215	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000872	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001270	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000105	0.000	0.999327	Linear Thru Zero
Se	81.917	0.000149	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006954	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.014806	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.002535	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005764	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010888	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008228	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003758	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.024422	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017915	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024515	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002107	0.000	0.999989	Linear Thru Zero
Hg	200.970	0.001248	0.000	0.999991	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.058908	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2203.137269	0.000	0.999998	Linear Thru Zero
Mg	23.985	1454.673715	0.000	0.999999	Linear Thru Zero
K	38.964	2615.052555	0.000	0.999999	Linear Thru Zero
Ca	43.956	85.126263	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Tuesday, September 01, 2020 09:27:11
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.012
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	200.002	**1.000**	0.13	13.2	ug/L
|	B	11	5572.223	**20.000**	1.11	5.6	ug/L
|	Al	27	60089.525	**20.000**	0.68	3.4	ug/L
|>	Sc	45	323444.642				ug/L
|	V	51	19976.524	**3.000**	0.97	32.5	ug/L
|	Cr	52	26745.074	**3.000**	0.20	6.6	ug/L
|	Cr	53	48603.334	**3.000**	0.78	26.0	ug/L
|	Mn	55	6596.845	**1.000**	0.02	2.0	ug/L
|	Co	59	3779.383	**1.000**	0.05	5.5	ug/L
⌊	Ni	60	1721.037	**2.000**	0.16	8.2	ug/L
⌈	Cu	63	3736.700	**2.000**	0.09	4.5	ug/L
|	Cu	65	1753.043	**2.000**	0.10	5.0	ug/L
|	Zn	66	2517.651	**5.000**	0.25	5.0	ug/L
|	Zn	68	1991.309	**5.000**	0.23	4.7	ug/L
|>	Ge	72	347115.293				ug/L
|	As	75	951.722	**2.000**	1.53	76.3	ug/L
|	Se	77	3502.613	**2.000**	0.19	9.3	ug/L
⌊	Se	82	174.415	**2.000**	0.15	7.7	ug/L
⌈	Mo	98	1626.470	**1.000**	0.04	3.9	ug/L
|>	Rh	103	216372.069				ug/L
⌊	Ag	107	4094.177	**1.000**	0.09	8.6	ug/L
⌈	Cd	111	875.229	**1.000**	0.29	28.6	ug/L
|	Cd	114	1159.782	**1.000**	0.08	8.2	ug/L
|>	In	115	280843.880				ug/L
|	Sn	120	3543.814	**1.000**	0.04	3.7	ug/L
⌊	Sb	121	4787.814	**2.000**	0.02	0.9	ug/L
⌈	Ba	137	1474.416	**1.000**	0.07	7.0	ug/L
|	Ba	138	9574.902	**1.000**	0.03	3.3	ug/L
|>	Tb	159	349455.978				ug/L
|	Tl	205	6714.254	**1.000**	0.03	3.0	ug/L
⌊	Pb	208	8954.907	**1.000**	0.02	2.2	ug/L
⌈	Hg	200	158.224	**0.200**	0.03	14.7	ug/L
|	Hg	201	116.001	**0.200**	0.06	28.0	ug/L
|>	Bi	209	219093.362				ug/L
⌊	U	238	12925.686	**1.000**	0.01	1.0	ug/L
	C	13	1473.445				ug/L
	W	184	69.297				ug/L
	Pd	106	280.305				ug/L

	Kr	83	106.001				ug/L
⌈	Na	23	275291.984	**100.000**	5.79	5.8	ug/L
|	Mg	24	176152.183	**100.000**	3.04	3.0	ug/L
|	K	39	462046.994	**100.000**	1.09	1.1	ug/L
|	Ca	44	27023.130	**100.000**	0.44	0.4	ug/L
|	Ti	47	200.002				ug/L
⌊	Sc-1	45	323444.642				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000423	0.000	1.000000	Linear Thru Zero
B	11.009	0.000622	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007924	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.010829	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.013068	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.007565	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.018082	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011169	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002490	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005001	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002253	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001264	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000924	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000758	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000682	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000160	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006591	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.016298	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.003185	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005501	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010853	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.007958	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003935	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.026083	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017887	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024629	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001437	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000985	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.058150	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2642.058302	0.000	1.000000	Linear Thru Zero
Mg	23.985	1746.320638	0.000	1.000000	Linear Thru Zero
K	38.964	2969.349502	0.000	1.000000	Linear Thru Zero
Ca	43.956	104.761172	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Tuesday, September 01, 2020 09:29:15
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.012
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	12748.570	**99.998**	4.50	4.5	ug/L
|	B	11	209748.770	**999.984**	30.15	3.0	ug/L
|	Al	27	702398.403	**250.009**	4.09	1.6	ug/L
|>	Sc	45	347896.731				ug/L
|	V	51	435505.798	**100.010**	1.71	1.7	ug/L
|	Cr	52	383349.530	**99.979**	0.50	0.5	ug/L
|	Cr	53	89241.799	**99.564**	2.67	2.7	ug/L
|	Mn	55	1458406.232	**250.000**	1.90	0.8	ug/L
|	Co	59	405951.586	**100.000**	2.64	2.6	ug/L
⌊	Ni	60	204730.660	**249.999**	2.91	1.2	ug/L
⌈	Cu	63	437431.430	**249.999**	4.82	1.9	ug/L
|	Cu	65	200879.966	**249.999**	6.08	2.4	ug/L
|	Zn	66	115257.764	**249.998**	3.40	1.4	ug/L
|	Zn	68	82944.346	**249.996**	5.40	2.2	ug/L
|>	Ge	72	370492.024				ug/L
|	As	75	118470.357	**250.006**	2.68	1.1	ug/L
|	Se	77	12664.682	**249.909**	2.24	0.9	ug/L
⌊	Se	82	13940.968	**249.999**	3.39	1.4	ug/L
⌈	Mo	98	157451.815	**100.001**	2.20	2.2	ug/L
|>	Rh	103	223807.843				ug/L
⌊	Ag	107	339744.507	**99.999**	1.13	1.1	ug/L
⌈	Cd	111	75417.998	**99.997**	2.75	2.8	ug/L
|	Cd	114	170024.635	**100.000**	1.83	1.8	ug/L
|>	In	115	298563.690				ug/L
|	Sn	120	322908.815	**100.000**	1.38	1.4	ug/L
⌊	Sb	121	239689.766	**100.000**	1.43	1.4	ug/L
⌈	Ba	137	138493.775	**100.000**	0.81	0.8	ug/L
|	Ba	138	893966.533	**99.999**	1.68	1.7	ug/L
|>	Tb	159	369126.021				ug/L
|	Tl	205	660818.697	**100.000**	1.25	1.3	ug/L
⌊	Pb	208	2239770.691	**250.000**	4.00	1.6	ug/L
⌈	Hg	200	9652.188	**20.001**	0.02	0.1	ug/L
|	Hg	201	5529.529	**20.000**	0.87	4.4	ug/L
|>	Bi	209	223004.915				ug/L
⌊	U	238	1339806.003	**100.000**	2.20	2.2	ug/L
	C	13	1693.477				ug/L
	W	184	73.299				ug/L
	Pd	106	-663.217				ug/L

	Kr	83	102.001				ug/L
⌈	Na	23	26027402.540	**9999.984**	403.51	4.0	ug/L
|	Mg	24	16906455.594	**9999.967**	569.79	5.7	ug/L
|	K	39	30096497.655	**10000.008**	376.32	3.8	ug/L
|	Ca	44	974977.054	**9999.907**	339.81	3.4	ug/L
|	Ti	47	133.335				ug/L
⌊	Sc-1	45	347896.731				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
⌊	Se	82		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		
	W	184		
	Pd	106		

	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000365	0.000	0.999999	Linear Thru Zero
B	11.009	0.000598	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007967	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012219	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.010586	0.000	0.999975	Linear Thru Zero
Cr	52.941	0.001295	0.000	0.989621	Linear Thru Zero
Mn	54.938	0.016760	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011668	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002353	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004721	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002167	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001241	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000891	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001274	0.000	0.999995	Linear Thru Zero
Se	76.920	0.000102	0.000	0.998965	Linear Thru Zero
Se	81.917	0.000150	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.007027	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.015156	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002528	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.005710	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010798	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008019	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003749	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.024202	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017892	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024272	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002142	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.001224	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.060065	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2601.635681	0.000	1.000000	Linear Thru Zero
Mg	23.985	1690.499130	0.000	1.000000	Linear Thru Zero
K	38.964	2993.136182	0.000	1.000000	Linear Thru Zero
Ca	43.956	95.843896	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero

Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Tuesday, September 01, 2020 09:48:30
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.023
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	56.889				ug/L
|	B	11	1450.773				ug/L
|	Al	27	10776.504				ug/L
| >	Sc	45	367602.511				ug/L
|	V	51	7225.675				ug/L
|	Cr	52	15219.025				ug/L
|	Cr	53	53696.500				ug/L
|	Mn	55	1749.569				ug/L
|	Co	59	456.910				ug/L
⌊	Ni	60	265.783				ug/L
⌈	Cu	63	512.018				ug/L
|	Cu	65	298.672				ug/L
|	Zn	66	511.124				ug/L
|	Zn	68	541.348				ug/L
| >	Ge	72	384508.785				ug/L
|	As	75	-146.766				ug/L
|	Se	77	3621.325				ug/L
⌊	Se	82	61.804				ug/L
⌈	Mo	98	223.672				ug/L
| >	Rh	103	244452.129				ug/L
⌊	Ag	107	730.694				ug/L
⌈	Cd	111	19.837				ug/L
|	Cd	114	-293.466				ug/L
| >	In	115	316494.403				ug/L
|	Sn	120	492.498				ug/L
⌊	Sb	121	368.007				ug/L
⌈	Ba	137	138.372				ug/L
|	Ba	138	491.718				ug/L
| >	Tb	159	387339.529				ug/L
|	Tl	205	461.344				ug/L
⌊	Pb	208	445.338				ug/L
⌈	Hg	200	70.224				ug/L
|	Hg	201	50.667				ug/L
| >	Bi	209	246086.355				ug/L
⌊	U	238	236.003				ug/L
	C	13	1520.117				ug/L
	W	184	69.274				ug/L
	Pd	106	236.222				ug/L
	Kr	83	99.334				ug/L
⌈	Na	23	15278.766				ug/L
|	Mg	24	3053.841				ug/L
|	K	39	186455.566				ug/L

	Ca	44	15812.530	ug/L
	Ti	47	213.336	ug/L
	Sc-1	45	367602.511	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000365	0.000	0.999999	Linear Thru Zero
B	11.009	0.000598	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007967	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012219	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.010586	0.000	0.999975	Linear Thru Zero
Cr	52.941	0.001295	0.000	0.989621	Linear Thru Zero
Mn	54.938	0.016760	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011668	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002353	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004721	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002167	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001241	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000891	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001274	0.000	0.999995	Linear Thru Zero
Se	76.920	0.000102	0.000	0.998965	Linear Thru Zero
Se	81.917	0.000150	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.007027	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.015156	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002528	0.000	0.999997	Linear Thru Zero
Cd	113.904	0.005710	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010798	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008019	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003749	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.024202	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017892	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024272	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002142	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.001224	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.060065	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2601.635681	0.000	1.000000	Linear Thru Zero
Mg	23.985	1690.499130	0.000	1.000000	Linear Thru Zero
K	38.964	2993.136182	0.000	1.000000	Linear Thru Zero
Ca	43.956	95.843896	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Tuesday, September 01, 2020 09:50:35
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.023
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	207.113	**1.000**	0.09	9.3	ug/L
|	B	11	6068.524	**20.000**	1.32	6.6	ug/L
|	Al	27	68168.620	**20.000**	0.49	2.5	ug/L
| >	Sc	45	373216.714				ug/L
|	V	51	22044.941	**3.000**	0.11	3.7	ug/L
|	Cr	52	26270.573	**3.000**	0.04	1.4	ug/L
|	Cr	53	45845.948	**3.000**	0.18	6.1	ug/L
|	Mn	55	7312.019	**1.000**	0.03	2.5	ug/L
|	Co	59	4654.419	**1.000**	0.05	4.6	ug/L
⌊	Ni	60	2005.535	**2.000**	0.01	0.5	ug/L
⌈	Cu	63	4296.924	**2.000**	0.02	0.9	ug/L
|	Cu	65	2033.986	**2.000**	0.23	11.4	ug/L
|	Zn	66	3520.622	**5.000**	0.28	5.5	ug/L
|	Zn	68	2692.807	**5.000**	0.26	5.1	ug/L
| >	Ge	72	409006.061				ug/L
|	As	75	1470.400	**2.000**	0.44	22.1	ug/L
|	Se	77	2785.055	**2.000**	0.05	2.7	ug/L
⌊	Se	82	193.007	**2.000**	0.40	19.8	ug/L
⌈	Mo	98	1757.469	**1.000**	0.04	4.3	ug/L
| >	Rh	103	249086.599				ug/L
⌊	Ag	107	5540.214	**1.000**	0.06	6.0	ug/L
⌈	Cd	111	809.328	**1.000**	0.13	13.0	ug/L
|	Cd	114	1427.569	**1.000**	0.09	8.6	ug/L
| >	In	115	324728.719				ug/L
|	Sn	120	4021.633	**1.000**	0.05	4.8	ug/L
⌊	Sb	121	3630.002	**2.000**	0.26	13.0	ug/L
⌈	Ba	137	1679.867	**1.000**	0.07	7.3	ug/L
|	Ba	138	10824.277	**1.000**	0.04	3.6	ug/L
| >	Tb	159	391247.569				ug/L
|	Tl	205	7580.218	**1.000**	0.04	3.5	ug/L
⌊	Pb	208	10491.529	**1.000**	0.03	2.9	ug/L
⌈	Hg	200	196.969	**0.200**	0.01	6.2	ug/L
|	Hg	201	134.668	**0.200**	0.08	42.4	ug/L
| >	Bi	209	253534.010				ug/L
⌊	U	238	14610.704	**1.000**	0.01	0.7	ug/L
	C	13	1480.111				ug/L
	W	184	57.277				ug/L
	Pd	106	265.023				ug/L
	Kr	83	114.667				ug/L
⌈	Na	23	312856.435	**100.000**	6.30	6.3	ug/L
|	Mg	24	198189.182	**100.000**	6.05	6.0	ug/L
|	K	39	530588.132	**100.000**	7.83	7.8	ug/L

Ca	44	27183.640	**100.000**	13.34	13.3	ug/L
Ti	47	133.334				ug/L
Sc-1	45	373216.714				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000402	0.000	1.000000	Linear Thru Zero
B	11.009	0.000614	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007660	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.013138	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.009661	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.007765	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.014816	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011240	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002325	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004588	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002097	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001455	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001036	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001999	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.001305	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000157	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006153	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.019217	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002433	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005328	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010840	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004992	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003929	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.026371	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.018172	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.025667	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002457	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001633	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.056656	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2975.776689	0.000	1.000000	Linear Thru Zero
Mg	23.985	1951.353412	0.000	1.000000	Linear Thru Zero
K	38.964	3441.325656	0.000	1.000000	Linear Thru Zero
Ca	43.956	113.711105	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Tuesday, September 01, 2020 09:52:39
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.023
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	13068.108	**99.999**	1.29	1.3	ug/L
|	B	11	212348.535	**999.987**	42.77	4.3	ug/L
|	Al	27	709903.962	**250.047**	6.27	2.5	ug/L
| >	Sc	45	354260.859				ug/L
|	V	51	451101.729	**99.996**	1.38	1.4	ug/L
|	Cr	52	394892.032	**100.009**	0.97	1.0	ug/L
|	Cr	53	92251.611	**100.705**	3.67	3.6	ug/L
|	Mn	55	1498190.802	**250.000**	6.98	2.8	ug/L
|	Co	59	417988.120	**100.000**	2.77	2.8	ug/L
⌊	Ni	60	209801.262	**250.000**	7.54	3.0	ug/L
⌈	Cu	63	450320.131	**250.001**	0.58	0.2	ug/L
|	Cu	65	206597.251	**250.001**	1.23	0.5	ug/L
|	Zn	66	119108.456	**249.985**	2.68	1.1	ug/L
|	Zn	68	84504.269	**249.985**	1.98	0.8	ug/L
| >	Ge	72	373445.657				ug/L
|	As	75	121819.146	**249.992**	7.74	3.1	ug/L
|	Se	77	12987.773	**250.222**	7.80	3.1	ug/L
⌊	Se	82	14268.101	**250.000**	3.99	1.6	ug/L
⌈	Mo	98	162740.994	**100.001**	1.76	1.8	ug/L
| >	Rh	103	234061.825				ug/L
⌊	Ag	107	350274.343	**99.997**	1.02	1.0	ug/L
⌈	Cd	111	76443.666	**100.000**	1.21	1.2	ug/L
|	Cd	114	174076.417	**100.001**	0.51	0.5	ug/L
| >	In	115	302189.281				ug/L
|	Sn	120	337908.228	**100.000**	3.10	3.1	ug/L
⌊	Sb	121	242930.313	**100.015**	2.62	2.6	ug/L
⌈	Ba	137	144004.408	**100.000**	3.51	3.5	ug/L
|	Ba	138	926532.213	**99.999**	2.76	2.8	ug/L
| >	Tb	159	370541.677				ug/L
|	Tl	205	664233.817	**100.000**	1.94	1.9	ug/L
⌊	Pb	208	2283794.971	**250.000**	4.59	1.8	ug/L
⌈	Hg	200	9749.670	**20.000**	0.48	2.4	ug/L
|	Hg	201	5672.278	**19.999**	0.28	1.4	ug/L
| >	Bi	209	229662.631				ug/L
⌊	U	238	1372015.946	**100.001**	1.04	1.0	ug/L
	C	13	1266.747				ug/L
	W	184	65.276				ug/L
	Pd	106	-479.451				ug/L
	Kr	83	103.334				ug/L
⌈	Na	23	26617975.693	**9999.881**	723.59	7.2	ug/L
|	Mg	24	17320413.241	**9999.873**	775.08	7.8	ug/L
|	K	39	31372634.329	**9999.897**	481.32	4.8	ug/L

Ca	44	997178.943	**9999.841**	715.25	7.2	ug/L
Ti	47	226.669				ug/L
Sc-1	45	354260.859				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000367	0.000	1.000000	Linear Thru Zero
B	11.009	0.000595	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007892	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012530	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.010737	0.000	0.999995	Linear Thru Zero
Cr	52.941	0.001137	0.000	0.973511	Linear Thru Zero
Mn	54.938	0.016917	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011801	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002369	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004818	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002210	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001271	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000900	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001307	0.000	0.999991	Linear Thru Zero
Se	76.920	0.000101	0.000	0.993892	Linear Thru Zero
Se	81.917	0.000152	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006941	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.014932	0.000	0.999996	Linear Thru Zero
Cd	110.904	0.002529	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005769	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.011168	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008028	0.000	0.999971	Linear Thru Zero
Ba	136.905	0.003887	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.025019	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017927	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024663	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002110	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.001225	0.000	0.999994	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.059737	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2660.301240	0.000	0.999999	Linear Thru Zero
Mg	23.985	1731.757900	0.000	0.999999	Linear Thru Zero
K	38.964	3118.650144	0.000	0.999999	Linear Thru Zero
Ca	43.956	98.138199	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Tuesday, September 01, 2020 14:59:54
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	40.889				ug/L
|	B	11	349.340				ug/L
|	Al	27	6727.604				ug/L
| >	Sc	45	287171.401				ug/L
|	V	51	5443.460				ug/L
|	Cr	52	9968.972				ug/L
|	Cr	53	46234.026				ug/L
|	Mn	55	584.017				ug/L
|	Co	59	59.556				ug/L
⌊	Ni	60	85.334				ug/L
⌈	Cu	63	194.669				ug/L
|	Cu	65	138.668				ug/L
|	Zn	66	282.671				ug/L
|	Zn	68	384.007				ug/L
| >	Ge	72	312974.237				ug/L
|	As	75	-111.821				ug/L
|	Se	77	3055.134				ug/L
⌊	Se	82	41.258				ug/L
⌈	Mo	98	138.740				ug/L
| >	Rh	103	195978.356				ug/L
⌊	Ag	107	498.679				ug/L
⌈	Cd	111	3.202				ug/L
|	Cd	114	-284.943				ug/L
| >	In	115	261055.816				ug/L
|	Sn	120	433.862				ug/L
⌊	Sb	121	58.667				ug/L
⌈	Ba	137	97.076				ug/L
|	Ba	138	315.747				ug/L
| >	Tb	159	336358.288				ug/L
|	Tl	205	88.000				ug/L
⌊	Pb	208	202.667				ug/L
⌈	Hg	200	51.480				ug/L
|	Hg	201	41.333				ug/L
| >	Bi	209	209277.803				ug/L
⌊	U	238	56.000				ug/L
	C	13	1026.719				ug/L
	W	184	81.299				ug/L
	Pd	106	175.345				ug/L
	Kr	83	85.334				ug/L
⌈	Na	23	8510.295				ug/L
|	Mg	24	1280.084				ug/L
|	K	39	148643.494				ug/L

Ca	44	7976.563		ug/L
Ti	47	120.001		ug/L
Sc-1	45	287171.401		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000367	0.000	1.000000	Linear Thru Zero
B	11.009	0.000595	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007892	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012530	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.010737	0.000	0.999995	Linear Thru Zero
Cr	52.941	0.001137	0.000	0.973511	Linear Thru Zero
Mn	54.938	0.016917	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011801	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002369	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004818	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002210	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001271	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000900	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001307	0.000	0.999991	Linear Thru Zero
Se	76.920	0.000101	0.000	0.993892	Linear Thru Zero
Se	81.917	0.000152	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006941	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.014932	0.000	0.999996	Linear Thru Zero
Cd	110.904	0.002529	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005769	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.011168	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008028	0.000	0.999971	Linear Thru Zero
Ba	136.905	0.003887	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.025019	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017927	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024663	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002110	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.001225	0.000	0.999994	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.059737	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2660.301240	0.000	0.999999	Linear Thru Zero
Mg	23.985	1731.757900	0.000	0.999999	Linear Thru Zero
K	38.964	3118.650144	0.000	0.999999	Linear Thru Zero
Ca	43.956	98.138199	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Tuesday, September 01, 2020 15:01:58
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	177.779	**1.000**	0.29	29.1	ug/L
|	B	11	4627.741	**20.000**	0.88	4.4	ug/L
|	Al	27	53004.485	**20.000**	0.81	4.1	ug/L
| >	Sc	45	337141.886				ug/L
|	V	51	17268.649	**3.000**	0.57	19.1	ug/L
|	Cr	52	20704.757	**3.000**	0.02	0.6	ug/L
|	Cr	53	43624.447	**3.000**	0.26	8.6	ug/L
|	Mn	55	6338.011	**1.000**	0.02	2.2	ug/L
|	Co	59	3982.126	**1.000**	0.02	2.4	ug/L
⌊	Ni	60	1741.486	**2.000**	0.13	6.6	ug/L
⌈	Cu	63	3886.088	**2.000**	0.09	4.7	ug/L
|	Cu	65	1788.605	**2.000**	0.04	1.8	ug/L
|	Zn	66	2976.443	**5.000**	0.15	3.0	ug/L
|	Zn	68	2306.933	**5.000**	0.20	3.9	ug/L
| >	Ge	72	367809.630				ug/L
|	As	75	1043.014	**2.000**	0.25	12.4	ug/L
|	Se	77	2649.684	**2.000**	0.11	5.5	ug/L
⌊	Se	82	145.840	**2.000**	0.92	45.8	ug/L
⌈	Mo	98	1719.180	**1.000**	0.02	1.9	ug/L
| >	Rh	103	224925.927				ug/L
⌊	Ag	107	4774.474	**1.000**	0.02	1.6	ug/L
⌈	Cd	111	781.294	**1.000**	0.11	11.3	ug/L
|	Cd	114	1621.750	**1.000**	0.11	10.6	ug/L
| >	In	115	303707.866				ug/L
|	Sn	120	3776.035	**1.000**	0.12	11.8	ug/L
⌊	Sb	121	3608.652	**2.000**	0.02	1.1	ug/L
⌈	Ba	137	1621.212	**1.000**	0.06	5.7	ug/L
|	Ba	138	10151.567	**1.000**	0.02	1.8	ug/L
| >	Tb	159	393696.212				ug/L
|	Tl	205	7181.245	**1.000**	0.01	1.3	ug/L
⌊	Pb	208	9885.941	**1.000**	0.02	1.9	ug/L
⌈	Hg	200	154.404	**0.200**	0.05	26.5	ug/L
|	Hg	201	108.001	**0.200**	0.02	10.6	ug/L
| >	Bi	209	241847.045				ug/L
⌊	U	238	14263.514	**1.000**	0.02	1.7	ug/L
	C	13	1160.068				ug/L
	W	184	41.282				ug/L
	Pd	106	233.356				ug/L
	Kr	83	95.334				ug/L
⌈	Na	23	252206.223	**100.000**	7.97	8.0	ug/L
|	Mg	24	168909.365	**100.000**	4.00	4.0	ug/L
|	K	39	467267.756	**100.000**	6.51	6.5	ug/L

Ca	44	17669.019	**100.000**	16.97	17.0	ug/L
Ti	47	253.337				ug/L
Sc-1	45	337141.886				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000386	0.000	1.000000	Linear Thru Zero
B	11.009	0.000625	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006685	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.010731	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.008901	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.010552	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.016758	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011608	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002431	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004976	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002210	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001438	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001010	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001594	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.001278	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000131	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006936	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.018683	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002561	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.006446	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010815	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005830	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.003832	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.024848	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017981	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024501	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001973	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001243	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.058714	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	2436.959278	0.000	1.000000	Linear Thru Zero
Mg	23.985	1676.292811	0.000	1.000000	Linear Thru Zero
K	38.964	3186.242620	0.000	1.000000	Linear Thru Zero
Ca	43.956	96.924561	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Tuesday, September 01, 2020 15:04:03
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.081
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	10036.147	**99.999**	1.66	1.7	ug/L
|	B	11	157520.131	**999.949**	22.17	2.2	ug/L
|	Al	27	477001.244	**249.989**	16.48	6.6	ug/L
| >	Sc	45	283687.830				ug/L
|	V	51	350946.881	**100.011**	2.32	2.3	ug/L
|	Cr	52	302618.743	**100.012**	2.91	2.9	ug/L
|	Cr	53	70045.845	**101.207**	7.98	7.9	ug/L
|	Mn	55	1155157.613	**250.000**	7.34	2.9	ug/L
|	Co	59	320412.897	**100.000**	3.43	3.4	ug/L
⌊	Ni	60	164359.491	**249.999**	9.58	3.8	ug/L
⌈	Cu	63	353631.529	**249.999**	7.14	2.9	ug/L
|	Cu	65	159578.154	**249.999**	5.43	2.2	ug/L
|	Zn	66	95738.040	**249.986**	6.49	2.6	ug/L
|	Zn	68	67376.483	**249.986**	3.52	1.4	ug/L
| >	Ge	72	303515.977				ug/L
|	As	75	95015.924	**249.996**	5.83	2.3	ug/L
|	Se	77	10209.883	**250.230**	15.60	6.2	ug/L
⌊	Se	82	11275.733	**250.002**	8.67	3.5	ug/L
⌈	Mo	98	128376.148	**100.000**	3.92	3.9	ug/L
| >	Rh	103	182471.911				ug/L
⌊	Ag	107	274432.304	**99.998**	2.51	2.5	ug/L
⌈	Cd	111	64219.194	**100.000**	0.83	0.8	ug/L
|	Cd	114	144194.210	**99.999**	0.81	0.8	ug/L
| >	In	115	251563.805				ug/L
|	Sn	120	274489.051	**100.000**	1.21	1.2	ug/L
⌊	Sb	121	208228.281	**100.012**	1.33	1.3	ug/L
⌈	Ba	137	117635.595	**99.999**	1.53	1.5	ug/L
|	Ba	138	775103.542	**99.999**	1.76	1.8	ug/L
| >	Tb	159	330773.836				ug/L
|	Tl	205	568383.094	**100.000**	0.22	0.2	ug/L
⌊	Pb	208	1953836.520	**250.000**	0.89	0.4	ug/L
⌈	Hg	200	8709.922	**20.000**	0.06	0.3	ug/L
|	Hg	201	4930.549	**20.000**	0.31	1.6	ug/L
| >	Bi	209	197710.112				ug/L
⌊	U	238	1217172.566	**100.000**	0.93	0.9	ug/L
	C	13	1300.086				ug/L
	W	184	83.934				ug/L
	Pd	106	-666.608				ug/L
	Kr	83	82.667				ug/L
⌈	Na	23	17132026.243	**9999.577**	303.34	3.0	ug/L
|	Mg	24	12151474.547	**9999.620**	288.27	2.9	ug/L
|	K	39	22242222.285	**9999.558**	228.74	2.3	ug/L

Ca	44	792865.301	**9999.765**	172.02	1.7	ug/L
Ti	47	120.001				ug/L
Sc-1	45	283687.830				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000352	0.000	1.000000	Linear Thru Zero
B	11.009	0.000554	0.000	0.999997	Linear Thru Zero
Al	26.982	0.006638	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012185	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.010326	0.000	0.999991	Linear Thru Zero
Cr	52.941	0.000850	0.000	0.927726	Linear Thru Zero
Mn	54.938	0.016289	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011299	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002318	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004658	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002101	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001258	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000883	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001254	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000095	0.000	0.993440	Linear Thru Zero
Se	81.917	0.000148	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.007032	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.015021	0.000	0.999997	Linear Thru Zero
Cd	110.904	0.002553	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005743	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010896	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008275	0.000	0.999983	Linear Thru Zero
Ba	136.905	0.003554	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.023425	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017181	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.023625	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002190	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001237	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.061563	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1712.424048	0.000	0.999991	Linear Thru Zero
Mg	23.985	1215.065569	0.000	0.999993	Linear Thru Zero
K	38.964	2209.455558	0.000	0.999990	Linear Thru Zero
Ca	43.956	78.490717	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Tuesday, September 01, 2020 15:31:43
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.097
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	50.667				ug/L
|	B	11	869.371				ug/L
|	Al	27	14431.792				ug/L
| >	Sc	45	284350.377				ug/L
|	V	51	6249.474				ug/L
|	Cr	52	9345.702				ug/L
|	Cr	53	39938.320				ug/L
|	Mn	55	949.379				ug/L
|	Co	59	96.000				ug/L
⌊	Ni	60	91.556				ug/L
⌈	Cu	63	239.114				ug/L
|	Cu	65	136.001				ug/L
|	Zn	66	265.781				ug/L
|	Zn	68	341.339				ug/L
| >	Ge	72	306068.550				ug/L
|	As	75	-157.557				ug/L
|	Se	77	2590.336				ug/L
⌊	Se	82	47.931				ug/L
⌈	Mo	98	167.945				ug/L
| >	Rh	103	190270.974				ug/L
⌊	Ag	107	490.679				ug/L
⌈	Cd	111	30.402				ug/L
|	Cd	114	-220.236				ug/L
| >	In	115	257783.989				ug/L
|	Sn	120	457.964				ug/L
⌊	Sb	121	136.001				ug/L
⌈	Ba	137	119.440				ug/L
|	Ba	138	571.456				ug/L
| >	Tb	159	328836.918				ug/L
|	Tl	205	145.334				ug/L
⌊	Pb	208	293.335				ug/L
⌈	Hg	200	54.300				ug/L
|	Hg	201	48.000				ug/L
| >	Bi	209	205159.822				ug/L
⌊	U	238	106.667				ug/L
	C	13	1166.735				ug/L
	W	184	57.289				ug/L
	Pd	106	157.522				ug/L
	Kr	83	84.667				ug/L
⌈	Na	23	8230.083				ug/L
|	Mg	24	3667.341				ug/L
|	K	39	147222.885				ug/L

	Ca	44	7816.395	ug/L
	Ti	47	186.668	ug/L
	Sc-1	45	284350.377	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000352	0.000	1.000000	Linear Thru Zero
B	11.009	0.000554	0.000	0.999997	Linear Thru Zero
Al	26.982	0.006638	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012185	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.010326	0.000	0.999991	Linear Thru Zero
Cr	52.941	0.000850	0.000	0.927726	Linear Thru Zero
Mn	54.938	0.016289	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011299	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002318	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004658	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002101	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001258	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000883	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001254	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000095	0.000	0.993440	Linear Thru Zero
Se	81.917	0.000148	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.007032	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.015021	0.000	0.999997	Linear Thru Zero
Cd	110.904	0.002553	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005743	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010896	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008275	0.000	0.999983	Linear Thru Zero
Ba	136.905	0.003554	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.023425	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017181	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.023625	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002190	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001237	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.061563	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1712.424048	0.000	0.999991	Linear Thru Zero
Mg	23.985	1215.065569	0.000	0.999993	Linear Thru Zero
K	38.964	2209.455558	0.000	0.999990	Linear Thru Zero
Ca	43.956	78.490717	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Tuesday, September 01, 2020 15:33:48
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.097
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	134.223	**1.000**	0.22	22.1	ug/L
|	B	11	3838.075	**20.000**	1.86	9.3	ug/L
|	Al	27	53475.168	**20.000**	8.03	40.2	ug/L
| >	Sc	45	288387.537				ug/L
|	V	51	15343.384	**3.000**	0.42	14.1	ug/L
|	Cr	52	17222.173	**3.000**	0.11	3.8	ug/L
|	Cr	53	33437.858	**3.000**	0.32	10.6	ug/L
|	Mn	55	5999.156	**1.000**	0.13	13.0	ug/L
|	Co	59	3559.746	**1.000**	0.04	4.4	ug/L
⌊	Ni	60	1515.671	**2.000**	0.11	5.3	ug/L
⌈	Cu	63	3385.464	**2.000**	0.02	1.0	ug/L
|	Cu	65	1607.240	**2.000**	0.10	5.1	ug/L
|	Zn	66	2667.914	**5.000**	0.25	5.0	ug/L
|	Zn	68	2033.986	**5.000**	0.39	7.8	ug/L
| >	Ge	72	316999.735				ug/L
|	As	75	834.963	**2.000**	0.17	8.3	ug/L
|	Se	77	1952.859	**2.000**	0.21	10.3	ug/L
⌊	Se	82	143.881	**2.000**	0.64	31.8	ug/L
⌈	Mo	98	1428.631	**1.000**	0.05	4.5	ug/L
| >	Rh	103	194695.390				ug/L
⌊	Ag	107	4475.673	**1.000**	0.06	6.5	ug/L
⌈	Cd	111	721.231	**1.000**	0.14	13.9	ug/L
|	Cd	114	1302.081	**1.000**	0.14	13.7	ug/L
| >	In	115	264568.778				ug/L
|	Sn	120	3245.045	**1.000**	0.04	4.2	ug/L
⌊	Sb	121	3304.551	**2.000**	0.17	8.5	ug/L
⌈	Ba	137	1505.882	**1.000**	0.18	18.1	ug/L
|	Ba	138	10145.690	**1.000**	0.14	14.1	ug/L
| >	Tb	159	339035.429				ug/L
|	Tl	205	6011.142	**1.000**	0.00	0.4	ug/L
⌊	Pb	208	8476.084	**1.000**	0.03	3.4	ug/L
⌈	Hg	200	151.771	**0.200**	0.04	18.2	ug/L
|	Hg	201	109.334	**0.200**	0.08	39.6	ug/L
| >	Bi	209	210185.456				ug/L
⌊	U	238	12984.431	**1.000**	0.01	0.7	ug/L
	C	13	1173.403				ug/L
	W	184	35.969				ug/L
	Pd	106	185.032				ug/L
	Kr	83	90.667				ug/L
⌈	Na	23	195468.801	**100.000**	5.60	5.6	ug/L
|	Mg	24	130259.847	**100.000**	8.32	8.3	ug/L
|	K	39	406909.931	**100.000**	10.40	10.4	ug/L

Ca	44	16026.185	**100.000**	9.38	9.4	ug/L
Ti	47	226.669				ug/L
Sc-1	45	288387.537				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000286	0.000	1.000000	Linear Thru Zero
B	11.009	0.000512	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006682	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.010377	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.008945	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.008164	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.017420	0.000	1.000000	Linear Thru Zero
Co	58.933	0.012000	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002468	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004947	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002316	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001507	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001060	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001574	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.001156	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000150	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006464	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.020397	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.002601	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005759	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010497	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005970	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.004057	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.028064	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017287	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.024101	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002279	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001446	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.061265	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1872.387179	0.000	1.000000	Linear Thru Zero
Mg	23.985	1265.925066	0.000	1.000000	Linear Thru Zero
K	38.964	2596.870460	0.000	1.000000	Linear Thru Zero
Ca	43.956	82.097902	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Tuesday, September 01, 2020 15:35:52
Sample File: C:\Elandata\Sample\PE_EL2_200901.sam
Blank File: C:\Elandata\Dataset\2020 SEP (01-06)\Blank.097
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_200901.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	9600.167	**100.002**	3.00	3.0	ug/L
|	B	11	149658.361	**1000.012**	16.69	1.7	ug/L
|	Al	27	470049.508	**249.944**	8.35	3.3	ug/L
| >	Sc	45	282300.487				ug/L
|	V	51	356829.622	**100.015**	2.20	2.2	ug/L
|	Cr	52	313807.299	**100.015**	1.24	1.2	ug/L
|	Cr	53	71277.126	**100.750**	4.87	4.8	ug/L
|	Mn	55	1189237.030	**250.000**	4.87	1.9	ug/L
|	Co	59	327924.918	**100.000**	3.13	3.1	ug/L
⌊	Ni	60	165577.382	**249.999**	5.11	2.0	ug/L
⌈	Cu	63	359469.370	**249.999**	3.85	1.5	ug/L
|	Cu	65	163749.879	**249.999**	2.78	1.1	ug/L
|	Zn	66	96944.277	**249.981**	2.30	0.9	ug/L
|	Zn	68	69413.557	**249.983**	2.86	1.1	ug/L
| >	Ge	72	305358.597				ug/L
|	As	75	97837.859	**249.996**	5.20	2.1	ug/L
|	Se	77	10372.718	**250.198**	10.23	4.1	ug/L
⌊	Se	82	11556.094	**250.000**	3.74	1.5	ug/L
⌈	Mo	98	128571.985	**100.001**	1.67	1.7	ug/L
| >	Rh	103	187407.486				ug/L
⌊	Ag	107	284291.679	**99.997**	1.58	1.6	ug/L
⌈	Cd	111	64391.245	**100.000**	0.85	0.9	ug/L
|	Cd	114	146173.819	**100.000**	0.98	1.0	ug/L
| >	In	115	257339.907				ug/L
|	Sn	120	280408.045	**100.000**	0.56	0.6	ug/L
⌊	Sb	121	212498.461	**100.011**	0.59	0.6	ug/L
⌈	Ba	137	121250.415	**99.999**	2.46	2.5	ug/L
|	Ba	138	791248.250	**99.998**	0.84	0.8	ug/L
| >	Tb	159	333846.569				ug/L
|	Tl	205	570836.153	**100.000**	1.15	1.2	ug/L
⌊	Pb	208	1935222.983	**250.000**	3.59	1.4	ug/L
⌈	Hg	200	8682.051	**20.000**	0.12	0.6	ug/L
|	Hg	201	4842.507	**20.000**	0.76	3.8	ug/L
| >	Bi	209	196563.850				ug/L
⌊	U	238	1242554.577	**100.000**	0.58	0.6	ug/L
	C	13	1080.063				ug/L
	W	184	59.946				ug/L
	Pd	106	-599.721				ug/L
	Kr	83	77.334				ug/L
⌈	Na	23	16459326.511	**9999.862**	1108.14	11.1	ug/L
|	Mg	24	11341807.300	**9999.883**	390.14	3.9	ug/L
|	K	39	23193501.711	**9999.873**	183.87	1.8	ug/L

Ca	44	792126.106	**9999.953**	90.30	0.9	ug/L
Ti	47	213.336				ug/L
Sc-1	45	282300.487				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000338	0.000	0.999999	Linear Thru Zero
B	11.009	0.000527	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006457	0.000	0.999996	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.012417	0.000	0.999988	Linear Thru Zero
Cr	51.941	0.010785	0.000	0.999987	Linear Thru Zero
Cr	52.941	0.001113	0.000	0.970108	Linear Thru Zero
Mn	54.938	0.016839	0.000	1.000000	Linear Thru Zero
Co	58.933	0.011616	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.002345	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004706	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002143	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001266	0.000	0.999993	Linear Thru Zero
Zn	67.925	0.000905	0.000	0.999994	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001283	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000102	0.000	0.995160	Linear Thru Zero
Se	81.917	0.000151	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.006853	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.015149	0.000	0.999994	Linear Thru Zero
Cd	110.904	0.002501	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.005689	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.010878	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.008251	0.000	0.999985	Linear Thru Zero
Ba	136.905	0.003628	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.023684	0.000	0.999998	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.017094	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.023183	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.002195	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001220	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.063211	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1645.132368	0.000	0.999999	Linear Thru Zero
Mg	23.985	1133.827206	0.000	0.999999	Linear Thru Zero
K	38.964	2304.657104	0.000	0.999999	Linear Thru Zero
Ca	43.956	78.431338	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Tuesday, September 01, 2020 08:11:38
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.1216
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	6.927	1551	2082	0.730	
Mg	23.985	23.878	5658	2100	0.750	
Rh	102.905	102.829	24818	2274	0.710	
Ce	139.905	139.778	33779	2355	0.694	
Pb	207.977	207.928	50315	2518	0.686	
U	238.050	238.026	57611	2578	0.687	

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Tuesday, September 01, 2020 08:21:24
Sample Description:
Method File: C:\Elandata\Method\BC Methods\OTHER\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.1219
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual
Acq. Dead Time(ns): 50
Current Dead Time (ns): 50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	46514.2	46514.181	4054.583	8.7
	In	114.9	167957.0	167957.034	13614.209	8.1
	U	238.1	230920.3	230920.348	18371.610	8.0
⌈>	Ba	137.9	158722.8	158722.805	13554.990	8.5
⌊	Ba++	69.0	4494.0	0.028	0.000	0.7
⌈>	Ce	139.9	196682.7	196682.692	16704.173	8.5
⌊	CeO	155.9	4345.9	0.022	0.002	8.1
	220	220.0	25.0	25.040	9.772	39.0
	8.5	8.5	60.7	60.720	7.565	12.5

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
6.25	Lens Voltage
1500.00	ICP RF Power
-1800.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	69	5.0	134697.8

Mg	24	69	5.0	40498.5
In	115	69	6.3	159634.1
Ce	140	69	6.5	175259.1
Pb	208	69	7.5	83245.1

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 9/14/2020 1:06:14PM
Project: SMUD 59th St.-CLP III
Project Number: 60632763.5
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2034585

Laboratory Documentation Requirements

For Data Validation of

Mercury Analysis
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For SMUD - Kleinfelder

60632793.6 SMUD SVM

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Metals Analysis (using ppm units)

EPA-6010B

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Case Narrative

Sample Receipt

Work Order: 2034585
COC Number:
Default Cooler was received at 2.5 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6010B (STLC)	PE-OP3
EPA-6010B (TCLP)	PE-OP3
EPA-6020 (TTLC)	PE-EL2
EPA-7471A (TTLC)	CETAC3

Sample Qualifier Summary

The analyte in the Method Blank is greater than the laboratory PQL but the sample result is greater than 10 times the Method Blank.

Lab Number	Method	Analyte
2034585-01	EPA-6020 (TTLC)	Barium
2034585-02	EPA-6020 (TTLC)	Barium

Holding Times

All holding time requirements were met.

Method Blanks

Lab Number	Method	Analyte		Concentration
B093700-BLK1	EPA-6020 (TTLC)	Barium	B	0.39475 mg/kg
B093700-BLK1	EPA-6020 (TTLC)	Copper	J	0.11725 mg/kg
B093700-BLK1	EPA-6020 (TTLC)	Molybdenum	J	0.053000 mg/kg
B093700-BLK1	EPA-6020 (TTLC)	Nickel	J	0.22650 mg/kg
B093700-BLK1	EPA-6020 (TTLC)	Selenium	J	0.11875 mg/kg
B093809-BLK1	EPA-7471A (TTLC)	Mercury	J	0.056160 mg/kg

Analyte detected in the Method Blank at or above the PQL.

Lab Number	Method	Analyte
B093700-BLK1	EPA-6020 (TTLC)	Barium

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B093700	EPA-6020 (TTLC)	2034585-01	VW-35-2
B093809	EPA-7471A (TTLC)	2034504-01	<Not Client Sample>
B094661	EPA-6010B (TCLP)	2035371-02	<Not Client Sample>
B094803	EPA-6010B (STLC)	2035420-01	<Not Client Sample>

The difference between duplicate readings is less than the quantitation limit.

Lab Number	Method	Analyte
B093700-DUP1	EPA-6020 (TTLC)	Beryllium
B093700-DUP1	EPA-6020 (TTLC)	Cadmium

The sample concentration was more than 4 times the spike level.

Lab Number	Method	Analyte
B093700-MS1	EPA-6020 (TTLC)	Lead
B093700-MS1	EPA-6020 (TTLC)	Zinc
B093700-MSD1	EPA-6020 (TTLC)	Barium

Matrix spike precision is not within the control limits.

Lab Number	Method	Analyte
B093700-MSD1	EPA-6020 (TTLC)	Copper

Matrix spike recovery(s) was(were) not within the control limits.

Lab Number	Method	Analyte

Case Narrative

Matrix Spikes

Matrix spike recovery(s) was(were) not within the control limits.

Lab Number	Method	Analyte
B093700-MS1	EPA-6020 (TTLC)	Antimony
B093700-MS1	EPA-6020 (TTLC)	Chromium
B093700-MS1	EPA-6020 (TTLC)	Copper
B093700-MS1	EPA-6020 (TTLC)	Lead
B093700-MS1	EPA-6020 (TTLC)	Vanadium
B093700-MS1	EPA-6020 (TTLC)	Zinc
B093700-MSD1	EPA-6020 (TTLC)	Barium
B093700-MSD1	EPA-6020 (TTLC)	Copper

LCS

The LCS recoveries were within QC limits.

Post Spikes

Post spike recovery was not within the control limits.

Lab Number	Method	Analyte
B093700-PS1	EPA-6020 (TTLC)	Barium

Interference Checks

Recovery of this analyte in the beginning spiked interference check standard was not within the control limits.

Lab Number	Method	Analyte
2021185-IFB1	EPA-6020 (TTLC)	Zinc

AECOM
2020 L Street, Suite 400
Sacramento, California 95811, United States
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aecom.com

20-34585

RUSH! CHAIN OF CUSTODY RECORD 100802

Task or Subtask (one per form): 60632793.6 - SMUD SVM-add.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
1 SVW-35-2	11/23/20	1425	AN	1	160z glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
2 VW-31-2	11/23/20	1448	AN	2	80z glass	S	ice	None	* See below	N	59th St Corpyard	NA	

CHK BY
DISTRIBUTION
SUB OUT

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270
* PCB's per client 11/24/20 see email

Released By:	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:19	NA			
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
	11/23/2020	1620		11/23/2020	1600	
	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				

AECOM
2020 L Street, Suite 400
Sacramento, California 95811, United States
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aecom.com

RUSH!

CHAIN OF CUSTODY RECORD
100802

20-34585

Task or Subtask (one per form): 60632793.6 · SMUD SVM-add.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

	Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
-1	VW-35-2	11/23/20	1425	N	1	16oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
-2	VW-31-2	11/23/20	1448	AN	2	8oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270

Released By	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:49	NA			
Received By	Date	Time	Relinquished By	Date	Time	
[signature]	11/23/2020	1530				
[signature]	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By	Date	Time	Chain of Custody Returned By	Date	Time	
	/ /	:				

Scanned with CamScanner

Mark Ellis 20-34585

From: Mulvey, Lucy <lucy.mulvey@aecom.com>
Sent: Monday, November 23, 2020 3:30 PM
To: Mark Ellis; Shepard, Andy (Sacramento); Kohlhardt, Robert
Subject: SMUD COC correction 11/23
Attachments: CoC- 11.23.20_1.pdf

Mark,

Please see attached CoC from earlier today. I didn't grab Bill before he left site. I forgot to include PCBs to the analyses list.
Please include PCBs by EPA method SW8082 to the existing list that includes TPH, Cam 17 metals, VOCs and SVOCs.

Thank you,

Lucy
Get Outlook for Android

1

Chain of Custody and Cooler Receipt Form for 2034585 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34585

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 11-24-20 950

Temperature: (A) 2.9 °C / (C) 2.5 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
~~8oz / 16oz / 32oz AMBER~~ SMR		AB								
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 11/24/20 1213

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **HG**
Method: **EPA-7471A**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-7471A

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-7471A

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: CETAC3

Analyte	MDL	PQL	Units
Mercury	0.016	0.16	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-7471A

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: CT3113020 R1 HZ-029
Sampled: 11/23/20 14:25
Prepared: 11/30/20 09:20
Analyzed: 11/30/20 12:54
Solids: 0.00
Preparation: EPA 7471A
Initial/Final: 0.62 g / 100 ml
Batch: B093809
Sequence: 2021216
Calibration: UNASSIGNED
Instrument: CETAC3

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.21	1.01		EPA-7471A

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-7471A

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: CT3113020 R1 HZ-030
Sampled: 11/23/20 14:48
Prepared: 11/30/20 09:20
Analyzed: 11/30/20 12:56
Solids: 0.00
Preparation: EPA 7471A
Initial/Final: 0.64 g / 100 ml
Batch: B093809
Sequence: 2021216
Calibration: UNASSIGNED
Instrument: CETAC3

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.12	0.977	J	EPA-7471A

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-7471A

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B093809 Batch Matrix: Solids
Preparation: EPA 7471A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	CT3113020 R1 HZ-029	11/30/20 09:20	
VW-31-2	2034585-02	CT3113020 R1 HZ-030	11/30/20 09:20	
Blank	B093809-BLK1	CT3113020 R1 HZ-010	11/30/20 09:20	
LCS	B093809-BS1	CT3113020 R1 HZ-011	11/30/20 09:20	
Duplicate	B093809-DUP1	CT3113020 R1 HZ-013	11/30/20 09:20	
Matrix Spike	B093809-MS1	CT3113020 R1 HZ-014	11/30/20 09:20	
Matrix Spike Dup	B093809-MSD1	CT3113020 R1 HZ-015	11/30/20 09:20	
Post Spike	B093809-PS1	CT3113020 R1 HZ-016	11/30/20 09:20	[Spk] 0.62g->100ml; 2ml->2ml; Spiked 1.9ml

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-7471A

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B093809-BLK1	File ID:	CT3113020 R1 HZ-010
Prepared:	11/30/20 09:20	Preparation:	EPA 7471A	Initial/Final:	0.625 g / 100 ml
Analyzed:	11/30/20 12:14	Instrument:	CETAC3		
Batch:	B093809	Sequence:	2021216	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7439-97-6	Mercury	0.056160	J

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Duplicate

DUPLICATES

EPA-7471A

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093809
Preparation: EPA 7471A
Source Sample Name: Duplicate

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093809-DUP1
Lab Source ID: 2034504-01
Initial/Final: 0.62 g / 100 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Mercury	20	0.11758		0.10887		7.69		EPA-7471A

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-7471A

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093809
Preparation: EPA 7471A
Source Sample Number: 2034504-01

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093809-MS1
Initial/Final: 0.62 g / 100 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Mercury	0.80645	0.11758	0.91613	99.0	80 - 120

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	0.80645	0.91452	98.8	0.176	20	80 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-7471A

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B093809
Laboratory ID: B093809-BS1
Preparation: EPA 7471A
Initial/Final: 0.625 g / 100 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Mercury	0.80000	0.87200	109	80 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-7471A

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021216
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: CETAC3
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2021216-ICV1	CT3113020 R1 HZ-008	11/30/20 12:08
Initial Cal Blank	2021216-ICB1	CT3113020 R1 HZ-009	11/30/20 12:10
Blank	B093809-BLK1	CT3113020 R1 HZ-010	11/30/20 12:14
LCS	B093809-BS1	CT3113020 R1 HZ-011	11/30/20 12:16
Duplicate	B093809-DUP1	CT3113020 R1 HZ-013	11/30/20 12:20
Matrix Spike	B093809-MS1	CT3113020 R1 HZ-014	11/30/20 12:23
Matrix Spike Dup	B093809-MSD1	CT3113020 R1 HZ-015	11/30/20 12:25
Post Spike	B093809-PS1	CT3113020 R1 HZ-016	11/30/20 12:27
Calibration Check	2021216-CCV1	CT3113020 R1 HZ-020	11/30/20 12:35
Calibration Blank	2021216-CCB1	CT3113020 R1 HZ-021	11/30/20 12:37
VW-35-2	2034585-01	CT3113020 R1 HZ-029	11/30/20 12:54
VW-31-2	2034585-02	CT3113020 R1 HZ-030	11/30/20 12:56
Calibration Check	2021216-CCV2	CT3113020 R1 HZ-032	11/30/20 13:01
Calibration Blank	2021216-CCB2	CT3113020 R1 HZ-033	11/30/20 13:03

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-7471A

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: CETAC3
Sequence: 2021216
SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2021216-ICB1	Mercury	-0.032700	1.0	ug/L		EPA-7471A
2021216-CCB1	Mercury	-0.021800	1.0	ug/L		EPA-7471A
2021216-CCB2	Mercury	0.012600	1.0	ug/L		EPA-7471A

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-7471A

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: CETAC3
Control Limt: +/- 20.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2021216

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2021216-ICV1	Mercury	5.0000	4.8400	96.8	ug/L	EPA-7471A
2021216-CCV1	Mercury	5.0000	4.9000	98.0	ug/L	EPA-7471A
2021216-CCV2	Mercury	5.0000	4.9000	98.0	ug/L	EPA-7471A

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-7471A

Post Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093809
Preparation: EPA 7471A

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093809-PS1
Lab Source ID: 2034504-01
Initial/Final: 0.01178 g / 2 ml

Source Sample Name: Post Spike
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Mercury	85 - 115	5.6700	0.69255	5.0000	99.5

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

HOLDING TIME SUMMARY

EPA-7471A

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-2	11/23/20 14:25	11/24/20 09:50	11/30/20 09:20	7.00	28.00	11/30/20 12:54	7.00	28.00	
VW-31-2	11/23/20 14:48	11/24/20 09:50	11/30/20 09:20	7.00	28.00	11/30/20 12:56	7.00	28.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **METALS-PPM**
Method: **EPA-6010B**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder

SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-6010B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: PE-OP3

Analyte	MDL	PQL	Units
Lead (STLC)	0.13	0.5	mg/L
Lead (TCLP)	0.03	0.5	mg/L

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-6010B (STLC)

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: PE3_201210-351
Sampled: 11/23/20 14:25
Prepared: 12/10/20 13:30
Analyzed: 12/10/20 19:23
Solids: 0.00
Preparation: Title 22-STLC
Initial/Final: 1 ml / 10 ml
Batch: B094803
Sequence: 2022085
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-92-1	Lead	7.6	1		EPA-6010B

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-6010B (TCLP)

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: PE3_201210-065
Sampled: 11/23/20 14:25
Prepared: 12/09/20 13:30
Analyzed: 12/10/20 09:48
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 5 g / 50 ml
Batch: B094661
Sequence: 2022005
Calibration: UNASSIGNED
Instrument: PE-OP3

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-92-1	Lead	0.052	1	J	EPA-6010B

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B094661 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	PE3_201210-065	12/09/20 13:30	
Blank	B094661-BLK1	PE3_201210-055	12/09/20 13:30	
LCS	B094661-BS1	PE3_201210-056	12/09/20 13:30	
Duplicate	B094661-DUP1	PE3_201210-058	12/09/20 13:30	
Matrix Spike	B094661-MS1	PE3_201210-060	12/09/20 13:30	
Matrix Spike Dup	B094661-MSD1	PE3_201210-061	12/09/20 13:30	
Post Spike	B094661-PS1	PE3_201210-062	12/09/20 13:30	[Spk] 5g->50ml; 50ml->50ml; Spiked 9.8ml

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B094803
Batch Matrix: Solids
Preparation: Title 22-STLC

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	PE3_201210-351	12/10/20 13:30	
Blank	B094803-BLK1	PE3_201210-334	12/10/20 13:30	
LCS	B094803-BS1	PE3_201210-335	12/10/20 13:30	
Duplicate	B094803-DUP1	PE3_201210-336	12/10/20 13:30	
Matrix Spike	B094803-MS1	PE3_201210-339	12/10/20 13:30	
Matrix Spike Dup	B094803-MSD1	PE3_201210-340	12/10/20 13:30	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-6010B

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094661-BLK1	File ID:	PE3_201210-055
Prepared:	12/09/20 13:30	Preparation:	EPA 3050B	Initial/Final:	5 g / 50 ml
Analyzed:	12/10/20 09:29	Instrument:	PE-OP3		
Batch:	B094661	Sequence:	2022005	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	Q
7439-92-1	Lead	0.030	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-6010B

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094803-BLK1	File ID:	PE3_201210-334
Prepared:	12/10/20 13:30	Preparation:	Title 22-STLC	Initial/Final:	1 ml / 10 ml
Analyzed:	12/10/20 18:49	Instrument:	PE-OP3		
Batch:	B094803	Sequence:	2022085	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	Q
7439-92-1	Lead	0.16	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Duplicate

DUPLICATES
EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094661
Preparation: EPA 3050B
Source Sample Name: Duplicate

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094661-DUP1
Lab Source ID: 2035371-02
Initial/Final: 5 g / 50 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Lead	20	0.013267		0.041334				EPA-6010B

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Duplicate

DUPLICATES

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094803
Preparation: Title 22-STLC
Source Sample Name: Duplicate

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094803-DUP1
Lab Source ID: 2035420-01
Initial/Final: 1 ml / 10 ml
% Solids: 17.43

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Lead	20	0.076489		ND				EPA-6010B

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6010B

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094661
Preparation: EPA 3050B
Source Sample Number: 2035371-02

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094661-MS1
Initial/Final: 5 g / 50 ml

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Lead	20.000	ND	20.690	103	75 - 125

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lead	20.000	20.536	103	0.749	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6010B

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094803
Preparation: Title 22-STLC
Source Sample Number: 2035420-01

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094803-MS1
Initial/Final: 0.98 ml / 10 ml

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Lead	20.408	ND	21.014	103	75 - 125

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lead	20.408	22.316	109	6.01	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-6010B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B094661
Laboratory ID: B094661-BS1
Preparation: EPA 3050B
Initial/Final: 5 g / 50 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Lead	20.000	20.908	105	85 - 115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094803
Preparation: Title 22-STLC

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094803-BS1
Initial/Final: 1 ml / 10 ml

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC. #	QC LIMITS REC.
Lead	20.000	20.679	103	85 - 115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2022005
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: PE-OP3
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022005-ICV1	PE3_201210-008	12/10/20 07:25
Initial Cal Blank	2022005-ICB1	PE3_201210-009	12/10/20 07:27
Calibration Check	2022005-CCV2	PE3_201210-033	12/10/20 08:40
Calibration Blank	2022005-CCB2	PE3_201210-034	12/10/20 08:42
Interference Check A	2022005-IFA1	PE3_201210-038	12/10/20 08:51
Interference Check B	2022005-IFB1	PE3_201210-039	12/10/20 08:53
Calibration Check	2022005-CCV3	PE3_201210-040	12/10/20 08:59
Calibration Blank	2022005-CCB3	PE3_201210-041	12/10/20 09:01
Calibration Check	2022005-CCV4	PE3_201210-053	12/10/20 09:25
Calibration Blank	2022005-CCB4	PE3_201210-054	12/10/20 09:27
Blank	B094661-BLK1	PE3_201210-055	12/10/20 09:29
LCS	B094661-BS1	PE3_201210-056	12/10/20 09:31
Duplicate	B094661-DUP1	PE3_201210-058	12/10/20 09:35
Matrix Spike	B094661-MS1	PE3_201210-060	12/10/20 09:38
Matrix Spike Dup	B094661-MSD1	PE3_201210-061	12/10/20 09:40
Post Spike	B094661-PS1	PE3_201210-062	12/10/20 09:42
Calibration Check	2022005-CCV5	PE3_201210-063	12/10/20 09:44
Calibration Blank	2022005-CCB5	PE3_201210-064	12/10/20 09:46
VW-35-2	2034585-01	PE3_201210-065	12/10/20 09:48
Calibration Check	2022005-CCV6	PE3_201210-072	12/10/20 10:01
Calibration Blank	2022005-CCB6	PE3_201210-073	12/10/20 10:03

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6010B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Sequence: 2022085
Instrument: PE-OP3
Matrix: Solids
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2022085-ICV1	PE3_201210-008	12/10/20 07:25
Initial Cal Blank	2022085-ICB1	PE3_201210-009	12/10/20 07:27
MRL Check	2022085-CRL1	PE3_201210-015	12/10/20 07:43
Calibration Check	2022085-CCV2	PE3_201210-033	12/10/20 08:40
Calibration Blank	2022085-CCB2	PE3_201210-034	12/10/20 08:42
Interference Check A	2022085-IFA1	PE3_201210-038	12/10/20 08:51
Interference Check B	2022085-IFB1	PE3_201210-039	12/10/20 08:53
Calibration Check	2022085-CCV3	PE3_201210-040	12/10/20 08:59
Calibration Blank	2022085-CCB3	PE3_201210-041	12/10/20 09:01
Calibration Check	2022085-CCV4	PE3_201210-332	12/10/20 18:43
Calibration Blank	2022085-CCB4	PE3_201210-333	12/10/20 18:45
Blank	B094803-BLK1	PE3_201210-334	12/10/20 18:49
LCS	B094803-BS1	PE3_201210-335	12/10/20 18:51
Duplicate	B094803-DUP1	PE3_201210-336	12/10/20 18:53
Matrix Spike	B094803-MS1	PE3_201210-339	12/10/20 18:59
Matrix Spike Dup	B094803-MSD1	PE3_201210-340	12/10/20 19:00
Calibration Check	2022085-CCV5	PE3_201210-341	12/10/20 19:02
Calibration Blank	2022085-CCB5	PE3_201210-342	12/10/20 19:04
Calibration Check	2022085-CCV6	PE3_201210-349	12/10/20 19:19
Calibration Blank	2022085-CCB6	PE3_201210-350	12/10/20 19:21
VW-35-2	2034585-01	PE3_201210-351	12/10/20 19:23
Calibration Check	2022085-CCV7	PE3_201210-354	12/10/20 19:29
Calibration Blank	2022085-CCB7	PE3_201210-355	12/10/20 19:31

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Sequence: 2022005

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2022005-ICB1	Lead	0.0012554	0.050	mg/L		EPA-6010B
2022005-CCB2	Lead	-0.0017332	0.050	mg/L		EPA-6010B
2022005-CCB3	Lead	0.0019536	0.050	mg/L		EPA-6010B
2022005-CCB4	Lead	0.00073356	0.050	mg/L		EPA-6010B
2022005-CCB5	Lead	0.00044525	0.050	mg/L		EPA-6010B
2022005-CCB6	Lead	-0.0045682	0.050	mg/L		EPA-6010B

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Sequence: 2022085
SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2022085-ICB1	Lead	0.0012554	0.050	mg/L		EPA-6010B
2022085-CCB2	Lead	-0.0017332	0.050	mg/L		EPA-6010B
2022085-CCB3	Lead	0.0019536	0.050	mg/L		EPA-6010B
2022085-CCB4	Lead	-0.000032360	0.050	mg/L		EPA-6010B
2022085-CCB5	Lead	-0.00020044	0.050	mg/L		EPA-6010B
2022085-CCB6	Lead	0.011120	0.050	mg/L		EPA-6010B
2022085-CCB7	Lead	0.0025063	0.050	mg/L		EPA-6010B

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Control Limt: +/- 10.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2022005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2022005-ICV1	Lead	0.50000	0.49209	98.4	mg/L	EPA-6010B
2022005-CCV2	Lead	0.50000	0.52084	104	mg/L	EPA-6010B
2022005-CCV3	Lead	0.50000	0.52160	104	mg/L	EPA-6010B
2022005-CCV4	Lead	0.50000	0.49661	99.3	mg/L	EPA-6010B
2022005-CCV5	Lead	0.50000	0.48399	96.8	mg/L	EPA-6010B
2022005-CCV6	Lead	0.50000	0.49546	99.1	mg/L	EPA-6010B

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Control Limt: +/- 10.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2022085

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2022085-ICV1	Lead	0.50000	0.49209	98.4	mg/L	EPA-6010B
2022085-CCV2	Lead	0.50000	0.52084	104	mg/L	EPA-6010B
2022085-CCV3	Lead	0.50000	0.52160	104	mg/L	EPA-6010B
2022085-CCV4	Lead	0.50000	0.53970	108	mg/L	EPA-6010B
2022085-CCV5	Lead	0.50000	0.53496	107	mg/L	EPA-6010B
2022085-CCV6	Lead	0.50000	0.50683	101	mg/L	EPA-6010B
2022085-CCV7	Lead	0.50000	0.52302	105	mg/L	EPA-6010B

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6010B

Post Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094661
Preparation: EPA 3050B

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094661-PS1
Lab Source ID: 2035371-02
Initial/Final: 0.98 g / 10 ml

Source Sample Name: Post Spike
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (mg/L)	Sample Result (SR) (mg/L)	Spike Added (SA) (mg/L)	%R
Lead	75 - 125	1.9905	0.0013002	2.0000	99.5

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ICP INTERFERENCE CHECK SAMPLE

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Sequence: 2022005

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2022005-IFA1	Lead		-0.011139		mg/L
2022005-IFB1	Lead	1.0000	0.99	98.7	mg/L

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ICP INTERFERENCE CHECK SAMPLE

EPA-6010B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-OP3
Sequence: 2022085

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2022085-IFA1	Lead		-0.011139		mg/L
2022085-IFB1	Lead	1.0000	0.99	98.7	mg/L

* Values outside of QC limits

Raw Data From Instrument PE-OP3

Raw Data - Calibration Standards

==========

Analysis Begun

Start Time: 12/10/2020 7:10:25 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank @STD0E12001 **Date Collected: 12/10/2020 7:10:34 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Blank @STD0E12001

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	644533.3	6494.69	1.01%	100.0	%
Y 371.029 (R)	18092.4	134.30	0.74%	100.0	%
Sc 361.383	1388614.1	6005.25	0.43%	100.0	%
Sc 361.383 (R)	39872.4	313.36	0.79%	100.0	%
Ag 328.068†	-695.0	31.35	4.51%	[0.00]	mg/L
Al 308.215 (R)†	23.5	4.29	18.28%	[0.00]	mg/L
As 188.979†	0.5	1.68	349.12%	[0.00]	mg/L
B 249.677†	75.0	5.75	7.67%	[0.00]	mg/L
Ba 233.527 (R)†	0.3	2.06	609.77%	[0.00]	mg/L
Be 313.107 †	4458.6	38.33	0.86%	[0.00]	mg/L
Ca 315.887 (R)†	-11.6	5.18	44.56%	[0.00]	mg/L
Cd 228.802 †	280.8	7.86	2.80%	[0.00]	mg/L
Co 228.616†	-95.9	2.99	3.12%	[0.00]	mg/L
Cr 267.716†	34.0	11.78	34.61%	[0.00]	mg/L
Cu 324.752†	1144.0	6.75	0.59%	[0.00]	mg/L
Fe 238.204 (R)†	35.9	0.15	0.41%	[0.00]	mg/L
K 766.490 (R)†	-79.0	48.14	60.92%	[0.00]	mg/L
Li 670.784 (R)†	10.0	2.74	27.46%	[0.00]	mg/L
Mg 279.077 (R)†	3.4	0.85	25.00%	[0.00]	mg/L
Mn 257.610 †	0.6	1.01	169.11%	[0.00]	mg/L
Mo 202.031†	91.4	6.71	7.34%	[0.00]	mg/L
Na 589.592 (R)†	267.9	2.46	0.92%	[0.00]	mg/L
Ni 231.604†	-69.2	3.06	4.42%	[0.00]	mg/L
Pb 220.353†	272.2	14.52	5.34%	[0.00]	mg/L
Sb 206.836†	54.3	6.00	11.05%	[0.00]	mg/L
Se 196.026†	-2.0	3.00	147.14%	[0.00]	mg/L
Si 251.611 (R)†	0.6	1.60	285.72%	[0.00]	mg/L
Sn 189.927†	-8.2	3.43	42.01%	[0.00]	mg/L
Sr 421.552 (R)†	111.3	11.26	10.11%	[0.00]	mg/L
Ti 334.940 (R)†	8.1	5.99	73.74%	[0.00]	mg/L
Tl 190.801†	-27.2	3.70	13.58%	[0.00]	mg/L
V 292.402†	87.8	0.25	0.28%	[0.00]	mg/L
Zn 206.200 †	145.4	0.44	0.30%	[0.00]	mg/L

==========

Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

==========

Analysis Begun

Start Time: 12/10/2020 7:20:00 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 7:20:01 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	594696.9	155.46	0.03%	92.27	%
Y 371.029 (R)	18123.0	87.15	0.48%	100.2	%
Sc 361.383	1327360.1	12346.00	0.93%	95.59	%
Sc 361.383 (R)	39177.9	515.48	1.32%	98.26	%
Ag 328.068†	83499.2	179.57	0.22%	[0.5]	mg/L
Al 308.215 (R)†	26603.7	226.65	0.85%	[100]	mg/L
As 188.979†	775.2	4.75	0.61%	[1.0]	mg/L
B 249.677†	96157.9	90.05	0.09%	[5.0]	mg/L
Ba 233.527 (R)†	3991.5	3.73	0.09%	[5.0]	mg/L
Be 313.107 †	3211507.6	4682.50	0.15%	[1.0]	mg/L
Ca 315.887 (R)†	64291.1	273.98	0.43%	[100]	mg/L
Cd 228.802 †	120275.1	29.71	0.02%	[5.0]	mg/L
Co 228.616†	12654.4	7.14	0.06%	[1.0]	mg/L
Cr 267.716†	47318.8	89.98	0.19%	[1.0]	mg/L
Cu 324.752†	133695.6	42.15	0.03%	[1.0]	mg/L
Fe 238.204 (R)†	15271.7	117.50	0.77%	[20]	mg/L
K 766.490 (R)†	178281.0	1405.16	0.79%	[100]	mg/L
Li 670.784 (R)†	366164.5	1608.94	0.44%	[5.0]	mg/L
Mg 279.077 (R)†	12570.7	102.04	0.81%	[100]	mg/L
Mn 257.610 †	29424.7	143.28	0.49%	[5.0]	mg/L
Mo 202.031†	80220.7	43.78	0.05%	[5.0]	mg/L
Na 589.592 (R)†	491792.1	10394.17	2.11%	[100]	mg/L
Ni 231.604†	20509.0	18.53	0.09%	[1.0]	mg/L
Pb 220.353†	5041.6	61.55	1.22%	[1.0]	mg/L
Sb 206.836†	1450.6	4.43	0.31%	[1.0]	mg/L
Se 196.026†	537.9	10.14	1.88%	[1.0]	mg/L
Si 251.611 (R)†	1323.2	8.27	0.62%	[5.0]	mg/L
Sn 189.927†	2295.8	12.73	0.55%	[1.0]	mg/L
Sr 421.552 (R)†	1470286.6	36216.33	2.46%	[5.0]	mg/L
Ti 334.940 (R)†	46643.7	380.32	0.82%	[5.0]	mg/L
Tl 190.801†	916.0	3.57	0.39%	[1.0]	mg/L
V 292.402†	121061.6	37.91	0.03%	[1.0]	mg/L
Zn 206.200 †	81449.4	49.69	0.06%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	167000	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	-0.0	266.0	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	775.2	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	19230	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	-0.0	798.3	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3212000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	642.9	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	24060	0.00000	1.000000	

Co 228.616	1	Lin, Calc Int	0.0	12650	0.00000	1.000000
Cr 267.716	1	Lin, Calc Int	0.0	47320	0.00000	1.000000
Cu 324.752	1	Lin, Calc Int	0.0	133700	0.00000	1.000000
Fe 238.204 (R)	1	Lin, Calc Int	0.0	763.6	0.00000	1.000000
K 766.490 (R)	1	Lin, Calc Int	0.0	1783	0.00000	1.000000
Li 670.784 (R)	1	Lin, Calc Int	0.0	73230	0.00000	1.000000
Mg 279.077 (R)	1	Lin, Calc Int	-0.0	125.7	0.00000	1.000000
Mn 257.610	1	Lin, Calc Int	0.0	5885	0.00000	1.000000
Mo 202.031	1	Lin, Calc Int	0.0	16040	0.00000	1.000000
Na 589.592 (R)	1	Lin, Calc Int	-0.0	4918	0.00000	1.000000
Ni 231.604	1	Lin, Calc Int	0.0	20510	0.00000	1.000000
Pb 220.353	1	Lin, Calc Int	0.0	5042	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1451	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	537.9	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	264.6	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2296	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	294100	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	9329	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	916.0	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	121100	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	-0.0	16290	0.00000	1.000000

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 7:59:30 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank @STD0E12001 **Date Collected: 12/10/2020 7:59:39 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Blank @STD0E12001

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	654155.7	10624.22	1.62%	101.5	%
Y 371.029 (R)	18481.2	505.74	2.74%	102.1	%
Sc 361.383	1350131.5	17426.07	1.29%	97.23	%
Sc 361.383 (R)	38645.8	859.48	2.22%	96.92	%
Ag 328.068†	-739.4	66.33	8.97%	[0.00]	mg/L
Al 308.215 (R)†	24.6	10.89	44.31%	[0.00]	mg/L
As 188.979†	0.2	0.80	427.43%	[0.00]	mg/L
B 249.677†	457.9	18.71	4.09%	[0.00]	mg/L
Ba 233.527 (R)†	0.2	2.33	939.93%	[0.00]	mg/L
Be 313.107 †	4148.9	185.99	4.48%	[0.00]	mg/L
Ca 315.887 (R)†	-10.6	2.48	23.34%	[0.00]	mg/L
Cd 228.802 †	285.1	18.72	6.57%	[0.00]	mg/L
Co 228.616†	-91.7	0.08	0.09%	[0.00]	mg/L
Cr 267.716†	24.2	0.99	4.08%	[0.00]	mg/L
Cu 324.752†	1223.8	37.89	3.10%	[0.00]	mg/L
Fe 238.204 (R)†	42.2	0.89	2.11%	[0.00]	mg/L
K 766.490 (R)†	-32.8	57.57	175.50%	[0.00]	mg/L
Li 670.784 (R)†	13.2	19.40	146.74%	[0.00]	mg/L
Mg 279.077 (R)†	4.9	3.95	81.04%	[0.00]	mg/L
Mn 257.610 †	1.4	2.19	154.10%	[0.00]	mg/L
Mo 202.031†	120.3	1.17	0.97%	[0.00]	mg/L
Na 589.592 (R)†	227.2	43.41	19.11%	[0.00]	mg/L
Ni 231.604†	-65.2	0.11	0.17%	[0.00]	mg/L
Pb 220.353†	255.8	0.64	0.25%	[0.00]	mg/L
Sb 206.836†	55.9	3.70	6.63%	[0.00]	mg/L
Se 196.026†	1.0	1.61	163.19%	[0.00]	mg/L
Si 251.611 (R)†	2.5	1.03	41.36%	[0.00]	mg/L
Sn 189.927†	-3.3	3.24	97.59%	[0.00]	mg/L
Sr 421.552 (R)†	147.0	22.18	15.09%	[0.00]	mg/L
Ti 334.940 (R)†	19.1	4.99	26.13%	[0.00]	mg/L
Tl 190.801†	-19.8	3.87	19.56%	[0.00]	mg/L
V 292.402†	101.3	6.92	6.83%	[0.00]	mg/L
Zn 206.200 †	105.6	1.68	1.59%	[0.00]	mg/L

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 8:05:04 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 8:05:05 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	606174.3	7540.82	1.24%	94.05	%
Y 371.029 (R)	18199.9	37.36	0.21%	100.6	%
Sc 361.383	1307945.3	29221.67	2.23%	94.19	%
Sc 361.383 (R)	38597.8	237.98	0.62%	96.80	%
Ag 328.068†	81275.0	556.84	0.69%	[0.5]	mg/L
Al 308.215 (R)†	26193.5	191.70	0.73%	[100]	mg/L
As 188.979†	758.5	12.23	1.61%	[1.0]	mg/L
B 249.677†	91532.5	686.54	0.75%	[5.0]	mg/L
Ba 233.527 (R)†	3827.5	0.61	0.02%	[5.0]	mg/L
Be 313.107 †	3258652.5	25605.27	0.79%	[1.0]	mg/L
Ca 315.887 (R)†	67038.3	333.79	0.50%	[100]	mg/L
Cd 228.802 †	117101.5	751.46	0.64%	[5.0]	mg/L
Co 228.616†	12965.6	177.16	1.37%	[1.0]	mg/L
Cr 267.716†	45921.5	450.13	0.98%	[1.0]	mg/L
Cu 324.752†	125797.3	188.40	0.15%	[1.0]	mg/L
Fe 238.204 (R)†	15463.3	75.15	0.49%	[20]	mg/L
K 766.490 (R)†	180162.9	35.29	0.02%	[100]	mg/L
Li 670.784 (R)†	374278.0	764.25	0.20%	[5.0]	mg/L
Mg 279.077 (R)†	12069.7	118.21	0.98%	[100]	mg/L
Mn 257.610 †	30628.1	303.54	0.99%	[5.0]	mg/L
Mo 202.031†	78042.2	362.65	0.46%	[5.0]	mg/L
Na 589.592 (R)†	494427.8	765.66	0.15%	[100]	mg/L
Ni 231.604†	21280.9	341.68	1.61%	[1.0]	mg/L
Pb 220.353†	4826.8	90.92	1.88%	[1.0]	mg/L
Sb 206.836†	1407.1	34.03	2.42%	[1.0]	mg/L
Se 196.026†	518.3	12.81	2.47%	[1.0]	mg/L
Si 251.611 (R)†	1342.5	8.53	0.64%	[5.0]	mg/L
Sn 189.927†	2191.9	44.75	2.04%	[1.0]	mg/L
Sr 421.552 (R)†	1506340.2	13335.21	0.89%	[5.0]	mg/L
Ti 334.940 (R)†	48549.8	554.85	1.14%	[5.0]	mg/L
Tl 190.801†	889.9	16.98	1.91%	[1.0]	mg/L
V 292.402†	117656.8	1071.39	0.91%	[1.0]	mg/L
Zn 206.200 †	79446.5	665.58	0.84%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	162500	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	261.9	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	758.5	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	18310	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	765.5	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3259000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	670.4	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	23420	0.00000	1.000000	

Co 228.616	1	Lin, Calc Int	0.0	12970	0.00000	1.000000
Cr 267.716	1	Lin, Calc Int	0.0	45920	0.00000	1.000000
Cu 324.752	1	Lin, Calc Int	0.0	125800	0.00000	1.000000
Fe 238.204 (R)	1	Lin, Calc Int	0.0	773.2	0.00000	1.000000
K 766.490 (R)	1	Lin, Calc Int	0.0	1802	0.00000	1.000000
Li 670.784 (R)	1	Lin, Calc Int	0.0	74860	0.00000	1.000000
Mg 279.077 (R)	1	Lin, Calc Int	0.0	120.7	0.00000	1.000000
Mn 257.610	1	Lin, Calc Int	0.0	6126	0.00000	1.000000
Mo 202.031	1	Lin, Calc Int	0.0	15610	0.00000	1.000000
Na 589.592 (R)	1	Lin, Calc Int	0.0	4944	0.00000	1.000000
Ni 231.604	1	Lin, Calc Int	0.0	21280	0.00000	1.000000
Pb 220.353	1	Lin, Calc Int	0.0	4827	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1407	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	518.3	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	268.5	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2192	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	301300	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	9710	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	889.9	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	117700	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	15890	0.00000	1.000000

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Analysis Begun

Start Time: 12/10/2020 8:36:46 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank @STD0E12001 **Date Collected: 12/10/2020 8:36:54 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 8:38:49 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 8:38:50 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	611601.5	4368.83	0.71%	94.89	%
Y 371.029 (R)	18298.2	74.30	0.41%	101.1	%
Sc 361.383	1280432.7	5057.46	0.39%	100.0	%
Sc 361.383 (R)	37892.7	75.23	0.20%	100.0	%
Ag 328.068†	81025.0	362.89	0.45%	[0.5]	mg/L
Al 308.215 (R)†	26545.8	70.69	0.27%	[100]	mg/L
As 188.979†	747.4	18.81	2.52%	[1.0]	mg/L
B 249.677†	91468.8	126.14	0.14%	[5.0]	mg/L
Ba 233.527 (R)†	3793.5	10.51	0.28%	[5.0]	mg/L
Be 313.107 †	3325538.9	7036.31	0.21%	[1.0]	mg/L
Ca 315.887 (R)†	69280.8	314.36	0.45%	[100]	mg/L
Cd 228.802 †	117294.2	510.69	0.44%	[5.0]	mg/L
Co 228.616†	13037.8	105.64	0.81%	[1.0]	mg/L
Cr 267.716†	46234.4	24.49	0.05%	[1.0]	mg/L
Cu 324.752†	123147.9	994.38	0.81%	[1.0]	mg/L
Fe 238.204 (R)†	15948.2	50.10	0.31%	[20]	mg/L
K 766.490 (R)†	180717.3	1760.17	0.97%	[100]	mg/L
Li 670.784 (R)†	375098.3	6184.14	1.65%	[5.0]	mg/L
Mg 279.077 (R)†	12121.4	52.12	0.43%	[100]	mg/L
Mn 257.610 †	31316.8	309.11	0.99%	[5.0]	mg/L
Mo 202.031†	78517.3	98.48	0.13%	[5.0]	mg/L
Na 589.592 (R)†	495506.0	4874.24	0.98%	[100]	mg/L
Ni 231.604†	21475.4	203.98	0.95%	[1.0]	mg/L
Pb 220.353†	4845.9	47.78	0.99%	[1.0]	mg/L
Sb 206.836†	1394.7	18.15	1.30%	[1.0]	mg/L
Se 196.026†	527.4	10.84	2.06%	[1.0]	mg/L
Si 251.611 (R)†	1387.2	5.38	0.39%	[5.0]	mg/L
Sn 189.927†	2190.1	19.78	0.90%	[1.0]	mg/L
Sr 421.552 (R)†	1529429.8	26839.53	1.75%	[5.0]	mg/L
Ti 334.940 (R)†	49554.8	804.14	1.62%	[5.0]	mg/L
Tl 190.801†	891.0	5.23	0.59%	[1.0]	mg/L

V 292.402†	118819.6	90.42	0.08%	[1.0] mg/L
Zn 206.200 †	80801.6	242.81	0.30%	[5.0] mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	162100	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	265.5	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	747.4	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	18290	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	758.7	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3326000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	692.8	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	23460	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	13040	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	46230	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	123100	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	0.0	797.4	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1807	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	75020	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	-0.0	121.2	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	-0.0	6263	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	15700	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	4955	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	21480	0.00000	1.000000	
Pb 220.353	1	Lin, Calc Int	0.0	4846	0.00000	1.000000	
Sb 206.836	1	Lin, Calc Int	0.0	1395	0.00000	1.000000	
Se 196.026	1	Lin, Calc Int	0.0	527.4	0.00000	1.000000	
Si 251.611 (R)	1	Lin, Calc Int	0.0	277.4	0.00000	1.000000	
Sn 189.927	1	Lin, Calc Int	0.0	2190	0.00000	1.000000	
Sr 421.552 (R)	1	Lin, Calc Int	0.0	305900	0.00000	1.000000	
Ti 334.940 (R)	1	Lin, Calc Int	-0.0	9911	0.00000	1.000000	
Tl 190.801	1	Lin, Calc Int	0.0	891.0	0.00000	1.000000	
V 292.402	1	Lin, Calc Int	0.0	118800	0.00000	1.000000	
Zn 206.200	1	Lin, Calc Int	0.0	16160	0.00000	1.000000	

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 9:22:34 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 9:22:35 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	606543.9	5146.69	0.85%	94.11	%
Y 371.029 (R)	18410.9	71.86	0.39%	101.8	%
Sc 361.383	1246663.2	687.71	0.06%	97.01	%
Sc 361.383 (R)	38037.6	1218.79	3.20%	103.6	%
Ag 328.068†	83457.6	435.06	0.52%	[0.5]	mg/L
Al 308.215 (R)†	26545.2	77.05	0.29%	[100]	mg/L
As 188.979†	779.7	9.30	1.19%	[1.0]	mg/L
B 249.677†	94764.6	388.52	0.41%	[5.0]	mg/L
Ba 233.527 (R)†	3743.2	19.70	0.53%	[5.0]	mg/L
Be 313.107 †	3383043.6	19172.76	0.57%	[1.0]	mg/L
Ca 315.887 (R)†	70400.3	399.65	0.57%	[100]	mg/L
Cd 228.802 †	120620.8	772.15	0.64%	[5.0]	mg/L
Co 228.616†	13087.0	33.34	0.25%	[1.0]	mg/L
Cr 267.716†	47680.4	129.71	0.27%	[1.0]	mg/L
Cu 324.752†	126650.9	752.90	0.59%	[1.0]	mg/L
Fe 238.204 (R)†	16134.5	111.94	0.69%	[20]	mg/L
K 766.490 (R)†	181366.4	3528.96	1.95%	[100]	mg/L
Li 670.784 (R)†	378961.8	6506.68	1.72%	[5.0]	mg/L
Mg 279.077 (R)†	11989.8	4.14	0.03%	[100]	mg/L
Mn 257.610 †	31844.2	97.89	0.31%	[5.0]	mg/L
Mo 202.031†	80623.3	293.62	0.36%	[5.0]	mg/L
Na 589.592 (R)†	497606.9	742.28	0.15%	[100]	mg/L
Ni 231.604†	21221.7	49.71	0.23%	[1.0]	mg/L
Pb 220.353†	5102.1	35.54	0.70%	[1.0]	mg/L
Sb 206.836†	1467.7	39.59	2.70%	[1.0]	mg/L
Se 196.026†	537.7	6.29	1.17%	[1.0]	mg/L
Si 251.611 (R)†	1400.1	13.61	0.97%	[5.0]	mg/L
Sn 189.927†	2307.5	35.78	1.55%	[1.0]	mg/L
Sr 421.552 (R)†	1541766.4	16487.57	1.07%	[5.0]	mg/L
Ti 334.940 (R)†	50503.7	26.53	0.05%	[5.0]	mg/L
Tl 190.801†	926.1	11.75	1.27%	[1.0]	mg/L
V 292.402†	123696.6	494.36	0.40%	[1.0]	mg/L
Zn 206.200 †	83212.1	240.45	0.29%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	166900	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	265.5	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	779.7	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	18950	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	748.6	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3383000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	704.0	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	-0.0	24120	0.00000	1.000000	

Co 228.616	1	Lin, Calc Int	0.0	13090	0.00000	1.000000
Cr 267.716	1	Lin, Calc Int	0.0	47680	0.00000	1.000000
Cu 324.752	1	Lin, Calc Int	0.0	126700	0.00000	1.000000
Fe 238.204 (R)	1	Lin, Calc Int	0.0	806.7	0.00000	1.000000
K 766.490 (R)	1	Lin, Calc Int	0.0	1814	0.00000	1.000000
Li 670.784 (R)	1	Lin, Calc Int	0.0	75790	0.00000	1.000000
Mg 279.077 (R)	1	Lin, Calc Int	0.0	119.9	0.00000	1.000000
Mn 257.610	1	Lin, Calc Int	0.0	6369	0.00000	1.000000
Mo 202.031	1	Lin, Calc Int	0.0	16120	0.00000	1.000000
Na 589.592 (R)	1	Lin, Calc Int	0.0	4976	0.00000	1.000000
Ni 231.604	1	Lin, Calc Int	0.0	21220	0.00000	1.000000
Pb 220.353	1	Lin, Calc Int	0.0	5102	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1468	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	537.7	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	280.0	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2307	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	308400	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	10100	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	926.1	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	123700	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	16640	0.00000	1.000000

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST

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Sequence No.: 43 **Autosampler Location: 35**
Sample ID: B094630-BLK1 **Date Collected: 12/10/2020 10:26:47 AM**
Analyst: JCC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 10:27:50 AM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 10:27:50 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	612316.5	6005.26	0.98%	95.00	%
Y 371.029 (R)	18392.0	39.30	0.21%	101.7	%
Sc 361.383	1228522.3	4477.34	0.36%	95.60	%
Sc 361.383 (R)	36199.5	623.65	1.72%	98.58	%
Ag 328.068†	82502.2	1539.27	1.87%	[0.5]	mg/L
Al 308.215 (R)†	26691.1	150.18	0.56%	[100]	mg/L
As 188.979†	760.1	13.68	1.80%	[1.0]	mg/L
B 249.677†	92466.5	1568.25	1.70%	[5.0]	mg/L
Ba 233.527 (R)†	3678.3	4.87	0.13%	[5.0]	mg/L
Be 313.107 †	3421672.1	23926.83	0.70%	[1.0]	mg/L
Ca 315.887 (R)†	72533.3	417.80	0.58%	[100]	mg/L
Cd 228.802 †	119209.8	1972.20	1.65%	[5.0]	mg/L
Co 228.616†	13511.8	63.33	0.47%	[1.0]	mg/L
Cr 267.716†	46905.2	709.57	1.51%	[1.0]	mg/L
Cu 324.752†	122217.3	2448.17	2.00%	[1.0]	mg/L
Fe 238.204 (R)†	16527.6	75.62	0.46%	[20]	mg/L
K 766.490 (R)†	180116.5	271.91	0.15%	[100]	mg/L
Li 670.784 (R)†	376641.6	1385.85	0.37%	[5.0]	mg/L
Mg 279.077 (R)†	11763.9	53.40	0.45%	[100]	mg/L
Mn 257.610 †	32592.4	117.72	0.36%	[5.0]	mg/L
Mo 202.031†	79744.9	1269.31	1.59%	[5.0]	mg/L
Na 589.592 (R)†	503785.5	19228.86	3.82%	[100]	mg/L
Ni 231.604†	22171.3	82.14	0.37%	[1.0]	mg/L
Pb 220.353†	4913.7	17.23	0.35%	[1.0]	mg/L
Sb 206.836†	1429.0	21.08	1.47%	[1.0]	mg/L
Se 196.026†	527.3	7.99	1.51%	[1.0]	mg/L
Si 251.611 (R)†	1429.4	0.38	0.03%	[5.0]	mg/L
Sn 189.927†	2270.5	0.87	0.04%	[1.0]	mg/L
Sr 421.552 (R)†	1568427.2	60974.51	3.89%	[5.0]	mg/L
Ti 334.940 (R)†	51582.3	799.00	1.55%	[5.0]	mg/L
Tl 190.801†	907.1	5.37	0.59%	[1.0]	mg/L
V 292.402†	121743.5	2066.58	1.70%	[1.0]	mg/L
Zn 206.200 †	82019.9	1164.50	1.42%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope

Ag 328.068	1	Lin, Calc Int	0.0	165000	0.00000	1.000000
Al 308.215 (R)	1	Lin, Calc Int	0.0	266.9	0.00000	1.000000
As 188.979	1	Lin, Calc Int	0.0	760.1	0.00000	1.000000
B 249.677	1	Lin, Calc Int	0.0	18490	0.00000	1.000000
Ba 233.527 (R)	1	Lin, Calc Int	0.0	735.7	0.00000	1.000000
Be 313.107	1	Lin, Calc Int	0.0	3422000	0.00000	1.000000
Ca 315.887 (R)	1	Lin, Calc Int	0.0	725.3	0.00000	1.000000
Cd 228.802	1	Lin, Calc Int	-0.0	23840	0.00000	1.000000
Co 228.616	1	Lin, Calc Int	0.0	13510	0.00000	1.000000
Cr 267.716	1	Lin, Calc Int	0.0	46910	0.00000	1.000000
Cu 324.752	1	Lin, Calc Int	0.0	122200	0.00000	1.000000
Fe 238.204 (R)	1	Lin, Calc Int	0.0	826.4	0.00000	1.000000
K 766.490 (R)	1	Lin, Calc Int	0.0	1801	0.00000	1.000000
Li 670.784 (R)	1	Lin, Calc Int	-0.0	75330	0.00000	1.000000
Mg 279.077 (R)	1	Lin, Calc Int	0.0	117.6	0.00000	1.000000
Mn 257.610	1	Lin, Calc Int	0.0	6518	0.00000	1.000000
Mo 202.031	1	Lin, Calc Int	0.0	15950	0.00000	1.000000
Na 589.592 (R)	1	Lin, Calc Int	0.0	5038	0.00000	1.000000
Ni 231.604	1	Lin, Calc Int	0.0	22170	0.00000	1.000000
Pb 220.353	1	Lin, Calc Int	0.0	4914	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1429	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	527.3	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	285.9	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2270	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	313700	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	10320	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	907.1	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	121700	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	-0.0	16400	0.00000	1.000000

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

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Analysis Begun

Start Time: 12/10/2020 1:20:22 PM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 1:20:23 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	594862.2	2442.39	0.41%	92.29	%
Y 371.029 (R)	18050.0	184.21	1.02%	99.77	%
Sc 361.383	1197514.1	7364.46	0.61%	93.19	%
Sc 361.383 (R)	35097.3	405.97	1.16%	95.58	%
Ag 328.068†	84740.4	25.22	0.03%	[0.5]	mg/L
Al 308.215 (R)†	26720.7	113.40	0.42%	[100]	mg/L
As 188.979†	784.2	2.87	0.37%	[1.0]	mg/L
B 249.677†	97739.8	75.88	0.08%	[5.0]	mg/L
Ba 233.527 (R)†	3797.7	0.94	0.02%	[5.0]	mg/L
Be 313.107 †	3428993.0	23603.49	0.69%	[1.0]	mg/L
Ca 315.887 (R)†	70675.5	158.07	0.22%	[100]	mg/L
Cd 228.802 †	122729.0	50.13	0.04%	[5.0]	mg/L
Co 228.616†	13245.6	35.62	0.27%	[1.0]	mg/L
Cr 267.716†	48155.2	24.93	0.05%	[1.0]	mg/L
Cu 324.752†	128188.9	189.73	0.15%	[1.0]	mg/L
Fe 238.204 (R)†	16340.6	102.55	0.63%	[20]	mg/L
K 766.490 (R)†	180477.4	2322.47	1.29%	[100]	mg/L
Li 670.784 (R)†	375486.5	2451.19	0.65%	[5.0]	mg/L
Mg 279.077 (R)†	12050.7	9.73	0.08%	[100]	mg/L
Mn 257.610 †	31852.2	9.14	0.03%	[5.0]	mg/L
Mo 202.031†	81726.5	8.19	0.01%	[5.0]	mg/L
Na 589.592 (R)†	502538.8	1196.85	0.24%	[100]	mg/L
Ni 231.604†	21428.8	67.33	0.31%	[1.0]	mg/L
Pb 220.353†	5166.4	15.13	0.29%	[1.0]	mg/L
Sb 206.836†	1456.3	3.00	0.21%	[1.0]	mg/L
Se 196.026†	540.9	5.25	0.97%	[1.0]	mg/L
Si 251.611 (R)†	1407.5	10.21	0.73%	[5.0]	mg/L
Sn 189.927†	2365.6	2.87	0.12%	[1.0]	mg/L
Sr 421.552 (R)†	1561470.3	18551.29	1.19%	[5.0]	mg/L
Ti 334.940 (R)†	50635.0	148.25	0.29%	[5.0]	mg/L
Tl 190.801†	926.6	1.15	0.12%	[1.0]	mg/L
V 292.402†	125480.9	175.07	0.14%	[1.0]	mg/L
Zn 206.200 †	84090.1	24.28	0.03%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	169500	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	267.2	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	784.2	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	19550	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	759.5	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3429000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	706.8	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	24550	0.00000	1.000000	

Co 228.616	1	Lin, Calc Int	0.0	13250	0.00000	1.000000
Cr 267.716	1	Lin, Calc Int	0.0	48160	0.00000	1.000000
Cu 324.752	1	Lin, Calc Int	0.0	128200	0.00000	1.000000
Fe 238.204 (R)	1	Lin, Calc Int	0.0	817.0	0.00000	1.000000
K 766.490 (R)	1	Lin, Calc Int	0.0	1805	0.00000	1.000000
Li 670.784 (R)	1	Lin, Calc Int	0.0	75100	0.00000	1.000000
Mg 279.077 (R)	1	Lin, Calc Int	0.0	120.5	0.00000	1.000000
Mn 257.610	1	Lin, Calc Int	0.0	6370	0.00000	1.000000
Mo 202.031	1	Lin, Calc Int	0.0	16350	0.00000	1.000000
Na 589.592 (R)	1	Lin, Calc Int	0.0	5025	0.00000	1.000000
Ni 231.604	1	Lin, Calc Int	0.0	21430	0.00000	1.000000
Pb 220.353	1	Lin, Calc Int	0.0	5166	0.00000	1.000000
Sb 206.836	1	Lin, Calc Int	0.0	1456	0.00000	1.000000
Se 196.026	1	Lin, Calc Int	0.0	540.9	0.00000	1.000000
Si 251.611 (R)	1	Lin, Calc Int	0.0	281.5	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2366	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	312300	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	10130	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	926.6	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	125500	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	16820	0.00000	1.000000

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Analysis Begun

Start Time: 12/10/2020 6:25:28 PM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank @STD0E12001 **Date Collected: 12/10/2020 6:25:37 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

Mean Data: Calib Blank @STD0E12001

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	652515.3	1531.56	0.23%	100.0	%
Y 371.029 (R)	17871.4	164.47	0.92%	100.0	%
Sc 361.383	1203620.3	503.41	0.04%	100.0	%
Sc 361.383 (R)	33335.5	227.90	0.68%	100.0	%
Ag 328.068†	-540.4	4.44	0.82%	[0.00]	mg/L
Al 308.215 (R)†	24.7	10.47	42.39%	[0.00]	mg/L
As 188.979†	-1.2	0.10	8.75%	[0.00]	mg/L
B 249.677†	693.3	18.82	2.71%	[0.00]	mg/L
Ba 233.527 (R)†	-0.7	1.23	175.23%	[0.00]	mg/L
Be 313.107 †	3617.7	163.84	4.53%	[0.00]	mg/L
Ca 315.887 (R)†	-21.8	9.34	42.88%	[0.00]	mg/L
Cd 228.802 †	294.7	5.70	1.93%	[0.00]	mg/L
Co 228.616†	-94.8	0.81	0.85%	[0.00]	mg/L
Cr 267.716†	19.5	5.44	27.86%	[0.00]	mg/L
Cu 324.752†	1582.8	62.65	3.96%	[0.00]	mg/L
Fe 238.204 (R)†	69.3	1.82	2.63%	[0.00]	mg/L
K 766.490 (R)†	-38.1	25.91	67.99%	[0.00]	mg/L
Li 670.784 (R)†	84.3	53.35	63.29%	[0.00]	mg/L
Mg 279.077 (R)†	2.3	1.65	71.49%	[0.00]	mg/L
Mn 257.610 †	1.7	0.14	8.24%	[0.00]	mg/L
Mo 202.031†	117.3	8.00	6.82%	[0.00]	mg/L
Na 589.592 (R)†	443.2	8.54	1.93%	[0.00]	mg/L
Ni 231.604†	-46.4	3.44	7.41%	[0.00]	mg/L
Pb 220.353†	247.9	3.94	1.59%	[0.00]	mg/L
Sb 206.836†	56.6	2.07	3.67%	[0.00]	mg/L
Se 196.026†	-3.9	2.59	65.63%	[0.00]	mg/L
Si 251.611 (R)†	3.2	1.89	58.29%	[0.00]	mg/L
Sn 189.927†	-9.4	1.07	11.32%	[0.00]	mg/L
Sr 421.552 (R)†	168.4	8.88	5.28%	[0.00]	mg/L
Ti 334.940 (R)†	63.3	0.59	0.94%	[0.00]	mg/L
Tl 190.801†	-23.1	5.21	22.56%	[0.00]	mg/L
V 292.402†	104.1	2.24	2.15%	[0.00]	mg/L
Zn 206.200 †	149.3	6.87	4.60%	[0.00]	mg/L

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Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 6:27:34 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	588317.9	218.39	0.04%	90.16	%
Y 371.029 (R)	17557.8	108.16	0.62%	98.25	%
Sc 361.383	1149070.5	18394.61	1.60%	95.47	%
Sc 361.383 (R)	34014.3	1042.74	3.07%	102.0	%
Ag 328.068†	87045.1	141.81	0.16%	[0.5]	mg/L
Al 308.215 (R)†	27100.1	383.84	1.42%	[100]	mg/L
As 188.979†	802.3	0.44	0.05%	[1.0]	mg/L
B 249.677†	97456.3	705.05	0.72%	[5.0]	mg/L
Ba 233.527 (R)†	3766.4	45.66	1.21%	[5.0]	mg/L
Be 313.107 †	3599246.3	15457.85	0.43%	[1.0]	mg/L
Ca 315.887 (R)†	75089.1	666.46	0.89%	[100]	mg/L
Cd 228.802 †	126249.3	295.69	0.23%	[5.0]	mg/L
Co 228.616†	14225.4	35.02	0.25%	[1.0]	mg/L
Cr 267.716†	49447.2	264.51	0.53%	[1.0]	mg/L
Cu 324.752†	127300.1	506.21	0.40%	[1.0]	mg/L
Fe 238.204 (R)†	17074.4	212.52	1.24%	[20]	mg/L
K 766.490 (R)†	181255.3	951.55	0.52%	[100]	mg/L
Li 670.784 (R)†	375830.8	524.36	0.14%	[5.0]	mg/L
Mg 279.077 (R)†	11928.5	132.40	1.11%	[100]	mg/L
Mn 257.610 †	33358.1	357.51	1.07%	[5.0]	mg/L
Mo 202.031†	84262.4	152.39	0.18%	[5.0]	mg/L
Na 589.592 (R)†	496907.7	14832.91	2.99%	[100]	mg/L
Ni 231.604†	23218.7	131.46	0.57%	[1.0]	mg/L
Pb 220.353†	5178.1	47.60	0.92%	[1.0]	mg/L
Sb 206.836†	1507.0	6.57	0.44%	[1.0]	mg/L
Se 196.026†	552.0	2.36	0.43%	[1.0]	mg/L
Si 251.611 (R)†	1464.3	18.51	1.26%	[5.0]	mg/L
Sn 189.927†	2316.5	9.53	0.41%	[1.0]	mg/L
Sr 421.552 (R)†	1572904.1	57918.34	3.68%	[5.0]	mg/L
Ti 334.940 (R)†	52872.6	713.61	1.35%	[5.0]	mg/L
Tl 190.801†	953.8	3.73	0.39%	[1.0]	mg/L
V 292.402†	128880.8	543.47	0.42%	[1.0]	mg/L
Zn 206.200 †	86353.5	365.58	0.42%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	174100	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	0.0	271.0	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	802.3	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	19490	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	-0.0	753.3	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3599000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	750.9	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	25250	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	14230	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	49450	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	127300	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	0.0	853.7	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1813	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	75170	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	119.3	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	6672	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	16850	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	-0.0	4969	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	23220	0.00000	1.000000	
Pb 220.353	1	Lin, Calc Int	0.0	5178	0.00000	1.000000	
Sb 206.836	1	Lin, Calc Int	0.0	1507	0.00000	1.000000	
Se 196.026	1	Lin, Calc Int	0.0	552.0	0.00000	1.000000	

Si 251.611 (R)	1	Lin, Calc Int	0.0	292.9	0.00000	1.000000
Sn 189.927	1	Lin, Calc Int	0.0	2317	0.00000	1.000000
Sr 421.552 (R)	1	Lin, Calc Int	0.0	314600	0.00000	1.000000
Ti 334.940 (R)	1	Lin, Calc Int	0.0	10570	0.00000	1.000000
Tl 190.801	1	Lin, Calc Int	0.0	953.8	0.00000	1.000000
V 292.402	1	Lin, Calc Int	0.0	128900	0.00000	1.000000
Zn 206.200	1	Lin, Calc Int	0.0	17270	0.00000	1.000000

==========

Method Loaded
Method Name: 200.7_6010_201006 **Method Last Saved: 12/3/2020 9:30:23 AM**
IEC File: 201112.iec **MSF File:**
Method Description: ICP-OES-PE3_200.7/6010_FAST
User canceled analysis.

==========

Analysis Begun

Start Time: 12/10/2020 7:16:23 PM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 7:16:25 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**
User canceled analysis.

==========

Analysis Begun

Start Time: 12/10/2020 7:17:21 PM **Plasma On Time: 12/10/2020 5:02:05 AM**
Logged In Analyst: Analyst **Technique: ICP Continuous**
Spectrometer: Optima 8300 , S/N 078N1121901 **Autosampler: ESI**

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\ PE3_201210.sif
Batch ID:
Results Data Set: PE3_201210
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: Calib Std 4@0E13030 **Date Collected: 12/10/2020 7:17:22 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 15 **Auto Dilution Factor: 1**

Mean Data: Calib Std 4@0E13030

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	572437.3	13655.48	2.39%	87.73	%
Y 371.029 (R)	17031.6	2.37	0.01%	95.30	%
Sc 361.383	1149473.6	22263.64	1.94%	95.50	%
Sc 361.383 (R)	33647.7	66.73	0.20%	100.9	%
Ag 328.068†	88853.4	1991.67	2.24%	[0.5]	mg/L
Al 308.215 (R)†	27615.9	189.09	0.68%	[100]	mg/L
As 188.979†	809.0	12.86	1.59%	[1.0]	mg/L
B 249.677†	99214.0	1614.84	1.63%	[5.0]	mg/L
Ba 233.527 (R)†	3789.2	6.12	0.16%	[5.0]	mg/L
Be 313.107 †	3681117.3	10703.29	0.29%	[1.0]	mg/L
Ca 315.887 (R)†	79267.7	794.72	1.00%	[100]	mg/L
Cd 228.802 †	128974.7	2535.29	1.97%	[5.0]	mg/L
Co 228.616†	14062.3	266.17	1.89%	[1.0]	mg/L
Cr 267.716†	50388.2	767.77	1.52%	[1.0]	mg/L
Cu 324.752†	129847.4	2510.91	1.93%	[1.0]	mg/L
Fe 238.204 (R)†	17490.3	169.15	0.97%	[20]	mg/L
K 766.490 (R)†	188096.2	1584.33	0.84%	[100]	mg/L
Li 670.784 (R)†	391324.4	2142.49	0.55%	[5.0]	mg/L
Mg 279.077 (R)†	12019.5	27.84	0.23%	[100]	mg/L
Mn 257.610 †	35225.3	358.67	1.02%	[5.0]	mg/L
Mo 202.031†	85505.4	1737.78	2.03%	[5.0]	mg/L
Na 589.592 (R)†	514070.5	9860.08	1.92%	[100]	mg/L
Ni 231.604†	22477.7	462.78	2.06%	[1.0]	mg/L
Pb 220.353†	5351.4	145.06	2.71%	[1.0]	mg/L

Sb 206.836†	1526.5	15.88	1.04%	[1.0]	mg/L
Se 196.026†	570.7	4.66	0.82%	[1.0]	mg/L
Si 251.611 (R)†	1504.2	3.02	0.20%	[5.0]	mg/L
Sn 189.927†	2359.6	37.30	1.58%	[1.0]	mg/L
Sr 421.552 (R)†	1637501.1	25074.90	1.53%	[5.0]	mg/L
Ti 334.940 (R)†	55805.6	205.51	0.37%	[5.0]	mg/L
Tl 190.801†	968.8	25.86	2.67%	[1.0]	mg/L
V 292.402†	133046.2	2460.12	1.85%	[1.0]	mg/L
Zn 206.200 †	87619.5	1589.25	1.81%	[5.0]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin, Calc Int	0.0	177700	0.00000	1.000000	
Al 308.215 (R)	1	Lin, Calc Int	-0.0	276.2	0.00000	1.000000	
As 188.979	1	Lin, Calc Int	0.0	809.0	0.00000	1.000000	
B 249.677	1	Lin, Calc Int	0.0	19840	0.00000	1.000000	
Ba 233.527 (R)	1	Lin, Calc Int	0.0	757.8	0.00000	1.000000	
Be 313.107	1	Lin, Calc Int	0.0	3681000	0.00000	1.000000	
Ca 315.887 (R)	1	Lin, Calc Int	0.0	792.7	0.00000	1.000000	
Cd 228.802	1	Lin, Calc Int	0.0	25790	0.00000	1.000000	
Co 228.616	1	Lin, Calc Int	0.0	14060	0.00000	1.000000	
Cr 267.716	1	Lin, Calc Int	0.0	50390	0.00000	1.000000	
Cu 324.752	1	Lin, Calc Int	0.0	129800	0.00000	1.000000	
Fe 238.204 (R)	1	Lin, Calc Int	0.0	874.5	0.00000	1.000000	
K 766.490 (R)	1	Lin, Calc Int	0.0	1881	0.00000	1.000000	
Li 670.784 (R)	1	Lin, Calc Int	0.0	78260	0.00000	1.000000	
Mg 279.077 (R)	1	Lin, Calc Int	0.0	120.2	0.00000	1.000000	
Mn 257.610	1	Lin, Calc Int	0.0	7045	0.00000	1.000000	
Mo 202.031	1	Lin, Calc Int	0.0	17100	0.00000	1.000000	
Na 589.592 (R)	1	Lin, Calc Int	0.0	5141	0.00000	1.000000	
Ni 231.604	1	Lin, Calc Int	0.0	22480	0.00000	1.000000	
Pb 220.353	1	Lin, Calc Int	0.0	5351	0.00000	1.000000	
Sb 206.836	1	Lin, Calc Int	0.0	1527	0.00000	1.000000	
Se 196.026	1	Lin, Calc Int	0.0	570.7	0.00000	1.000000	
Si 251.611 (R)	1	Lin, Calc Int	0.0	300.8	0.00000	1.000000	
Sn 189.927	1	Lin, Calc Int	0.0	2360	0.00000	1.000000	
Sr 421.552 (R)	1	Lin, Calc Int	0.0	327500	0.00000	1.000000	
Ti 334.940 (R)	1	Lin, Calc Int	-0.0	11160	0.00000	1.000000	
Tl 190.801	1	Lin, Calc Int	0.0	968.8	0.00000	1.000000	
V 292.402	1	Lin, Calc Int	0.0	133000	0.00000	1.000000	
Zn 206.200	1	Lin, Calc Int	0.0	17520	0.00000	1.000000	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **METALS-PPM**
Method: **EPA-6020**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: PE-EL2

Analyte	MDL	PQL	Units
Antimony	0.08	0.5	mg/kg
Arsenic	0.17	0.5	mg/kg
Barium	0.054	0.25	mg/kg
Beryllium	0.041	0.25	mg/kg
Cadmium	0.048	0.25	mg/kg
Chromium	0.25	0.75	mg/kg
Cobalt	0.049	0.25	mg/kg
Copper	0.099	0.5	mg/kg
Lead	0.12	0.25	mg/kg
Molybdenum	0.045	0.25	mg/kg
Nickel	0.11	0.5	mg/kg
Selenium	0.11	0.5	mg/kg
Silver	0.051	0.25	mg/kg
Thallium	0.049	0.25	mg/kg
Vanadium	0.27	0.75	mg/kg
Zinc	0.5	2.5	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: PE_EL2_201125-259
Sampled: 11/23/20 14:25
Prepared: 11/25/20 10:00
Analyzed: 11/25/20 23:23
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B093700
Sequence: 2021185
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-36-0	Antimony	0.52	1		EPA-6020
7440-38-2	Arsenic	46	1		EPA-6020
7440-39-3	Barium	170	1	B	EPA-6020
7440-41-7	Beryllium	0.33	1		EPA-6020
7440-43-9	Cadmium	0.22	1	J	EPA-6020
7440-47-3	Chromium	33	1		EPA-6020
7440-48-4	Cobalt	8.1	1		EPA-6020
7440-50-8	Copper	53	1		EPA-6020
7439-92-1	Lead	120	1		EPA-6020
7439-98-7	Molybdenum	0.61	1		EPA-6020
7440-02-0	Nickel	29	1		EPA-6020
7782-49-2	Selenium	0.11	1	U	EPA-6020
7440-22-4	Silver	0.093	1	J	EPA-6020
7440-28-0	Thallium	0.090	1	J	EPA-6020
7440-62-2	Vanadium	38	1		EPA-6020
7440-66-6	Zinc	170	1		EPA-6020

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: PE_EL2_201125-266
Sampled: 11/23/20 14:48
Prepared: 11/25/20 10:00
Analyzed: 11/25/20 23:35
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B093700
Sequence: 2021185
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-36-0	Antimony	0.14	0.943	J	EPA-6020
7440-38-2	Arsenic	26	0.943		EPA-6020
7440-39-3	Barium	120	0.943	B	EPA-6020
7440-41-7	Beryllium	0.33	0.943		EPA-6020
7440-43-9	Cadmium	0.048	0.943	U	EPA-6020
7440-47-3	Chromium	29	0.943		EPA-6020
7440-48-4	Cobalt	7.9	0.943		EPA-6020
7440-50-8	Copper	22	0.943		EPA-6020
7439-92-1	Lead	10	0.943		EPA-6020
7439-98-7	Molybdenum	0.46	0.943		EPA-6020
7440-02-0	Nickel	25	0.943		EPA-6020
7782-49-2	Selenium	0.11	0.943	U	EPA-6020
7440-22-4	Silver	0.077	0.943	J	EPA-6020
7440-28-0	Thallium	0.13	0.943	J	EPA-6020
7440-62-2	Vanadium	44	0.943		EPA-6020
7440-66-6	Zinc	46	0.943		EPA-6020

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B093700 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	PE_EL2_201125-259	11/25/20 10:00	
VW-31-2	2034585-02	PE_EL2_201125-266	11/25/20 10:00	
Blank	B093700-BLK1	PE_EL2_201125-257	11/25/20 10:00	
LCS	B093700-BS1	PE_EL2_201125-258	11/25/20 10:00	
VW-35-2	B093700-DUP1	PE_EL2_201125-260	11/25/20 10:00	
VW-35-2	B093700-MS1	PE_EL2_201125-262	11/25/20 10:00	
VW-35-2	B093700-MSD1	PE_EL2_201125-263	11/25/20 10:00	
VW-35-2	B093700-PS1	PE_EL2_201125-264	11/25/20 10:00	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B093700-BLK1	File ID:	PE_EL2_201125-257
Prepared:	11/25/20 10:00	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	11/25/20 23:20	Instrument:	PE-EL2		
Batch:	B093700	Sequence:	2021185	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-36-0	Antimony	0.080	U
7440-38-2	Arsenic	0.17	U
7440-39-3	Barium	0.39475	
7440-41-7	Beryllium	0.041	U
7440-43-9	Cadmium	0.048	U
7440-47-3	Chromium	0.25	U
7440-48-4	Cobalt	0.049	U
7440-50-8	Copper	0.11725	J
7439-92-1	Lead	0.12	U
7439-98-7	Molybdenum	0.053000	J
7440-02-0	Nickel	0.22650	J
7782-49-2	Selenium	0.11875	J
7440-22-4	Silver	0.051	U
7440-28-0	Thallium	0.049	U
7440-62-2	Vanadium	0.27	U
7440-66-6	Zinc	0.50	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

VW-35-2

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093700
Preparation: EPA 3050B
Source Sample Name: VW-35-2

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093700-DUP1
Lab Source ID: 2034585-01
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Antimony	20	0.52100		0.42950		19.3		EPA-6020
Arsenic	20	45.560		44.428		2.52		EPA-6020
Barium	20	172.35		167.43		2.90		EPA-6020
Beryllium	20	0.32525		0.24675		27.4		EPA-6020
Cadmium	20	0.22375		0.29900		28.8		EPA-6020
Chromium	20	32.919		35.494		7.53		EPA-6020
Cobalt	20	8.1182		7.8605		3.23		EPA-6020
Copper	20	53.221		56.300		5.62		EPA-6020
Lead	20	118.35		101.07		15.7		EPA-6020
Molybdenum	20	0.60725		0.54225		11.3		EPA-6020
Nickel	20	29.104		30.214		3.74		EPA-6020
Selenium	20	-0.086250		ND				EPA-6020
Silver	20	0.093000		0.089000		4.40		EPA-6020
Thallium	20	0.089750		0.073500		19.9		EPA-6020
Vanadium	20	37.655		36.477		3.18		EPA-6020
Zinc	20	168.99		162.87		3.69		EPA-6020

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

VW-35-2

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093700
Preparation: EPA 3050B
Source Sample Number: 2034585-01

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093700-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Antimony	10.000	0.52100	2.0605	15.4 *	16 - 119
Arsenic	25.000	45.560	65.242	78.7	75 - 125
Barium	10.000	172.35	179.99	76.5	75 - 125
Beryllium	10.000	0.32525	9.5318	92.1	75 - 125
Cadmium	10.000	0.22375	10.079	98.6	75 - 125
Chromium	10.000	32.919	38.913	59.9 *	75 - 125
Cobalt	10.000	8.1182	15.864	77.5	75 - 125
Copper	25.000	53.221	68.648	61.7 *	75 - 125
Lead	25.000	118.35	118.53	0.737 *	75 - 125
Molybdenum	10.000	0.60725	9.1370	85.3	75 - 125
Nickel	25.000	29.104	48.875	79.1	75 - 125
Selenium	25.000	ND	24.465	97.9	75 - 125
Silver	10.000	0.093000	9.2982	92.1	75 - 125
Thallium	10.000	0.089750	9.3552	92.7	75 - 125
Vanadium	10.000	37.655	42.293	46.4 *	75 - 125
Zinc	25.000	168.99	178.94	39.8 *	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Antimony	10.000	2.1668	16.5	5.03	20	16 - 119
Arsenic	25.000	73.857	113	12.4	20	75 - 125
Barium	10.000	186.68	143 *	3.65	20	75 - 125
Beryllium	10.000	9.7750	94.5	2.52	20	75 - 125
Cadmium	10.000	10.408	102	3.21	20	75 - 125
Chromium	10.000	42.137	92.2	7.96	20	75 - 125

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B093700
Laboratory ID: B093700-MSD1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Source Sample Number: 2034585-01

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Cobalt	10.000	17.747	96.3	11.2	20	75 - 125
Copper	25.000	86.047	131 *	22.5 *	20	75 - 125
Lead	25.000	138.49	80.6	15.5	20	75 - 125
Molybdenum	10.000	9.9735	93.7	8.75	20	75 - 125
Nickel	25.000	56.361	109	14.2	20	75 - 125
Selenium	25.000	25.528	102	4.25	20	75 - 125
Silver	10.000	9.8620	97.7	5.88	20	75 - 125
Thallium	10.000	9.9505	98.6	6.17	20	75 - 125
Vanadium	10.000	46.546	88.9	9.57	20	75 - 125
Zinc	25.000	194.50	102	8.34	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B093700
Laboratory ID: B093700-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Antimony	10.000	10.063	101	75 - 125
Arsenic	25.000	25.739	103	75 - 125
Barium	10.000	10.488	105	75 - 125
Beryllium	10.000	11.164	112	75 - 125
Cadmium	10.000	10.626	106	75 - 125
Chromium	10.000	10.935	109	75 - 125
Cobalt	10.000	11.008	110	75 - 125
Copper	25.000	26.243	105	75 - 125
Lead	25.000	26.546	106	75 - 125
Molybdenum	10.000	9.5522	95.5	75 - 125
Nickel	25.000	28.528	114	75 - 125
Selenium	25.000	25.951	104	75 - 125
Silver	10.000	10.312	103	75 - 125
Thallium	10.000	10.535	105	75 - 125
Vanadium	10.000	9.9880	99.9	75 - 125
Zinc	25.000	26.289	105	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021185
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: PE-EL2
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2021185-ICV1	PE_EL2_201125-033	11/25/20 15:21
Initial Cal Blank	2021185-ICB1	PE_EL2_201125-034	11/25/20 15:24
MRL Check	2021185-CRL4	PE_EL2_201125-125	11/25/20 18:35
Calibration Check	2021185-CCVA	PE_EL2_201125-126	11/25/20 18:37
Calibration Blank	2021185-CCBA	PE_EL2_201125-127	11/25/20 18:40
Interference Check A	2021185-IFA1	PE_EL2_201125-128	11/25/20 18:44
Interference Check B	2021185-IFB1	PE_EL2_201125-129	11/25/20 18:45
Calibration Check	2021185-CCVB	PE_EL2_201125-136	11/25/20 18:58
Calibration Blank	2021185-CCBB	PE_EL2_201125-137	11/25/20 19:01
Calibration Check	2021185-CCVO	PE_EL2_201125-255	11/25/20 23:16
Calibration Blank	2021185-CCBO	PE_EL2_201125-256	11/25/20 23:18
Blank	B093700-BLK1	PE_EL2_201125-257	11/25/20 23:20
LCS	B093700-BS1	PE_EL2_201125-258	11/25/20 23:21
VW-35-2	2034585-01	PE_EL2_201125-259	11/25/20 23:23
VW-35-2	B093700-DUP1	PE_EL2_201125-260	11/25/20 23:25
VW-35-2	B093700-MS1	PE_EL2_201125-262	11/25/20 23:28
VW-35-2	B093700-MSD1	PE_EL2_201125-263	11/25/20 23:30
VW-35-2	B093700-PS1	PE_EL2_201125-264	11/25/20 23:32
VW-31-2	2034585-02	PE_EL2_201125-266	11/25/20 23:35
Calibration Check	2021185-CCVP	PE_EL2_201125-267	11/25/20 23:37
Calibration Blank	2021185-CCBP	PE_EL2_201125-268	11/25/20 23:39

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Sequence: 2021185

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2021185-ICB1	Antimony	-0.0040000	2.0	ug/L		EPA-6020
	Arsenic	0.079000	2.0	ug/L		EPA-6020
	Barium	-0.0030000	1.0	ug/L		EPA-6020
	Beryllium	0.021000	1.0	ug/L		EPA-6020
	Cadmium	-0.036000	1.0	ug/L		EPA-6020
	Chromium	0.024000	3.0	ug/L		EPA-6020
	Cobalt	-0.0010000	1.0	ug/L		EPA-6020
	Copper	-0.060000	2.0	ug/L		EPA-6020
	Lead	0.0020000	1.0	ug/L		EPA-6020
	Molybdenum	0.26100	1.0	ug/L		EPA-6020
	Nickel	0.0010000	2.0	ug/L		EPA-6020
	Selenium	0.28900	2.0	ug/L		EPA-6020
	Silver	-0.0080000	1.0	ug/L		EPA-6020
	Thallium	0.0020000	1.0	ug/L		EPA-6020
	Vanadium	0.20300	3.0	ug/L		EPA-6020
	Zinc	-0.14200	10	ug/L		EPA-6020
2021185-CCBA	Antimony	-0.0020000	2.0	ug/L		EPA-6020
	Arsenic	0.044000	2.0	ug/L		EPA-6020
	Barium	-0.0020000	1.0	ug/L		EPA-6020
	Beryllium	-0.037000	1.0	ug/L		EPA-6020
	Cadmium	0.026000	1.0	ug/L		EPA-6020
	Chromium	-0.035000	3.0	ug/L		EPA-6020
	Cobalt	0.010000	1.0	ug/L		EPA-6020
	Copper	0.035000	2.0	ug/L		EPA-6020
	Lead	0.0000	1.0	ug/L		EPA-6020
	Molybdenum	0.14800	1.0	ug/L		EPA-6020
	Nickel	0.020000	2.0	ug/L		EPA-6020

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Sequence: 2021185
SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2021185-CCBA	Selenium	0.024000	2.0	ug/L		EPA-6020
	Silver	-0.024000	1.0	ug/L		EPA-6020
	Thallium	0.0050000	1.0	ug/L		EPA-6020
	Vanadium	0.23000	3.0	ug/L		EPA-6020
	Zinc	0.030000	10	ug/L		EPA-6020
2021185-CCBB	Antimony	0.0000	2.0	ug/L		EPA-6020
	Arsenic	1.0530	2.0	ug/L		EPA-6020
	Barium	-0.019000	1.0	ug/L		EPA-6020
	Beryllium	-0.028000	1.0	ug/L		EPA-6020
	Cadmium	0.010000	1.0	ug/L		EPA-6020
	Chromium	-0.059000	3.0	ug/L		EPA-6020
	Cobalt	0.0070000	1.0	ug/L		EPA-6020
	Copper	-0.054000	2.0	ug/L		EPA-6020
	Lead	-0.0050000	1.0	ug/L		EPA-6020
	Molybdenum	0.86300	1.0	ug/L		EPA-6020
	Nickel	0.0040000	2.0	ug/L		EPA-6020
	Selenium	-0.16000	2.0	ug/L		EPA-6020
	Silver	-0.014000	1.0	ug/L		EPA-6020
	Thallium	0.0010000	1.0	ug/L		EPA-6020
	Vanadium	0.36300	3.0	ug/L		EPA-6020
	Zinc	-0.021000	10	ug/L		EPA-6020
2021185-CCBO	Antimony	0.065000	2.0	ug/L		EPA-6020
	Arsenic	0.55500	2.0	ug/L		EPA-6020
	Barium	0.0050000	1.0	ug/L		EPA-6020
	Beryllium	0.0000	1.0	ug/L		EPA-6020
	Cadmium	-0.022000	1.0	ug/L		EPA-6020
	Chromium	0.066000	3.0	ug/L		EPA-6020

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Sequence: 2021185
SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2021185-CCBO	Cobalt	-0.0020000	1.0	ug/L		EPA-6020
	Copper	0.072000	2.0	ug/L		EPA-6020
	Lead	0.0080000	1.0	ug/L		EPA-6020
	Molybdenum	0.52700	1.0	ug/L		EPA-6020
	Nickel	0.027000	2.0	ug/L		EPA-6020
	Selenium	1.5410	2.0	ug/L		EPA-6020
	Silver	0.027000	1.0	ug/L		EPA-6020
	Thallium	0.022000	1.0	ug/L		EPA-6020
	Vanadium	0.22600	3.0	ug/L		EPA-6020
	Zinc	0.11300	10	ug/L		EPA-6020
2021185-CCBP	Antimony	0.082000	2.0	ug/L		EPA-6020
	Arsenic	-0.29400	2.0	ug/L		EPA-6020
	Barium	0.098000	1.0	ug/L		EPA-6020
	Beryllium	0.011000	1.0	ug/L		EPA-6020
	Cadmium	0.026000	1.0	ug/L		EPA-6020
	Chromium	0.0080000	3.0	ug/L		EPA-6020
	Cobalt	0.0000	1.0	ug/L		EPA-6020
	Copper	0.054000	2.0	ug/L		EPA-6020
	Lead	0.041000	1.0	ug/L		EPA-6020
	Molybdenum	0.56300	1.0	ug/L		EPA-6020
	Nickel	0.078000	2.0	ug/L		EPA-6020
	Selenium	1.7840	2.0	ug/L		EPA-6020
	Silver	0.055000	1.0	ug/L		EPA-6020
	Thallium	0.022000	1.0	ug/L		EPA-6020
	Vanadium	-0.78300	3.0	ug/L		EPA-6020
	Zinc	0.24000	10	ug/L		EPA-6020

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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2021185

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2021185-ICV1	Antimony	50.000	49.870	99.7	ug/L	EPA-6020
	Arsenic	125.00	122.51	98.0	ug/L	EPA-6020
	Barium	50.000	51.698	103	ug/L	EPA-6020
	Beryllium	50.000	50.272	101	ug/L	EPA-6020
	Cadmium	50.000	48.849	97.7	ug/L	EPA-6020
	Chromium	50.000	48.986	98.0	ug/L	EPA-6020
	Cobalt	50.000	50.520	101	ug/L	EPA-6020
	Copper	125.00	127.86	102	ug/L	EPA-6020
	Lead	125.00	130.04	104	ug/L	EPA-6020
	Molybdenum	50.000	47.990	96.0	ug/L	EPA-6020
	Nickel	125.00	129.04	103	ug/L	EPA-6020
	Selenium	125.00	120.74	96.6	ug/L	EPA-6020
	Silver	50.000	50.704	101	ug/L	EPA-6020
	Thallium	50.000	51.237	102	ug/L	EPA-6020
	Vanadium	50.000	47.457	94.9	ug/L	EPA-6020
	Zinc	125.00	122.99	98.4	ug/L	EPA-6020
2021185-CCVA	Antimony	40.000	39.137	97.8	ug/L	EPA-6020
	Arsenic	100.00	98.518	98.5	ug/L	EPA-6020
	Barium	40.000	41.012	103	ug/L	EPA-6020
	Beryllium	40.000	40.617	102	ug/L	EPA-6020
	Cadmium	40.000	38.986	97.5	ug/L	EPA-6020
	Chromium	40.000	40.360	101	ug/L	EPA-6020
	Cobalt	40.000	40.131	100	ug/L	EPA-6020
	Copper	100.00	101.61	102	ug/L	EPA-6020
	Lead	100.00	104.14	104	ug/L	EPA-6020
	Molybdenum	40.000	38.240	95.6	ug/L	EPA-6020
	Nickel	100.00	101.47	101	ug/L	EPA-6020
	Selenium	100.00	103.56	104	ug/L	EPA-6020
	Silver	40.000	39.411	98.5	ug/L	EPA-6020
	Thallium	40.000	41.491	104	ug/L	EPA-6020
	Vanadium	40.000	39.908	99.8	ug/L	EPA-6020

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2021185

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2021185-CCVA	Zinc	100.00	96.732	96.7	ug/L	EPA-6020
2021185-CCVB	Antimony	40.000	39.472	98.7	ug/L	EPA-6020
	Arsenic	100.00	98.154	98.2	ug/L	EPA-6020
	Barium	40.000	40.100	100	ug/L	EPA-6020
	Beryllium	40.000	40.809	102	ug/L	EPA-6020
	Cadmium	40.000	39.381	98.5	ug/L	EPA-6020
	Chromium	40.000	40.300	101	ug/L	EPA-6020
	Cobalt	40.000	39.859	99.6	ug/L	EPA-6020
	Copper	100.00	101.96	102	ug/L	EPA-6020
	Lead	100.00	100.83	101	ug/L	EPA-6020
	Molybdenum	40.000	40.173	100	ug/L	EPA-6020
	Nickel	100.00	99.115	99.1	ug/L	EPA-6020
	Selenium	100.00	101.40	101	ug/L	EPA-6020
	Silver	40.000	39.980	100	ug/L	EPA-6020
	Thallium	40.000	39.670	99.2	ug/L	EPA-6020
	Vanadium	40.000	39.472	98.7	ug/L	EPA-6020
	Zinc	100.00	97.607	97.6	ug/L	EPA-6020
2021185-CCVO	Antimony	40.000	40.163	100	ug/L	EPA-6020
	Arsenic	100.00	97.318	97.3	ug/L	EPA-6020
	Barium	40.000	40.168	100	ug/L	EPA-6020
	Beryllium	40.000	41.871	105	ug/L	EPA-6020
	Cadmium	40.000	41.107	103	ug/L	EPA-6020
	Chromium	40.000	41.779	104	ug/L	EPA-6020
	Cobalt	40.000	40.761	102	ug/L	EPA-6020
	Copper	100.00	102.81	103	ug/L	EPA-6020
	Lead	100.00	100.87	101	ug/L	EPA-6020
	Molybdenum	40.000	39.898	99.7	ug/L	EPA-6020
	Nickel	100.00	101.97	102	ug/L	EPA-6020
	Selenium	100.00	100.59	101	ug/L	EPA-6020
	Silver	40.000	39.309	98.3	ug/L	EPA-6020
	Thallium	40.000	40.627	102	ug/L	EPA-6020

SMUD - Kleinfelder
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Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED
Sequence: 2021185

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2021185-CCVO	Vanadium	40.000	39.212	98.0	ug/L	EPA-6020
	Zinc	100.00	96.087	96.1	ug/L	EPA-6020
2021185-CCVP	Antimony	40.000	39.644	99.1	ug/L	EPA-6020
	Arsenic	100.00	98.210	98.2	ug/L	EPA-6020
	Barium	40.000	40.446	101	ug/L	EPA-6020
	Beryllium	40.000	42.924	107	ug/L	EPA-6020
	Cadmium	40.000	39.837	99.6	ug/L	EPA-6020
	Chromium	40.000	40.976	102	ug/L	EPA-6020
	Cobalt	40.000	40.182	100	ug/L	EPA-6020
	Copper	100.00	104.49	104	ug/L	EPA-6020
	Lead	100.00	103.01	103	ug/L	EPA-6020
	Molybdenum	40.000	39.547	98.9	ug/L	EPA-6020
	Nickel	100.00	100.43	100	ug/L	EPA-6020
	Selenium	100.00	98.946	98.9	ug/L	EPA-6020
	Silver	40.000	38.985	97.5	ug/L	EPA-6020
	Thallium	40.000	41.493	104	ug/L	EPA-6020
	Vanadium	40.000	40.601	102	ug/L	EPA-6020
	Zinc	100.00	97.839	97.8	ug/L	EPA-6020

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

VW-35-2

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093700
Preparation: EPA 3050B

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093700-PS1
Lab Source ID: 2034585-01
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: VW-35-2
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Antimony	75 - 125	42.247	2.0423	40.000	101
Arsenic	75 - 125	272.05	178.60	100.00	93.5
Barium	75 - 125	705.56	675.60	40.000	74.9 *
Beryllium	75 - 125	37.963	1.2750	40.000	91.7
Cadmium	75 - 125	41.258	0.87710	40.000	101
Chromium	75 - 125	159.68	129.04	40.000	76.6
Cobalt	75 - 125	66.098	31.824	40.000	85.7
Copper	75 - 125	296.20	208.63	100.00	87.6
Lead	75 - 125	556.39	463.92	100.00	92.5
Molybdenum	75 - 125	42.843	2.3804	40.000	101
Nickel	75 - 125	196.37	114.09	100.00	82.3
Selenium	75 - 125	98.450	-0.33810	100.00	98.4
Silver	75 - 125	39.141	0.36456	40.000	96.9
Thallium	75 - 125	39.742	0.35182	40.000	98.5
Vanadium	75 - 125	178.95	147.61	40.000	78.4
Zinc	75 - 125	750.64	662.45	100.00	88.2

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Sequence: 2021185

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2021185-IFA1	Antimony		0.69000		ug/L
	Arsenic		0.68500		ug/L
	Barium		1.0630	*	ug/L
	Beryllium		0.041000		ug/L
	Cadmium		-0.29700		ug/L
	Chromium		1.7340		ug/L
	Cobalt		0.29100		ug/L
	Copper		4.1840	*	ug/L
	Lead		0.10600		ug/L
	Molybdenum	2000.0	2,216.54	111	ug/L
	Nickel		3.1390	*	ug/L
	Selenium		-3.6200	*	ug/L
	Silver		1.0610	*	ug/L
	Thallium		0.0090000		ug/L
	Vanadium		-0.59200		ug/L
	Zinc		7.7110		ug/L
2021185-IFB1	Antimony		0.21600		ug/L
	Arsenic	20.000	18.94	94.7	ug/L
	Barium		1.0340	*	ug/L
	Beryllium		0.056000		ug/L
	Cadmium	20.000	18.35	91.7	ug/L
	Chromium	20.000	22.31	112	ug/L
	Cobalt	20.000	20.40	102	ug/L

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: PE-EL2
Sequence: 2021185

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2021185-IFB1	Copper	20.000	22.08	110	ug/L
	Lead		0.11200		ug/L
	Molybdenum	2000.0	2,275.96	114	ug/L
	Nickel	20.000	23.18	116	ug/L
	Selenium		-3.1130	*	ug/L
	Silver	20.000	19.80	99.0	ug/L
	Thallium		0.019000		ug/L
	Vanadium		-0.44500		ug/L
	Zinc	20.000	25.95	130 *	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, November 25, 2020 09:38:47
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.480
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	5.333				ug/L
|	B	11	146.668				ug/L
|	Al	27	1312.087				ug/L
|>	Sc	45	167783.215				ug/L
|	V	51	2570.514				ug/L
|	Cr	52	1795.495				ug/L
|	Cr	53	11941.133				ug/L
|	Mn	55	253.337				ug/L
|	Co	59	35.556				ug/L
⌊	Ni	60	27.556				ug/L
⌈	Cu	63	40.889				ug/L
|	Cu	65	11.556				ug/L
|	Zn	66	90.667				ug/L
|	Zn	68	106.667				ug/L
|>	Ge	72	137120.503				ug/L
|	As	75	-57.071				ug/L
|	Se	77	694.691				ug/L
⌊	Se	82	33.264				ug/L
⌈	Mo	98	86.521				ug/L
|>	Rh	103	147679.815				ug/L
⌊	Ag	107	122.667				ug/L
⌈	Cd	111	7.972				ug/L
|	Cd	114	-15.509				ug/L
|>	In	115	219035.946				ug/L
|	Sn	120	717.325				ug/L
⌊	Sb	121	181.335				ug/L
⌈	Ba	137	17.297				ug/L
|	Ba	138	153.298				ug/L
|>	Tb	159	350459.622				ug/L
|	Tl	205	104.001				ug/L
⌊	Pb	208	34.667				ug/L
⌈	Hg	200	6.573				ug/L
|	Hg	201	2.667				ug/L
|>	Bi	209	252582.459				ug/L
⌊	U	238	44.000				ug/L
	C	13	653.355				ug/L
	W	184	14.665				ug/L
	Pd	106	21.073				ug/L
	Kr	83	8.000				ug/L
⌈	Na	23	3333.890				ug/L
|	Mg	24	706.695				ug/L
|	K	39	70648.831				ug/L

Ca	44	693.358		ug/L
Ti	47	66.667		ug/L
Sc-1	45	167783.215		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, November 25, 2020 09:40:51
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.480
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	82.667	**1.000**	0.09	8.9	ug/L
|	B	11	2568.330	**20.000**	0.47	2.4	ug/L
|	Al	27	20410.181	**20.000**	0.91	4.6	ug/L
|>	Sc	45	167875.174				ug/L
|	V	51	6308.379	**3.000**	0.64	21.5	ug/L
|	Cr	52	5086.628	**3.000**	0.12	3.9	ug/L
|	Cr	53	12623.297	**3.000**	0.65	21.6	ug/L
|	Mn	55	2128.228	**1.000**	0.11	10.6	ug/L
|	Co	59	1720.148	**1.000**	0.02	2.0	ug/L
⌊	Ni	60	535.125	**2.000**	0.10	5.1	ug/L
⌈	Cu	63	1521.894	**2.000**	0.09	4.6	ug/L
|	Cu	65	679.134	**2.000**	0.08	4.0	ug/L
|	Zn	66	856.926	**5.000**	0.33	6.7	ug/L
|	Zn	68	648.021	**5.000**	0.75	15.0	ug/L
|>	Ge	72	136810.358				ug/L
|	As	75	393.439	**2.000**	0.28	13.9	ug/L
|	Se	77	747.361	**2.000**	1.52	76.2	ug/L
⌊	Se	82	59.200	**2.000**	0.92	45.9	ug/L
⌈	Mo	98	666.397	**1.000**	0.07	7.5	ug/L
|>	Rh	103	145490.826				ug/L
⌊	Ag	107	1522.784	**1.000**	0.14	13.8	ug/L
⌈	Cd	111	272.560	**1.000**	0.24	24.2	ug/L
|	Cd	114	674.345	**1.000**	0.02	1.9	ug/L
|>	In	115	214236.487				ug/L
|	Sn	120	2141.529	**1.000**	0.01	1.4	ug/L
⌊	Sb	121	2053.544	**2.000**	0.07	3.7	ug/L
⌈	Ba	137	642.660	**1.000**	0.10	10.1	ug/L
|	Ba	138	4304.899	**1.000**	0.04	4.2	ug/L
|>	Tb	159	349364.991				ug/L
|	Tl	205	4134.188	**1.000**	0.03	2.9	ug/L
⌊	Pb	208	5528.586	**1.000**	0.02	1.7	ug/L
⌈	Hg	200	53.248	**0.200**	0.03	17.4	ug/L
|	Hg	201	26.667	**0.200**	0.07	35.4	ug/L
|>	Bi	209	251519.319				ug/L
⌊	U	238	8278.093	**1.000**	0.02	2.0	ug/L
	C	13	806.700				ug/L
	W	184	13.333				ug/L
	Pd	106	37.239				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	103951.088	**100.000**	2.78	2.8	ug/L
|	Mg	24	64474.741	**100.000**	8.15	8.2	ug/L
|	K	39	183549.346	**100.000**	1.89	1.9	ug/L

Ca	44	3827.401	**100.000**	8.50	8.5	ug/L
Ti	47	53.333				ug/L
Sc-1	45	167875.174				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000461	0.000	1.000000	Linear Thru Zero
B	11.009	0.000721	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005687	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007396	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006533	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001344	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011172	0.000	1.000000	Linear Thru Zero
Co	58.933	0.010037	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001512	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005415	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002440	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001121	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000790	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001645	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000201	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000096	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003994	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009627	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001238	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003219	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006722	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004381	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001793	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011890	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011541	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015729	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000928	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000478	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032738	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1006.171984	0.000	1.000000	Linear Thru Zero
Mg	23.985	637.680457	0.000	1.000000	Linear Thru Zero
K	38.964	1129.005158	0.000	1.000000	Linear Thru Zero
Ca	43.956	31.340437	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, November 25, 2020 09:42:56
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.480
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7755.008	**100.000**	1.96	2.0	ug/L
|	B	11	116377.338	**999.996**	8.45	0.8	ug/L
|	Al	27	227285.492	**249.963**	7.71	3.1	ug/L
|>	Sc	45	162735.080				ug/L
|	V	51	117857.202	**99.996**	1.37	1.4	ug/L
|	Cr	52	102624.577	**99.995**	2.06	2.1	ug/L
|	Cr	53	22645.613	**99.912**	4.09	4.1	ug/L
|	Mn	55	401349.845	**249.999**	2.66	1.1	ug/L
|	Co	59	109312.508	**99.995**	1.61	1.6	ug/L
⌊	Ni	60	53507.232	**249.998**	2.64	1.1	ug/L
⌈	Cu	63	117708.325	**249.992**	8.54	3.4	ug/L
|	Cu	65	55149.918	**249.993**	8.06	3.2	ug/L
|	Zn	66	36650.158	**249.999**	6.42	2.6	ug/L
|	Zn	68	26187.135	**250.000**	7.13	2.9	ug/L
|>	Ge	72	131526.767				ug/L
|	As	75	35287.213	**249.992**	6.02	2.4	ug/L
|	Se	77	3875.417	**249.983**	10.84	4.3	ug/L
⌊	Se	82	4492.894	**250.005**	7.04	2.8	ug/L
⌈	Mo	98	55032.208	**100.000**	2.71	2.7	ug/L
|>	Rh	103	136901.753				ug/L
⌊	Ag	107	119207.724	**99.999**	3.52	3.5	ug/L
⌈	Cd	111	29806.225	**100.001**	2.50	2.5	ug/L
|	Cd	114	67075.927	**100.000**	0.86	0.9	ug/L
|>	In	115	207194.938				ug/L
|	Sn	120	133771.432	**100.000**	0.61	0.6	ug/L
⌊	Sb	121	96315.095	**100.002**	2.65	2.7	ug/L
⌈	Ba	137	57929.895	**99.999**	1.92	1.9	ug/L
|	Ba	138	366250.656	**99.999**	1.56	1.6	ug/L
|>	Tb	159	343341.820				ug/L
|	Tl	205	374517.772	**99.999**	0.77	0.8	ug/L
⌊	Pb	208	1283662.004	**250.000**	6.45	2.6	ug/L
⌈	Hg	200	5266.566	**20.000**	0.34	1.7	ug/L
|	Hg	201	2967.107	**20.000**	0.63	3.1	ug/L
|>	Bi	209	234589.858				ug/L
⌊	U	238	768210.349	**100.000**	3.09	3.1	ug/L
	C	13	793.365				ug/L
	W	184	24.000				ug/L
	Pd	106	-154.838				ug/L
	Kr	83	14.000				ug/L
⌈	Na	23	9596348.371	**9999.951**	349.63	3.5	ug/L
|	Mg	24	6026628.691	**9999.942**	65.13	0.7	ug/L
|	K	39	10677069.746	**9999.936**	172.54	1.7	ug/L

Ca	44	306960.922	**9999.977**	172.36	1.7	ug/L
Ti	47	13.333				ug/L
Sc-1	45	162735.080				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000476	0.000	1.000000	Linear Thru Zero
B	11.009	0.000714	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005558	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007090	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.006201	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000681	0.000	0.999573	Linear Thru Zero
Mn	54.938	0.009860	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006716	0.000	0.999988	Linear Thru Zero
Ni	59.933	0.001315	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003582	0.000	0.999992	Linear Thru Zero
Cu	64.928	0.001678	0.000	0.999993	Linear Thru Zero
Zn	65.926	0.001113	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000794	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001075	0.000	0.999991	Linear Thru Zero
Se	76.920	0.000098	0.000	0.999964	Linear Thru Zero
Se	81.917	0.000136	0.000	0.999997	Linear Thru Zero
Mo	97.906	0.004016	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008704	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001438	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003238	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006424	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004640	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001687	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010664	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010906	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014956	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001121	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000632	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032759	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	959.306135	0.000	1.000000	Linear Thru Zero
Mg	23.985	602.595708	0.000	1.000000	Linear Thru Zero
K	38.964	1060.648927	0.000	1.000000	Linear Thru Zero
Ca	43.956	30.626828	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, November 25, 2020 14:01:14
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.500
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.889				ug/L
|	B	11	50.667				ug/L
|	Al	27	1242.744				ug/L
|>	Sc	45	179533.580				ug/L
|	V	51	2128.422				ug/L
|	Cr	52	1806.163				ug/L
|	Cr	53	12102.662				ug/L
|	Mn	55	178.668				ug/L
|	Co	59	20.444				ug/L
⌊	Ni	60	15.111				ug/L
⌈	Cu	63	37.333				ug/L
|	Cu	65	26.667				ug/L
|	Zn	66	88.889				ug/L
|	Zn	68	107.556				ug/L
|>	Ge	72	141771.297				ug/L
|	As	75	77.644				ug/L
|	Se	77	738.694				ug/L
⌊	Se	82	31.252				ug/L
⌈	Mo	98	46.374				ug/L
|>	Rh	103	154008.902				ug/L
⌊	Ag	107	96.000				ug/L
⌈	Cd	111	-2.327				ug/L
|	Cd	114	-35.337				ug/L
|>	In	115	222425.330				ug/L
|	Sn	120	602.685				ug/L
⌊	Sb	121	42.667				ug/L
⌈	Ba	137	9.291				ug/L
|	Ba	138	95.958				ug/L
|>	Tb	159	374264.968				ug/L
|	Tl	205	22.667				ug/L
⌊	Pb	208	22.667				ug/L
⌈	Hg	200	2.564				ug/L
|	Hg	201	2.667				ug/L
|>	Bi	209	274582.960				ug/L
⌊	U	238	8.000				ug/L
	C	13	733.361				ug/L
	W	184	15.998				ug/L
	Pd	106	34.667				ug/L
	Kr	83	9.333				ug/L
⌈	Na	23	4160.867				ug/L
|	Mg	24	546.682				ug/L
|	K	39	72501.959				ug/L

Ca	44	626.687		ug/L
Ti	47	13.333		ug/L
Sc-1	45	179533.580		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000476	0.000	1.000000	Linear Thru Zero
B	11.009	0.000714	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005558	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007090	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.006201	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000681	0.000	0.999573	Linear Thru Zero
Mn	54.938	0.009860	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006716	0.000	0.999988	Linear Thru Zero
Ni	59.933	0.001315	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003582	0.000	0.999992	Linear Thru Zero
Cu	64.928	0.001678	0.000	0.999993	Linear Thru Zero
Zn	65.926	0.001113	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000794	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001075	0.000	0.999991	Linear Thru Zero
Se	76.920	0.000098	0.000	0.999964	Linear Thru Zero
Se	81.917	0.000136	0.000	0.999997	Linear Thru Zero
Mo	97.906	0.004016	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008704	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001438	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003238	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006424	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004640	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001687	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010664	0.000	0.999999	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010906	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014956	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001121	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000632	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032759	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	959.306135	0.000	1.000000	Linear Thru Zero
Mg	23.985	602.595708	0.000	1.000000	Linear Thru Zero
K	38.964	1060.648927	0.000	1.000000	Linear Thru Zero
Ca	43.956	30.626828	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, November 25, 2020 14:03:19
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.500
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	95.112	**1.000**	0.12	11.9	ug/L
|	B	11	3000.450	**20.000**	0.46	2.3	ug/L
|	Al	27	22689.745	**20.000**	0.50	2.5	ug/L
|>	Sc	45	179283.985				ug/L
|	V	51	6483.554	**3.000**	0.24	8.0	ug/L
|	Cr	52	5208.690	**3.000**	0.19	6.3	ug/L
|	Cr	53	13151.981	**3.000**	0.36	11.9	ug/L
|	Mn	55	2085.551	**1.000**	0.01	1.0	ug/L
|	Co	59	1687.253	**1.000**	0.01	1.2	ug/L
⌊	Ni	60	580.461	**2.000**	0.02	1.0	ug/L
⌈	Cu	63	1497.890	**2.000**	0.16	8.1	ug/L
|	Cu	65	742.250	**2.000**	0.21	10.4	ug/L
|	Zn	66	878.261	**5.000**	0.25	5.0	ug/L
|	Zn	68	654.244	**5.000**	0.26	5.1	ug/L
|>	Ge	72	142274.654				ug/L
|	As	75	353.190	**2.000**	1.25	62.5	ug/L
|	Se	77	806.699	**2.000**	1.64	82.2	ug/L
⌊	Se	82	68.563	**2.000**	0.39	19.7	ug/L
⌈	Mo	98	550.390	**1.000**	0.15	15.2	ug/L
|>	Rh	103	154872.960				ug/L
⌊	Ag	107	1490.778	**1.000**	0.01	1.3	ug/L
⌈	Cd	111	315.092	**1.000**	0.16	15.8	ug/L
|	Cd	114	607.438	**1.000**	0.13	12.6	ug/L
|>	In	115	226778.880				ug/L
|	Sn	120	1864.140	**1.000**	0.07	7.1	ug/L
⌊	Sb	121	2026.872	**2.000**	0.07	3.4	ug/L
⌈	Ba	137	633.330	**1.000**	0.09	9.4	ug/L
|	Ba	138	3924.747	**1.000**	0.03	3.3	ug/L
|>	Tb	159	379839.225				ug/L
|	Tl	205	4459.661	**1.000**	0.02	1.8	ug/L
⌊	Pb	208	6036.714	**1.000**	0.03	2.8	ug/L
⌈	Hg	200	75.906	**0.200**	0.02	9.6	ug/L
|	Hg	201	37.333	**0.200**	0.07	35.3	ug/L
|>	Bi	209	270855.117				ug/L
⌊	U	238	8562.332	**1.000**	0.02	1.9	ug/L
	C	13	786.698				ug/L
	W	184	14.667				ug/L
	Pd	106	38.989				ug/L
	Kr	83	12.000				ug/L
⌈	Na	23	125530.021	**100.000**	2.81	2.8	ug/L
|	Mg	24	70621.919	**100.000**	2.36	2.4	ug/L
|	K	39	193548.474	**100.000**	0.94	0.9	ug/L

Ca	44	3587.312	**100.000**	8.15	8.1	ug/L
Ti	47	53.333				ug/L
Sc-1	45	179283.985				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000526	0.000	1.000000	Linear Thru Zero
B	11.009	0.000823	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005980	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008104	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006335	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001981	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010637	0.000	1.000000	Linear Thru Zero
Co	58.933	0.009298	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001577	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005136	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002512	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001110	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000767	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000976	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000227	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000131	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003254	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009002	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001399	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002837	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005511	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004373	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001644	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010081	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011683	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015839	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001355	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000641	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031584	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1213.691542	0.000	1.000000	Linear Thru Zero
Mg	23.985	700.752365	0.000	1.000000	Linear Thru Zero
K	38.964	1210.465150	0.000	1.000000	Linear Thru Zero
Ca	43.956	29.606253	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, November 25, 2020 14:05:23
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.500
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8480.928	**99.999**	1.21	1.2	ug/L
|	B	11	132009.688	**999.965**	15.12	1.5	ug/L
|	Al	27	251005.048	**249.931**	2.44	1.0	ug/L
|>	Sc	45	174292.530				ug/L
|	V	51	128630.547	**99.990**	0.62	0.6	ug/L
|	Cr	52	109618.897	**99.998**	1.03	1.0	ug/L
|	Cr	53	24707.822	**99.851**	3.47	3.5	ug/L
|	Mn	55	424328.689	**250.000**	5.74	2.3	ug/L
|	Co	59	116881.860	**99.996**	2.18	2.2	ug/L
⌊	Ni	60	55847.071	**249.996**	1.68	0.7	ug/L
⌈	Cu	63	122820.814	**249.993**	3.12	1.2	ug/L
|	Cu	65	57457.058	**249.992**	3.89	1.6	ug/L
|	Zn	66	38500.640	**250.001**	1.41	0.6	ug/L
|	Zn	68	27571.292	**250.005**	2.54	1.0	ug/L
|>	Ge	72	136433.738				ug/L
|	As	75	37094.142	**250.002**	2.87	1.1	ug/L
|	Se	77	3911.432	**249.977**	8.53	3.4	ug/L
⌊	Se	82	4810.430	**250.001**	2.88	1.2	ug/L
⌈	Mo	98	56162.183	**100.002**	2.34	2.3	ug/L
|>	Rh	103	143818.994				ug/L
⌊	Ag	107	124897.987	**100.000**	3.40	3.4	ug/L
⌈	Cd	111	30962.354	**100.000**	2.44	2.4	ug/L
|	Cd	114	71122.745	**100.001**	1.39	1.4	ug/L
|>	In	115	214787.681				ug/L
|	Sn	120	139861.971	**100.002**	0.23	0.2	ug/L
⌊	Sb	121	98800.400	**100.002**	0.54	0.5	ug/L
⌈	Ba	137	60051.681	**100.000**	2.42	2.4	ug/L
|	Ba	138	381349.094	**100.000**	2.25	2.2	ug/L
|>	Tb	159	374347.987				ug/L
|	Tl	205	405662.591	**99.999**	1.63	1.6	ug/L
⌊	Pb	208	1391727.661	**250.000**	1.29	0.5	ug/L
⌈	Hg	200	5648.102	**20.000**	1.05	5.2	ug/L
|	Hg	201	3407.247	**20.000**	0.50	2.5	ug/L
|>	Bi	209	255421.758				ug/L
⌊	U	238	822489.416	**100.000**	1.54	1.5	ug/L
	C	13	873.372				ug/L
	W	184	25.332				ug/L
	Pd	106	-93.626				ug/L
	Kr	83	7.333				ug/L
⌈	Na	23	10789804.353	**9999.875**	5.54	0.1	ug/L
|	Mg	24	6895004.956	**9999.984**	140.80	1.4	ug/L
|	K	39	11436395.518	**9999.935**	361.96	3.6	ug/L

Ca	44	331553.826	**10000.105**	106.47	1.1	ug/L
Ti	47	0.000				ug/L
Sc-1	45	174292.530				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000487	0.000	1.000000	Linear Thru Zero
B	11.009	0.000757	0.000	0.999998	Linear Thru Zero
Al	26.982	0.005734	0.000	0.999994	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007262	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.006189	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000745	0.000	0.998763	Linear Thru Zero
Mn	54.938	0.009736	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006706	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001281	0.000	0.999998	Linear Thru Zero
Cu	62.930	0.003600	0.000	0.999994	Linear Thru Zero
Cu	64.928	0.001684	0.000	0.999992	Linear Thru Zero
Zn	65.926	0.001126	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000805	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001085	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999935	Linear Thru Zero
Se	81.917	0.000140	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003903	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008681	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001442	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003313	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006484	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004598	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001604	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010186	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010835	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014871	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001106	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000667	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032204	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1078.577860	0.000	0.999999	Linear Thru Zero
Mg	23.985	689.446958	0.000	1.000000	Linear Thru Zero
K	38.964	1136.396763	0.000	1.000000	Linear Thru Zero
Ca	43.956	33.092365	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, November 25, 2020 18:15:47
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.592
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	3.556				ug/L
|	B	11	130.668				ug/L
|	Al	27	1314.753				ug/L
|>	Sc	45	193457.660				ug/L
|	V	51	2747.162				ug/L
|	Cr	52	1848.171				ug/L
|	Cr	53	12814.881				ug/L
|	Mn	55	194.669				ug/L
|	Co	59	14.222				ug/L
⌊	Ni	60	8.000				ug/L
⌈	Cu	63	25.778				ug/L
|	Cu	65	17.778				ug/L
|	Zn	66	94.223				ug/L
|	Zn	68	89.778				ug/L
|>	Ge	72	144814.605				ug/L
|	As	75	2.076				ug/L
|	Se	77	788.031				ug/L
⌊	Se	82	43.948				ug/L
⌈	Mo	98	136.001				ug/L
|>	Rh	103	153299.787				ug/L
⌊	Ag	107	120.001				ug/L
⌈	Cd	111	-2.363				ug/L
|	Cd	114	-51.068				ug/L
|>	In	115	226725.696				ug/L
|	Sn	120	530.579				ug/L
⌊	Sb	121	53.333				ug/L
⌈	Ba	137	18.626				ug/L
|	Ba	138	115.960				ug/L
|>	Tb	159	388457.214				ug/L
|	Tl	205	16.000				ug/L
⌊	Pb	208	61.333				ug/L
⌈	Hg	200	14.470				ug/L
|	Hg	201	4.000				ug/L
|>	Bi	209	276447.820				ug/L
⌊	U	238	26.667				ug/L
	C	13	793.366				ug/L
	W	184	30.665				ug/L
	Pd	106	42.406				ug/L
	Kr	83	6.000				ug/L
⌈	Na	23	9657.998				ug/L
|	Mg	24	2106.891				ug/L
|	K	39	71427.626				ug/L

Ca	44	720.026	ug/L
Ti	47	40.000	ug/L
Sc-1	45	193457.660	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000487	0.000	1.000000	Linear Thru Zero
B	11.009	0.000757	0.000	0.999998	Linear Thru Zero
Al	26.982	0.005734	0.000	0.999994	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007262	0.000	0.999994	Linear Thru Zero
Cr	51.941	0.006189	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000745	0.000	0.998763	Linear Thru Zero
Mn	54.938	0.009736	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006706	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001281	0.000	0.999998	Linear Thru Zero
Cu	62.930	0.003600	0.000	0.999994	Linear Thru Zero
Cu	64.928	0.001684	0.000	0.999992	Linear Thru Zero
Zn	65.926	0.001126	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000805	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001085	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999935	Linear Thru Zero
Se	81.917	0.000140	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003903	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008681	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001442	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003313	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006484	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004598	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001604	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010186	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010835	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014871	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001106	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000667	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032204	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1078.577860	0.000	0.999999	Linear Thru Zero
Mg	23.985	689.446958	0.000	1.000000	Linear Thru Zero
K	38.964	1136.396763	0.000	1.000000	Linear Thru Zero
Ca	43.956	33.092365	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, November 25, 2020 18:17:52
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.592
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	88.889	**1.000**	0.28	27.8	ug/L
|	B	11	3269.868	**20.000**	0.96	4.8	ug/L
|	Al	27	24186.578	**20.000**	0.64	3.2	ug/L
|>	Sc	45	190691.768				ug/L
|	V	51	7176.330	**3.000**	1.38	45.8	ug/L
|	Cr	52	5314.079	**3.000**	0.14	4.6	ug/L
|	Cr	53	13689.367	**3.000**	1.67	55.7	ug/L
|	Mn	55	2090.886	**1.000**	0.06	5.8	ug/L
|	Co	59	1688.143	**1.000**	0.09	8.9	ug/L
⌊	Ni	60	533.348	**2.000**	0.12	6.2	ug/L
⌈	Cu	63	1488.111	**2.000**	0.11	5.6	ug/L
|	Cu	65	708.470	**2.000**	0.12	6.1	ug/L
|	Zn	66	962.713	**5.000**	0.32	6.4	ug/L
|	Zn	68	724.471	**5.000**	0.51	10.3	ug/L
|>	Ge	72	143058.745				ug/L
|	As	75	300.417	**2.000**	1.62	80.9	ug/L
|	Se	77	802.032	**2.000**	0.72	36.1	ug/L
⌊	Se	82	55.896	**2.000**	1.73	86.3	ug/L
⌈	Mo	98	707.733	**1.000**	0.10	9.5	ug/L
|>	Rh	103	155243.858				ug/L
⌊	Ag	107	1560.123	**1.000**	0.11	11.1	ug/L
⌈	Cd	111	322.933	**1.000**	0.22	22.0	ug/L
|	Cd	114	785.193	**1.000**	0.06	5.6	ug/L
|>	In	115	227866.617				ug/L
|	Sn	120	2085.484	**1.000**	0.10	10.3	ug/L
⌊	Sb	121	2197.577	**2.000**	0.17	8.6	ug/L
⌈	Ba	137	662.634	**1.000**	0.06	5.6	ug/L
|	Ba	138	4122.128	**1.000**	0.03	3.1	ug/L
|>	Tb	159	380416.619				ug/L
|	Tl	205	4291.587	**1.000**	0.02	1.9	ug/L
⌊	Pb	208	5847.345	**1.000**	0.01	1.2	ug/L
⌈	Hg	200	59.821	**0.200**	0.08	40.5	ug/L
|	Hg	201	41.333	**0.200**	0.05	26.4	ug/L
|>	Bi	209	272888.101				ug/L
⌊	U	238	8786.526	**1.000**	0.01	1.3	ug/L
	C	13	960.046				ug/L
	W	184	28.000				ug/L
	Pd	106	43.417				ug/L
	Kr	83	12.000				ug/L
⌈	Na	23	128716.454	**100.000**	0.68	0.7	ug/L
|	Mg	24	82633.484	**100.000**	2.57	2.6	ug/L
|	K	39	204632.944	**100.000**	2.70	2.7	ug/L

Ca	44	4534.362	**100.000**	5.28	5.3	ug/L
Ti	47	13.333				ug/L
Sc-1	45	190691.768				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000449	0.000	1.000000	Linear Thru Zero
B	11.009	0.000825	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006006	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007697	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006114	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001878	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009967	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008801	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001381	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005114	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002414	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001215	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000889	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001038	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000082	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000043	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003670	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009264	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001433	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003671	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006810	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004699	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001693	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010541	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011242	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015215	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000835	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000684	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032100	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1190.584560	0.000	1.000000	Linear Thru Zero
Mg	23.985	805.265932	0.000	1.000000	Linear Thru Zero
K	38.964	1332.053179	0.000	1.000000	Linear Thru Zero
Ca	43.956	38.143365	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, November 25, 2020 18:19:56
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.592
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8897.292	**100.001**	2.93	2.9	ug/L
|	B	11	138501.950	**999.969**	34.72	3.5	ug/L
|	Al	27	264550.193	**249.951**	6.18	2.5	ug/L
|>	Sc	45	180848.240				ug/L
|	V	51	130388.627	**99.992**	2.00	2.0	ug/L
|	Cr	52	110750.720	**99.999**	1.55	1.5	ug/L
|	Cr	53	25072.059	**99.857**	4.20	4.2	ug/L
|	Mn	55	441058.947	**250.000**	9.28	3.7	ug/L
|	Co	59	117322.467	**99.996**	2.49	2.5	ug/L
⌊	Ni	60	55938.246	**249.998**	6.07	2.4	ug/L
⌈	Cu	63	123990.650	**249.993**	7.18	2.9	ug/L
|	Cu	65	57998.819	**249.993**	7.66	3.1	ug/L
|	Zn	66	38369.492	**249.991**	3.60	1.4	ug/L
|	Zn	68	27874.358	**249.990**	2.95	1.2	ug/L
|>	Ge	72	137093.847				ug/L
|	As	75	37262.901	**250.001**	2.51	1.0	ug/L
|	Se	77	3974.123	**250.002**	6.31	2.5	ug/L
⌊	Se	82	4660.309	**250.011**	6.17	2.5	ug/L
⌈	Mo	98	57235.086	**100.001**	3.22	3.2	ug/L
|>	Rh	103	144287.123				ug/L
⌊	Ag	107	124325.801	**99.999**	1.16	1.2	ug/L
⌈	Cd	111	30799.509	**100.000**	2.25	2.3	ug/L
|	Cd	114	71183.820	**99.999**	1.98	2.0	ug/L
|>	In	115	216617.852				ug/L
|	Sn	120	141157.313	**100.000**	2.34	2.3	ug/L
⌊	Sb	121	100968.562	**100.000**	2.60	2.6	ug/L
⌈	Ba	137	59749.871	**99.999**	0.90	0.9	ug/L
|	Ba	138	377928.076	**100.000**	0.45	0.5	ug/L
|>	Tb	159	371932.600				ug/L
|	Tl	205	399633.378	**100.000**	2.53	2.5	ug/L
⌊	Pb	208	1365206.064	**250.000**	4.51	1.8	ug/L
⌈	Hg	200	5620.068	**20.000**	0.61	3.0	ug/L
|	Hg	201	3247.195	**20.000**	1.04	5.2	ug/L
|>	Bi	209	253178.761				ug/L
⌊	U	238	827295.805	**100.000**	0.73	0.7	ug/L
	C	13	993.383				ug/L
	W	184	27.997				ug/L
	Pd	106	-179.039				ug/L
	Kr	83	13.333				ug/L
⌈	Na	23	11464423.830	**9999.961**	484.08	4.8	ug/L
|	Mg	24	7359280.668	**9999.905**	526.01	5.3	ug/L
|	K	39	12097706.573	**9999.892**	427.07	4.3	ug/L

Ca	44	334806.436	**9999.858**	131.94	1.3	ug/L
Ti	47	13.333				ug/L
Sc-1	45	180848.240				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000492	0.000	1.000000	Linear Thru Zero
B	11.009	0.000766	0.000	0.999999	Linear Thru Zero
Al	26.982	0.005828	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007066	0.000	0.999996	Linear Thru Zero
Cr	51.941	0.006030	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000726	0.000	0.998866	Linear Thru Zero
Mn	54.938	0.009758	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006490	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001238	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003619	0.000	0.999995	Linear Thru Zero
Cu	64.928	0.001693	0.000	0.999994	Linear Thru Zero
Zn	65.926	0.001117	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000811	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001087	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999999	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999985	Linear Thru Zero
Mo	97.906	0.003959	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008608	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001422	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003289	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006495	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004661	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001606	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010159	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010745	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014683	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001107	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000641	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032677	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1145.481094	0.000	1.000000	Linear Thru Zero
Mg	23.985	735.724332	0.000	1.000000	Linear Thru Zero
K	38.964	1202.640836	0.000	0.999999	Linear Thru Zero
Ca	43.956	33.409114	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, November 25, 2020 23:06:59
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.725
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.000				ug/L
|	B	11	208.002				ug/L
|	Al	27	6015.152				ug/L
|>	Sc	45	179089.138				ug/L
|	V	51	2933.601				ug/L
|	Cr	52	1603.462				ug/L
|	Cr	53	10663.018				ug/L
|	Mn	55	514.680				ug/L
|	Co	59	25.778				ug/L
⌊	Ni	60	22.222				ug/L
⌈	Cu	63	61.334				ug/L
|	Cu	65	18.667				ug/L
|	Zn	66	663.133				ug/L
|	Zn	68	479.123				ug/L
|>	Ge	72	130118.468				ug/L
|	As	75	136.688				ug/L
|	Se	77	634.020				ug/L
⌊	Se	82	29.925				ug/L
⌈	Mo	98	72.895				ug/L
|>	Rh	103	139588.859				ug/L
⌊	Ag	107	98.667				ug/L
⌈	Cd	111	-5.441				ug/L
|	Cd	114	-43.552				ug/L
|>	In	115	208187.811				ug/L
|	Sn	120	247.935				ug/L
⌊	Sb	121	24.000				ug/L
⌈	Ba	137	34.520				ug/L
|	Ba	138	259.857				ug/L
|>	Tb	159	346937.537				ug/L
|	Tl	205	10.667				ug/L
⌊	Pb	208	65.333				ug/L
⌈	Hg	200	15.915				ug/L
|	Hg	201	4.000				ug/L
|>	Bi	209	249291.951				ug/L
⌊	U	238	26.667				ug/L
	C	13	773.363				ug/L
	W	184	13.333				ug/L
	Pd	106	23.740				ug/L
	Kr	83	8.667				ug/L
⌈	Na	23	9591.277				ug/L
|	Mg	24	1960.192				ug/L
|	K	39	75860.196				ug/L

Ca	44	2160.239		ug/L
Ti	47	40.000		ug/L
Sc-1	45	179089.138		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000492	0.000	1.000000	Linear Thru Zero
B	11.009	0.000766	0.000	0.999999	Linear Thru Zero
Al	26.982	0.005828	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007066	0.000	0.999996	Linear Thru Zero
Cr	51.941	0.006030	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000726	0.000	0.998866	Linear Thru Zero
Mn	54.938	0.009758	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006490	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001238	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003619	0.000	0.999995	Linear Thru Zero
Cu	64.928	0.001693	0.000	0.999994	Linear Thru Zero
Zn	65.926	0.001117	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000811	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001087	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999999	Linear Thru Zero
Se	81.917	0.000135	0.000	0.999985	Linear Thru Zero
Mo	97.906	0.003959	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008608	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001422	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003289	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006495	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004661	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001606	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010159	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010745	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014683	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001107	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000641	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032677	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1145.481094	0.000	1.000000	Linear Thru Zero
Mg	23.985	735.724332	0.000	1.000000	Linear Thru Zero
K	38.964	1202.640836	0.000	0.999999	Linear Thru Zero
Ca	43.956	33.409114	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, November 25, 2020 23:09:03
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.725
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	102.223	**1.000**	0.08	7.9	ug/L
|	B	11	3147.163	**20.000**	1.08	5.4	ug/L
|	Al	27	24667.746	**20.000**	0.38	1.9	ug/L
|>	Sc	45	178038.014				ug/L
|	V	51	5934.080	**3.000**	0.52	17.2	ug/L
|	Cr	52	4888.528	**3.000**	0.10	3.4	ug/L
|	Cr	53	11052.109	**3.000**	3.88	129.4	ug/L
|	Mn	55	2173.570	**1.000**	0.07	6.5	ug/L
|	Co	59	1674.807	**1.000**	0.03	2.5	ug/L
⌊	Ni	60	506.680	**2.000**	0.06	2.9	ug/L
⌈	Cu	63	1460.551	**2.000**	0.08	4.1	ug/L
|	Cu	65	671.134	**2.000**	0.04	2.2	ug/L
|	Zn	66	906.708	**5.000**	1.52	30.3	ug/L
|	Zn	68	693.357	**5.000**	0.08	1.7	ug/L
|>	Ge	72	130118.959				ug/L
|	As	75	293.119	**2.000**	0.87	43.7	ug/L
|	Se	77	648.688	**2.000**	9.11	455.5	ug/L
⌊	Se	82	55.247	**2.000**	0.68	34.0	ug/L
⌈	Mo	98	602.685	**1.000**	0.11	11.2	ug/L
|>	Rh	103	136604.396				ug/L
⌊	Ag	107	1293.417	**1.000**	0.07	7.3	ug/L
⌈	Cd	111	278.925	**1.000**	0.12	12.2	ug/L
|	Cd	114	649.122	**1.000**	0.04	3.5	ug/L
|>	In	115	208811.213				ug/L
|	Sn	120	1656.103	**1.000**	0.02	2.1	ug/L
⌊	Sb	121	2010.870	**2.000**	0.14	7.2	ug/L
⌈	Ba	137	590.622	**1.000**	0.08	7.9	ug/L
|	Ba	138	3725.965	**1.000**	0.02	1.8	ug/L
|>	Tb	159	347812.929				ug/L
|	Tl	205	3954.116	**1.000**	0.04	4.0	ug/L
⌊	Pb	208	5625.963	**1.000**	0.01	1.3	ug/L
⌈	Hg	200	55.915	**0.200**	0.09	42.6	ug/L
|	Hg	201	24.000	**0.200**	0.11	54.0	ug/L
|>	Bi	209	243872.327				ug/L
⌊	U	238	7682.951	**1.000**	0.04	4.2	ug/L
	C	13	880.039				ug/L
	W	184	13.332				ug/L
	Pd	106	53.177				ug/L
	Kr	83	10.000				ug/L
⌈	Na	23	121912.664	**100.000**	4.11	4.1	ug/L
|	Mg	24	76733.421	**100.000**	2.80	2.8	ug/L
|	K	39	194255.444	**100.000**	1.92	1.9	ug/L

Ca	44	4147.528	**100.000**	10.33	10.3	ug/L
Ti	47	0.000				ug/L
Sc-1	45	178038.014				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000574	0.000	1.000000	Linear Thru Zero
B	11.009	0.000826	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005247	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005655	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006171	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000859	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009333	0.000	1.000000	Linear Thru Zero
Co	58.933	0.009266	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001361	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.005379	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002508	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000376	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000329	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000596	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000052	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000097	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003887	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008772	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001360	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003319	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006739	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004755	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001598	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009965	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011337	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015985	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000825	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000413	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031417	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1123.213866	0.000	1.000000	Linear Thru Zero
Mg	23.985	747.732281	0.000	1.000000	Linear Thru Zero
K	38.964	1183.952481	0.000	1.000000	Linear Thru Zero
Ca	43.956	19.872887	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, November 25, 2020 23:11:08
Sample File: C:\Elandata\Sample\PE_EL2_201125.sam
Blank File: C:\Elandata\Dataset\2020 NOV (23-29)\Blank.725
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201125.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8418.653	**99.998**	1.30	1.3	ug/L
|	B	11	138301.909	**999.989**	12.23	1.2	ug/L
|	Al	27	253143.262	**250.140**	2.65	1.1	ug/L
|>	Sc	45	172038.105				ug/L
|	V	51	120674.099	**100.016**	1.77	1.8	ug/L
|	Cr	52	102485.201	**99.995**	0.41	0.4	ug/L
|	Cr	53	21983.473	**99.977**	0.54	0.5	ug/L
|	Mn	55	410501.940	**250.000**	2.02	0.8	ug/L
|	Co	59	109197.612	**99.995**	0.81	0.8	ug/L
⌊	Ni	60	51453.829	**249.998**	3.37	1.3	ug/L
⌈	Cu	63	111985.468	**249.992**	2.32	0.9	ug/L
|	Cu	65	52069.436	**249.992**	4.12	1.6	ug/L
|	Zn	66	35174.658	**250.066**	6.08	2.4	ug/L
|	Zn	68	25150.722	**250.058**	6.07	2.4	ug/L
|>	Ge	72	124552.241				ug/L
|	As	75	34154.034	**250.007**	1.72	0.7	ug/L
|	Se	77	3559.968	**250.007**	10.14	4.1	ug/L
⌊	Se	82	4384.212	**250.005**	2.61	1.0	ug/L
⌈	Mo	98	50958.845	**100.000**	0.80	0.8	ug/L
|>	Rh	103	127487.544				ug/L
⌊	Ag	107	111829.950	**100.000**	0.95	1.0	ug/L
⌈	Cd	111	27768.575	**100.000**	2.22	2.2	ug/L
|	Cd	114	63163.155	**100.000**	1.68	1.7	ug/L
|>	In	115	198061.302				ug/L
|	Sn	120	128897.542	**100.000**	0.66	0.7	ug/L
⌊	Sb	121	90202.389	**99.998**	0.31	0.3	ug/L
⌈	Ba	137	54434.304	**100.000**	1.83	1.8	ug/L
|	Ba	138	342557.706	**100.000**	1.30	1.3	ug/L
|>	Tb	159	339267.707				ug/L
|	Tl	205	360756.449	**99.999**	1.37	1.4	ug/L
⌊	Pb	208	1257154.676	**250.000**	3.06	1.2	ug/L
⌈	Hg	200	5175.905	**20.001**	0.84	4.2	ug/L
|	Hg	201	3029.793	**20.001**	0.99	4.9	ug/L
|>	Bi	209	228306.170				ug/L
⌊	U	238	755751.934	**100.001**	0.37	0.4	ug/L
	C	13	866.705				ug/L
	W	184	15.998				ug/L
	Pd	106	-295.181				ug/L
	Kr	83	10.000				ug/L
⌈	Na	23	10478385.099	**9999.927**	179.59	1.8	ug/L
|	Mg	24	6843628.253	**9999.907**	142.05	1.4	ug/L
|	K	39	11292448.415	**9999.944**	62.63	0.6	ug/L

Ca	44	340556.961	**10000.413**	220.60	2.2	ug/L
Ti	47	26.667				ug/L
Sc-1	45	172038.105				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000489	0.000	0.999999	Linear Thru Zero
B	11.009	0.000803	0.000	1.000000	Linear Thru Zero
Al	26.982	0.005748	0.000	0.999976	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006850	0.000	0.999986	Linear Thru Zero
Cr	51.941	0.005868	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000683	0.000	0.999970	Linear Thru Zero
Mn	54.938	0.009534	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006346	0.000	0.999989	Linear Thru Zero
Ni	59.933	0.001196	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003594	0.000	0.999992	Linear Thru Zero
Cu	64.928	0.001672	0.000	0.999992	Linear Thru Zero
Zn	65.926	0.001109	0.000	0.999913	Linear Thru Zero
Zn	67.925	0.000793	0.000	0.999932	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001093	0.000	0.999993	Linear Thru Zero
Se	76.920	0.000095	0.000	0.999994	Linear Thru Zero
Se	81.917	0.000140	0.000	0.999997	Linear Thru Zero
Mo	97.906	0.003992	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008764	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001402	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003192	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006496	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004553	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001604	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.010091	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010634	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014822	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001130	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000663	0.000	0.999993	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033102	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1046.887015	0.000	1.000000	Linear Thru Zero
Mg	23.985	684.173162	0.000	1.000000	Linear Thru Zero
K	38.964	1121.665051	0.000	1.000000	Linear Thru Zero
Ca	43.956	33.838276	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Wednesday, November 25, 2020 07:32:12
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.1534
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.027	1567	2081	0.705	
Mg	23.985	24.027	5691	2108	0.684	
Rh	102.905	102.879	24824	2266	0.695	
Ce	139.905	139.828	33785	2344	0.704	
Pb	207.977	208.028	50327	2516	0.673	
U	238.050	238.076	57611	2574	0.669	

Daily Performance Report

Sample ID: Daily Performance Check

Sample Date/Time: Wednesday, November 25, 2020 08:07:12
Sample Description:
Method File: C:\Elandata\Method\BC Methods\OTHER\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.1536
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 50
Current Dead Time (ns): 50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	11912.4	11912.373	196.206	1.6
	In	114.9	74083.3	74083.268	1224.808	1.7
	U	238.1	133540.0	133540.033	1237.326	0.9
⌈>	Ba	137.9	73132.9	73132.940	906.949	1.2
⌊	Ba++	69.0	802.1	0.011	0.000	2.1
⌈>	Ce	139.9	90215.9	90215.867	865.425	1.0
⌊	CeO	155.9	2119.8	0.023	0.001	2.7
	220	220.0	0.5	0.480	0.335	69.7
	8.5	8.5	2.2	2.160	1.043	48.3

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
7.50	Lens Voltage
1500.00	ICP RF Power
-1800.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	69	6.3	62041.9
Mg	24	69	6.5	14523.9
In	115	69	7.5	64782.5
Ce	140	69	7.8	77250.6
Pb	208	69	8.8	50828.9

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:51:58AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2034585

Laboratory Documentation Requirements
For Data Validation of
Semi-Volatiles Analysis

Prepared By

BC Laboratories

For SMUD - Kleinfelder

60632793.6 SMUD SVM

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-8270C

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Case Narrative

Sample Receipt

Work Order: 2034585
COC Number:
Default Cooler was received at 2.5 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-8270C	MS-B2

Sample Qualifier Summary

The surrogate recovery for this compound was not within the control limits.

Lab Number	Method	Analyte
2034585-01	EPA-8270C	2,4,6-Tribromophenol (Surrogate)
2034585-02	EPA-8270C	2,4,6-Tribromophenol (Surrogate)

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).
The internal standard on the sample was not within the control limits.

Lab Number	Method	Analyte
2104723-ICB1	EPA-8270C	Chrysene-d12 (IS)
2104723-ICB1	EPA-8270C	Perylene-d12 (IS)

Calibration

The relative standard deviation of the calibration curve response factors exceeds the control limit.

Lab Number	Method	Analyte
2103032-CAL	EPA-8270C	2-Naphthylamine

The correlation coefficient for the calibration was below the minmum control limit.

Lab Number	Method	Analyte
2103032-CAL	EPA-8270C	4,6-Dinitro-2-methylphenol

The relative standard deviation of the calibration curve response factors for a Calibration Check Compound (CCC) exceeds the control limit.

Lab Number	Method	Analyte
2103032-CAL	EPA-8270C	Pentachlorophenol

The Initial Calibration Verification (ICV) recovery is not within established control limits.

Lab Number	Method	Analyte
2104723-ICV1	EPA-8270C	2-Naphthylamine

The Continuing Calibration Verification (CCV) recovery was not within established control limits.

Lab Number	Method	Analyte
2021422-CCV1	EPA-8270C	4-Nitrophenol
2021592-CCV1	EPA-8270C	Benzidine
2021592-CCV1	EPA-8270C	Benzo[g,h,i]perylene
2021592-CCV1	EPA-8270C	2-Naphthylamine

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B094056	EPA-8270C	2034773-06	<Not Client Sample>

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Discussion

The CCC limit for Pentachlorophenol exceeded 20% limit. The linearity criteria is met.

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aecom.com

20-34585

RUSH! CHAIN OF CUSTODY RECORD 100802

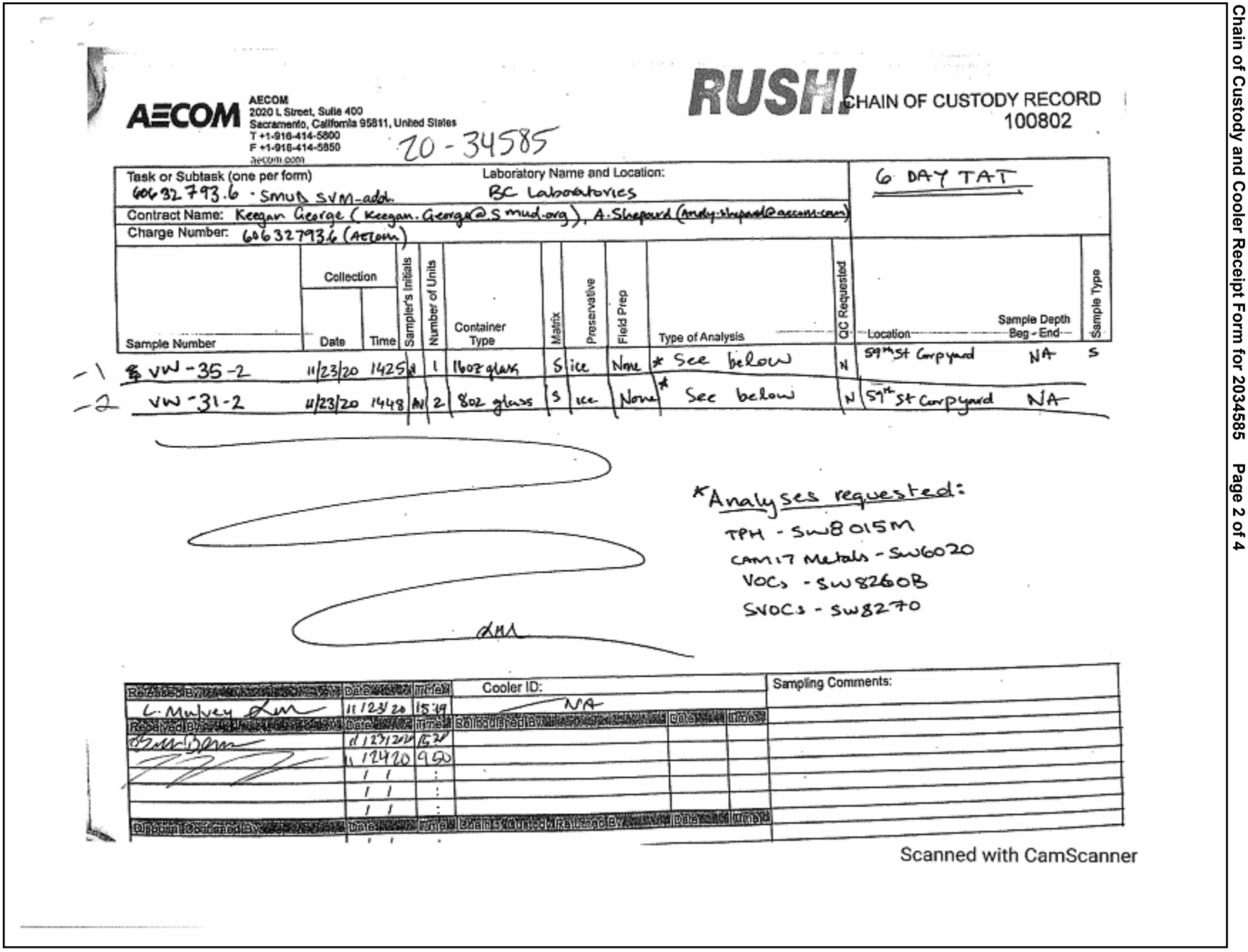
Task or Subtask (one per form): 60632793.6 - SMUD SVM-addl.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
1 SVW-35-2	11/23/20	1425	AN	1	160z glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
2 VW-31-2	11/23/20	1448	AN	2	80z glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270
* PCB's per client 11/24/20 see email

CHK BY
DISTRIBUTION
SUB OUT

Released By:	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:19	NA			
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
	11/23/2020	1620		11/23/2020	1600	
	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				



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20-34585

RUSH! CHAIN OF CUSTODY RECORD
100802

Task or Subtask (one per form): 60632793.6 - SMUD SVM-addt.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@SMUD.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
-1 VW-35-2	11/23/20	1425	AH	1	160z glass	S	ice	None	* See below	N	59th St Carpyard	NA	S
-2 VW-31-2	11/23/20	1448	AH	2	80z glass	S	ice	None	* See below	N	59th St Carpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM 17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270

AMA

Relinquished By	Date	Time	Received By	Date	Time
L. Mulvey	11/23/20	15:19			
	11/23/20	1620			
	11/24/20	900			
	/ /	:			
	/ /	:			
	/ /	:			

Cooler ID: NA

Sampling Comments:

Scanned with CamScanner

Mark Ellis 20-34585

From: Mulvey, Lucy <lucy.mulvey@aecom.com>
Sent: Monday, November 23, 2020 3:30 PM
To: Mark Ellis; Shepard, Andy (Sacramento); Kohlhardt, Robert
Subject: SMUD COC correction 11/23
Attachments: CoC- 11.23.20_1.pdf

Mark,

Please see attached CoC from earlier today. I didn't grab Bill before he left site. I forgot to include PCBs to the analyses list.
Please include PCBs by EPA method SW8082 to the existing list that includes TPH, Cam 17 metals, VOCs and SVOCs.

Thank you,

Lucy
Get Outlook for Android

1

Chain of Custody and Cooler Receipt Form for 2034585 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34585

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 11-24-20 950

Temperature: (A) 2.9 °C / (C) 2.5 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz ~~AMBER~~ JAR		AB								
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 11/24/20 1213

A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **SVOA**
Method: **EPA-8270C**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-B2

Analyte	MDL	PQL	Units
Acenaphthene	0.0067	0.1	mg/kg
Acenaphthylene	0.0067	0.1	mg/kg
Aldrin	0.0067	0.1	mg/kg
Aniline	0.011	0.2	mg/kg
Anthracene	0.0067	0.1	mg/kg
Benzidine	0.0093	3	mg/kg
Benzo[a]anthracene	0.0077	0.1	mg/kg
Benzo[b]fluoranthene	0.0067	0.1	mg/kg
Benzo[k]fluoranthene	0.0082	0.1	mg/kg
Benzo[a]pyrene	0.0067	0.1	mg/kg
Benzo[g,h,i]perylene	0.013	0.1	mg/kg
Benzoic acid	0.014	0.5	mg/kg
Benzyl alcohol	0.0067	0.1	mg/kg
Benzyl butyl phthalate	0.0067	0.1	mg/kg
alpha-BHC	0.0067	0.1	mg/kg
beta-BHC	0.0075	0.1	mg/kg
delta-BHC	0.0067	0.1	mg/kg
gamma-BHC (Lindane)	0.0067	0.1	mg/kg
bis(2-Chloroethoxy)methane	0.0067	0.1	mg/kg
bis(2-Chloroethyl) ether	0.0097	0.1	mg/kg
bis(2-Chloroisopropyl)ether	0.0067	0.1	mg/kg
bis(2-Ethylhexyl)phthalate	0.0067	0.2	mg/kg
4-Bromophenyl phenyl ether	0.0067	0.1	mg/kg
4-Chloroaniline	0.015	0.1	mg/kg
2-Chloronaphthalene	0.0067	0.1	mg/kg
4-Chlorophenyl phenyl ether	0.0067	0.1	mg/kg
Chrysene	0.0067	0.1	mg/kg
4,4'-DDD	0.0067	0.1	mg/kg
4,4'-DDE	0.0068	0.1	mg/kg
4,4'-DDT	0.0067	0.1	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-B2

Analyte	MDL	PQL	Units
Dibenzo[a,h]anthracene	0.0067	0.1	mg/kg
Dibenzofuran	0.0067	0.1	mg/kg
1,2-Dichlorobenzene	0.0067	0.1	mg/kg
1,3-Dichlorobenzene	0.0067	0.1	mg/kg
1,4-Dichlorobenzene	0.0067	0.1	mg/kg
3,3-Dichlorobenzidine	0.0067	0.2	mg/kg
Dieldrin	0.0077	0.1	mg/kg
Diethyl phthalate	0.0067	0.1	mg/kg
Dimethyl phthalate	0.0067	0.1	mg/kg
Di-n-butyl phthalate	0.0067	0.1	mg/kg
2,4-Dinitrotoluene	0.0085	0.1	mg/kg
2,6-Dinitrotoluene	0.0067	0.1	mg/kg
Di-n-octyl phthalate	0.0067	0.1	mg/kg
1,2-Diphenylhydrazine	0.0067	0.1	mg/kg
Endosulfan I	0.0088	0.2	mg/kg
Endosulfan II	0.0088	0.2	mg/kg
Endosulfan sulfate	0.0067	0.1	mg/kg
Endrin	0.0086	0.2	mg/kg
Endrin aldehyde	0.007	0.5	mg/kg
Fluoranthene	0.0067	0.1	mg/kg
Fluorene	0.0067	0.1	mg/kg
Heptachlor	0.0067	0.1	mg/kg
Heptachlor epoxide	0.013	0.1	mg/kg
Hexachlorobenzene	0.0067	0.1	mg/kg
Hexachlorobutadiene	0.0067	0.1	mg/kg
Hexachlorocyclopentadiene	0.015	0.1	mg/kg
Hexachloroethane	0.0067	0.1	mg/kg
Indeno[1,2,3-cd]pyrene	0.0069	0.1	mg/kg
Isophorone	0.0067	0.1	mg/kg
2-Methylnaphthalene	0.0067	0.1	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-B2

Analyte	MDL	PQL	Units
Naphthalene	0.0067	0.1	mg/kg
2-Naphthylamine	0.036	3	mg/kg
2-Nitroaniline	0.0067	0.1	mg/kg
3-Nitroaniline	0.0067	0.2	mg/kg
4-Nitroaniline	0.011	0.2	mg/kg
Nitrobenzene	0.0067	0.1	mg/kg
N-Nitrosodimethylamine	0.04	0.1	mg/kg
N-Nitrosodi-N-propylamine	0.0067	0.1	mg/kg
N-Nitrosodiphenylamine	0.0067	0.1	mg/kg
Phenanthrene	0.0067	0.1	mg/kg
Pyrene	0.0067	0.1	mg/kg
1,2,4-Trichlorobenzene	0.0067	0.1	mg/kg
4-Chloro-3-methylphenol	0.0067	0.2	mg/kg
2-Chlorophenol	0.0067	0.1	mg/kg
2,4-Dichlorophenol	0.0067	0.1	mg/kg
2,4-Dimethylphenol	0.0067	0.1	mg/kg
4,6-Dinitro-2-methylphenol	0.0067	0.5	mg/kg
2,4-Dinitrophenol	0.0067	0.5	mg/kg
2-Methylphenol	0.0067	0.1	mg/kg
3- & 4-Methylphenol	0.014	0.2	mg/kg
2-Nitrophenol	0.0067	0.1	mg/kg
4-Nitrophenol	0.018	0.2	mg/kg
Pentachlorophenol	0.017	0.2	mg/kg
Phenol	0.0067	0.1	mg/kg
2,4,5-Trichlorophenol	0.011	0.2	mg/kg
2,4,6-Trichlorophenol	0.0067	0.2	mg/kg

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: 02DEC044.D
Sampled: 11/23/20 14:25
Prepared: 12/01/20 09:30
Analyzed: 12/03/20 04:45
Solids:
Preparation: EPA 3550B
Initial/Final: 1.6 g / 0.96 ml
Batch: B094056
Sequence: 2021592
Calibration: 2103032
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
83-32-9	Acenaphthene	360	2.4	UD
208-96-8	Acenaphthylene	360	2.4	UD
309-00-2	Aldrin	360	2.4	UD
62-53-3	Aniline	360	4.0	UD
120-12-7	Anthracene	360	2.4	UD
92-87-5	Benzidine	360	3.3	UD
56-55-3	Benzo[a]anthracene	360	2.8	UD
205-99-2	Benzo[b]fluoranthene	360	2.4	UD
207-08-9	Benzo[k]fluoranthene	360	3.0	UD
50-32-8	Benzo[a]pyrene	360	2.4	UD
191-24-2	Benzo[g,h,i]perylene	360	4.7	UD
65-85-0	Benzoic acid	360	5.0	UD
100-51-6	Benzyl alcohol	360	2.4	UD
85-68-7	Benzyl butyl phthalate	360	2.4	UD
319-84-6	alpha-BHC	360	2.4	UD
319-85-7	beta-BHC	360	2.7	UD
319-86-8	delta-BHC	360	2.4	UD
58-89-9	gamma-BHC (Lindane)	360	2.4	UD
111-91-1	bis(2-Chloroethoxy)methane	360	2.4	UD
111-44-4	bis(2-Chloroethyl) ether	360	3.5	UD
39638-32-9	bis(2-Chloroisopropyl)ether	360	2.4	UD
117-81-7	bis(2-Ethylhexyl)phthalate	360	2.4	UD
101-55-3	4-Bromophenyl phenyl ether	360	2.4	UD
106-47-8	4-Chloroaniline	360	5.4	UD
91-58-7	2-Chloronaphthalene	360	2.4	UD
7005-72-3	4-Chlorophenyl phenyl ether	360	2.4	UD
218-01-9	Chrysene	360	2.4	UD
72-54-8	4,4'-DDD	360	2.4	UD
72-55-9	4,4'-DDE	360	2.4	UD
50-29-3	4,4'-DDT	360	2.4	UD
53-70-3	Dibenzo[a,h]anthracene	360	2.4	UD
132-64-9	Dibenzofuran	360	2.4	UD

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: 02DEC044.D
Sampled: 11/23/20 14:25
Prepared: 12/01/20 09:30
Analyzed: 12/03/20 04:45
Solids:
Preparation: EPA 3550B
Initial/Final: 1.6 g / 0.96 ml
Batch: B094056
Sequence: 2021592
Calibration: 2103032
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
95-50-1	1,2-Dichlorobenzene	360	2.4	UD
541-73-1	1,3-Dichlorobenzene	360	2.4	UD
106-46-7	1,4-Dichlorobenzene	360	2.4	UD
91-94-1	3,3-Dichlorobenzidine	360	2.4	UD
60-57-1	Dieldrin	360	2.8	UD
84-66-2	Diethyl phthalate	360	2.4	UD
131-11-3	Dimethyl phthalate	360	2.4	UD
84-74-2	Di-n-butyl phthalate	360	2.4	UD
121-14-2	2,4-Dinitrotoluene	360	3.1	UD
606-20-2	2,6-Dinitrotoluene	360	2.4	UD
117-84-0	Di-n-octyl phthalate	360	2.4	UD
122-66-7	1,2-Diphenylhydrazine	360	2.4	UD
959-98-8	Endosulfan I	360	3.2	UD
33213-65-9	Endosulfan II	360	3.2	UD
1031-07-8	Endosulfan sulfate	360	2.4	UD
72-20-8	Endrin	360	3.1	UD
7421-93-4	Endrin aldehyde	360	2.5	UD
206-44-0	Fluoranthene	360	2.4	UD
86-73-7	Fluorene	360	2.4	UD
76-44-8	Heptachlor	360	2.4	UD
1024-57-3	Heptachlor epoxide	360	4.7	UD
118-74-1	Hexachlorobenzene	360	2.4	UD
87-68-3	Hexachlorobutadiene	360	2.4	UD
77-47-4	Hexachlorocyclopentadiene	360	5.4	UD
67-72-1	Hexachloroethane	360	2.4	UD
193-39-5	Indeno[1,2,3-cd]pyrene	360	2.5	UD
78-59-1	Isophorone	360	2.4	UD
91-57-6	2-Methylnaphthalene	360	2.4	UD
91-20-3	Naphthalene	360	2.4	UD
91-59-8	2-Naphthylamine	360	13	UD
88-74-4	2-Nitroaniline	360	2.4	UD
99-09-2	3-Nitroaniline	360	2.4	UD

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-35-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-01	File ID:	02DEC044.D
Sampled:	11/23/20 14:25	Prepared:	12/01/20 09:30	Analyzed:	12/03/20 04:45
Solids:		Preparation:	EPA 3550B	Initial/Final:	1.6 g / 0.96 ml
Batch:	B094056	Sequence:	2021592	Calibration:	2103032
Instrument:	MS-B2				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
100-01-6	4-Nitroaniline	360	4.0	UD
98-95-3	Nitrobenzene	360	2.4	UD
62-75-9	N-Nitrosodimethylamine	360	14	UD
621-64-7	N-Nitrosodi-N-propylamine	360	2.4	UD
86-30-6	N-Nitrosodiphenylamine	360	2.4	UD
85-01-8	Phenanthrene	360	2.4	UD
129-00-0	Pyrene	360	2.4	UD
120-82-1	1,2,4-Trichlorobenzene	360	2.4	UD
59-50-7	4-Chloro-3-methylphenol	360	2.4	UD
95-57-8	2-Chlorophenol	360	2.4	UD
120-83-2	2,4-Dichlorophenol	360	2.4	UD
105-67-9	2,4-Dimethylphenol	360	2.4	UD
534-52-1	4,6-Dinitro-2-methylphenol	360	2.4	UD
51-28-5	2,4-Dinitrophenol	360	2.4	UD
95-48-7	2-Methylphenol	360	2.4	UD
15831-10-4	3- & 4-Methylphenol	360	5.0	UD
88-75-5	2-Nitrophenol	360	2.4	UD
100-02-7	4-Nitrophenol	360	6.5	UD
87-86-5	Pentachlorophenol	360	6.1	UD
108-95-2	Phenol	360	2.4	UD
95-95-4	2,4,5-Trichlorophenol	360	4.0	UD
88-06-2	2,4,6-Trichlorophenol	360	2.4	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	25.000	17.760	71.0	20 - 130	
Phenol-d5 (Surrogate)	25.000	19.680	78.7	30 - 130	
Nitrobenzene-d5 (Surrogate)	25.000	20.640	82.6	30 - 130	
2-Fluorobiphenyl (Surrogate)	25.000	22.800	91.2	30 - 140	
2,4,6-Tribromophenol (Surrogate)	25.000	55.800	223	20 - 150	*
p-Terphenyl-d14 (Surrogate)	12.500	9.7200	77.8	30 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	961117	10.09	697575	10.27	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-35-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-01	File ID:	02DEC044.D
Sampled:	11/23/20 14:25	Prepared:	12/01/20 09:30	Analyzed:	12/03/20 04:45
Solids:		Preparation:	EPA 3550B	Initial/Final:	1.6 g / 0.96 ml
Batch:	B094056	Sequence:	2021592	Calibration:	2103032
Instrument:	MS-B2				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Chrysene-d12 (IS)	604512	13.63	450915	13.95	
Acenaphthene-d10 (IS)	657548	8.63	498937	8.79	
1,4-Dichlorobenzene-d4 (IS)	426666	5.6	305728	5.83	
Perylene-d12 (IS)	461907	15.8	463812	16	
Naphthalene-d8 (IS)	1420039	6.9	1080958	7.07	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 02DEC045.D
Sampled: 11/23/20 14:48
Prepared: 12/01/20 09:30
Analyzed: 12/03/20 05:11
Solids:
Preparation: EPA 3550B
Initial/Final: 29.9 g / 0.97 ml
Batch: B094056
Sequence: 2021592
Calibration: 2103032
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
83-32-9	Acenaphthene	9.73	0.067	UD
208-96-8	Acenaphthylene	9.73	0.067	UD
309-00-2	Aldrin	9.73	0.067	UD
62-53-3	Aniline	9.73	0.11	UD
120-12-7	Anthracene	9.73	0.067	UD
92-87-5	Benzidine	9.73	0.093	UD
56-55-3	Benzo[a]anthracene	9.73	0.077	UD
205-99-2	Benzo[b]fluoranthene	9.73	0.067	UD
207-08-9	Benzo[k]fluoranthene	9.73	0.082	UD
50-32-8	Benzo[a]pyrene	9.73	0.067	UD
191-24-2	Benzo[g,h,i]perylene	9.73	0.13	UD
65-85-0	Benzoic acid	9.73	0.14	UD
100-51-6	Benzyl alcohol	9.73	0.067	UD
85-68-7	Benzyl butyl phthalate	9.73	0.067	UD
319-84-6	alpha-BHC	9.73	0.067	UD
319-85-7	beta-BHC	9.73	0.075	UD
319-86-8	delta-BHC	9.73	0.067	UD
58-89-9	gamma-BHC (Lindane)	9.73	0.067	UD
111-91-1	bis(2-Chloroethoxy)methane	9.73	0.067	UD
111-44-4	bis(2-Chloroethyl) ether	9.73	0.097	UD
39638-32-9	bis(2-Chloroisopropyl)ether	9.73	0.067	UD
117-81-7	bis(2-Ethylhexyl)phthalate	9.73	0.067	UD
101-55-3	4-Bromophenyl phenyl ether	9.73	0.067	UD
106-47-8	4-Chloroaniline	9.73	0.15	UD
91-58-7	2-Chloronaphthalene	9.73	0.067	UD
7005-72-3	4-Chlorophenyl phenyl ether	9.73	0.067	UD
218-01-9	Chrysene	9.73	0.067	UD
72-54-8	4,4'-DDD	9.73	0.067	UD
72-55-9	4,4'-DDE	9.73	0.068	UD
50-29-3	4,4'-DDT	9.73	0.067	UD
53-70-3	Dibenzo[a,h]anthracene	9.73	0.067	UD
132-64-9	Dibenzofuran	9.73	0.067	UD

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 02DEC045.D
Sampled: 11/23/20 14:48
Prepared: 12/01/20 09:30
Analyzed: 12/03/20 05:11
Solids:
Preparation: EPA 3550B
Initial/Final: 29.9 g / 0.97 ml
Batch: B094056
Sequence: 2021592
Calibration: 2103032
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
95-50-1	1,2-Dichlorobenzene	9.73	0.067	UD
541-73-1	1,3-Dichlorobenzene	9.73	0.067	UD
106-46-7	1,4-Dichlorobenzene	9.73	0.067	UD
91-94-1	3,3-Dichlorobenzidine	9.73	0.067	UD
60-57-1	Dieldrin	9.73	0.077	UD
84-66-2	Diethyl phthalate	9.73	0.067	UD
131-11-3	Dimethyl phthalate	9.73	0.067	UD
84-74-2	Di-n-butyl phthalate	9.73	0.067	UD
121-14-2	2,4-Dinitrotoluene	9.73	0.085	UD
606-20-2	2,6-Dinitrotoluene	9.73	0.067	UD
117-84-0	Di-n-octyl phthalate	9.73	0.067	UD
122-66-7	1,2-Diphenylhydrazine	9.73	0.067	UD
959-98-8	Endosulfan I	9.73	0.088	UD
33213-65-9	Endosulfan II	9.73	0.088	UD
1031-07-8	Endosulfan sulfate	9.73	0.067	UD
72-20-8	Endrin	9.73	0.086	UD
7421-93-4	Endrin aldehyde	9.73	0.070	UD
206-44-0	Fluoranthene	9.73	0.067	UD
86-73-7	Fluorene	9.73	0.067	UD
76-44-8	Heptachlor	9.73	0.067	UD
1024-57-3	Heptachlor epoxide	9.73	0.13	UD
118-74-1	Hexachlorobenzene	9.73	0.067	UD
87-68-3	Hexachlorobutadiene	9.73	0.067	UD
77-47-4	Hexachlorocyclopentadiene	9.73	0.15	UD
67-72-1	Hexachloroethane	9.73	0.067	UD
193-39-5	Indeno[1,2,3-cd]pyrene	9.73	0.069	UD
78-59-1	Isophorone	9.73	0.067	UD
91-57-6	2-Methylnaphthalene	9.73	0.067	UD
91-20-3	Naphthalene	9.73	0.067	UD
91-59-8	2-Naphthylamine	9.73	0.36	UD
88-74-4	2-Nitroaniline	9.73	0.067	UD
99-09-2	3-Nitroaniline	9.73	0.067	UD

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 02DEC045.D
Sampled: 11/23/20 14:48
Prepared: 12/01/20 09:30
Analyzed: 12/03/20 05:11
Solids:
Preparation: EPA 3550B
Initial/Final: 29.9 g / 0.97 ml
Batch: B094056
Sequence: 2021592
Calibration: 2103032
Instrument: MS-B2

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
100-01-6	4-Nitroaniline	9.73	0.11	UD
98-95-3	Nitrobenzene	9.73	0.067	UD
62-75-9	N-Nitrosodimethylamine	9.73	0.40	UD
621-64-7	N-Nitrosodi-N-propylamine	9.73	0.067	UD
86-30-6	N-Nitrosodiphenylamine	9.73	0.067	UD
85-01-8	Phenanthrene	9.73	0.067	UD
129-00-0	Pyrene	9.73	0.067	UD
120-82-1	1,2,4-Trichlorobenzene	9.73	0.067	UD
59-50-7	4-Chloro-3-methylphenol	9.73	0.067	UD
95-57-8	2-Chlorophenol	9.73	0.067	UD
120-83-2	2,4-Dichlorophenol	9.73	0.067	UD
105-67-9	2,4-Dimethylphenol	9.73	0.067	UD
534-52-1	4,6-Dinitro-2-methylphenol	9.73	0.067	UD
51-28-5	2,4-Dinitrophenol	9.73	0.067	UD
95-48-7	2-Methylphenol	9.73	0.067	UD
15831-10-4	3- & 4-Methylphenol	9.73	0.14	UD
88-75-5	2-Nitrophenol	9.73	0.067	UD
100-02-7	4-Nitrophenol	9.73	0.18	UD
87-86-5	Pentachlorophenol	9.73	0.17	UD
108-95-2	Phenol	9.73	0.067	UD
95-95-4	2,4,5-Trichlorophenol	9.73	0.11	UD
88-06-2	2,4,6-Trichlorophenol	9.73	0.067	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	1.3378	1.0641	79.5	20 - 130	
Phenol-d5 (Surrogate)	1.3378	1.0803	80.8	30 - 130	
Nitrobenzene-d5 (Surrogate)	1.3378	1.0316	77.1	30 - 130	
2-Fluorobiphenyl (Surrogate)	1.3378	0.97649	73.0	30 - 140	
2,4,6-Tribromophenol (Surrogate)	1.3378	2.0633	154	20 - 150	*
p-Terphenyl-d14 (Surrogate)	0.66890	0.36010	53.8	30 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	916651	10.09	697575	10.27	

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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8270C

VW-31-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-02	File ID:	02DEC045.D
Sampled:	11/23/20 14:48	Prepared:	12/01/20 09:30	Analyzed:	12/03/20 05:11
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.9 g / 0.97 ml
Batch:	B094056	Sequence:	2021592	Calibration:	2103032
Instrument:	MS-B2				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Chrysene-d12 (IS)	560598	13.63	450915	13.95	
Acenaphthene-d10 (IS)	633163	8.63	498937	8.79	
1,4-Dichlorobenzene-d4 (IS)	427463	5.59	305728	5.83	
Perylene-d12 (IS)	519923	15.8	463812	16	
Naphthalene-d8 (IS)	1416326	6.9	1080958	7.07	

* Values outside of QC limits

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B094056 Batch Matrix: Solids
Preparation: EPA 3550B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	02DEC044.D	12/01/20 09:30	
VW-31-2	2034585-02	02DEC045.D	12/01/20 09:30	
Blank	B094056-BLK1	01DEC005.D	12/01/20 09:30	
LCS	B094056-BS1	01DEC006.D	12/01/20 09:30	
Matrix Spike	B094056-MS1	01DEC025.D	12/01/20 09:30	
Matrix Spike Dup	B094056-MSD1	01DEC026.D	12/01/20 09:30	

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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094056-BLK1	File ID:	01DEC005.D
Prepared:	12/01/20 09:30	Preparation:	EPA 3550B	Initial/Final:	30 g / 1 ml
Analyzed:	12/01/20 14:20	Instrument:	MS-B2		
Batch:	B094056	Sequence:	2021422	Calibration:	2103032

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
83-32-9	Acenaphthene	0.0067	U
208-96-8	Acenaphthylene	0.0067	U
309-00-2	Aldrin	0.0067	U
62-53-3	Aniline	0.011	U
120-12-7	Anthracene	0.0067	U
92-87-5	Benzidine	0.0093	U
56-55-3	Benzo[a]anthracene	0.0077	U
205-99-2	Benzo[b]fluoranthene	0.0067	U
207-08-9	Benzo[k]fluoranthene	0.0082	U
50-32-8	Benzo[a]pyrene	0.0067	U
191-24-2	Benzo[g,h,i]perylene	0.013	U
65-85-0	Benzoic acid	0.014	U
100-51-6	Benzyl alcohol	0.0067	U
85-68-7	Benzyl butyl phthalate	0.0067	U
319-84-6	alpha-BHC	0.0067	U
319-85-7	beta-BHC	0.0075	U
319-86-8	delta-BHC	0.0067	U
58-89-9	gamma-BHC (Lindane)	0.0067	U
111-91-1	bis(2-Chloroethoxy)methane	0.0067	U
111-44-4	bis(2-Chloroethyl) ether	0.0097	U
39638-32-9	bis(2-Chloroisopropyl)ether	0.0067	U
117-81-7	bis(2-Ethylhexyl)phthalate	0.0067	U
101-55-3	4-Bromophenyl phenyl ether	0.0067	U
106-47-8	4-Chloroaniline	0.015	U

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094056-BLK1	File ID:	01DEC005.D
Prepared:	12/01/20 09:30	Preparation:	EPA 3550B	Initial/Final:	30 g / 1 ml
Analyzed:	12/01/20 14:20	Instrument:	MS-B2		
Batch:	B094056	Sequence:	2021422	Calibration:	2103032

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
91-58-7	2-Chloronaphthalene	0.0067	U
7005-72-3	4-Chlorophenyl phenyl ether	0.0067	U
218-01-9	Chrysene	0.0067	U
72-54-8	4,4'-DDD	0.0067	U
72-55-9	4,4'-DDE	0.0068	U
50-29-3	4,4'-DDT	0.0067	U
53-70-3	Dibenzo[a,h]anthracene	0.0067	U
132-64-9	Dibenzofuran	0.0067	U
95-50-1	1,2-Dichlorobenzene	0.0067	U
541-73-1	1,3-Dichlorobenzene	0.0067	U
106-46-7	1,4-Dichlorobenzene	0.0067	U
91-94-1	3,3-Dichlorobenzidine	0.0067	U
60-57-1	Dieldrin	0.0077	U
84-66-2	Diethyl phthalate	0.0067	U
131-11-3	Dimethyl phthalate	0.0067	U
84-74-2	Di-n-butyl phthalate	0.0067	U
121-14-2	2,4-Dinitrotoluene	0.0085	U
606-20-2	2,6-Dinitrotoluene	0.0067	U
117-84-0	Di-n-octyl phthalate	0.0067	U
122-66-7	1,2-Diphenylhydrazine	0.0067	U
959-98-8	Endosulfan I	0.0088	U
33213-65-9	Endosulfan II	0.0088	U
1031-07-8	Endosulfan sulfate	0.0067	U
72-20-8	Endrin	0.0086	U

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094056-BLK1	File ID:	01DEC005.D
Prepared:	12/01/20 09:30	Preparation:	EPA 3550B	Initial/Final:	30 g / 1 ml
Analyzed:	12/01/20 14:20	Instrument:	MS-B2		
Batch:	B094056	Sequence:	2021422	Calibration:	2103032

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7421-93-4	Endrin aldehyde	0.0070	U
206-44-0	Fluoranthene	0.0067	U
86-73-7	Fluorene	0.0067	U
76-44-8	Heptachlor	0.0067	U
1024-57-3	Heptachlor epoxide	0.013	U
118-74-1	Hexachlorobenzene	0.0067	U
87-68-3	Hexachlorobutadiene	0.0067	U
77-47-4	Hexachlorocyclopentadiene	0.015	U
67-72-1	Hexachloroethane	0.0067	U
193-39-5	Indeno[1,2,3-cd]pyrene	0.0069	U
78-59-1	Isophorone	0.0067	U
91-57-6	2-Methylnaphthalene	0.0067	U
91-20-3	Naphthalene	0.0067	U
91-59-8	2-Naphthylamine	0.036	U
88-74-4	2-Nitroaniline	0.0067	U
99-09-2	3-Nitroaniline	0.0067	U
100-01-6	4-Nitroaniline	0.011	U
98-95-3	Nitrobenzene	0.0067	U
62-75-9	N-Nitrosodimethylamine	0.040	U
621-64-7	N-Nitrosodi-N-propylamine	0.0067	U
86-30-6	N-Nitrosodiphenylamine	0.0067	U
85-01-8	Phenanthrene	0.0067	U
129-00-0	Pyrene	0.0067	U
120-82-1	1,2,4-Trichlorobenzene	0.0067	U

SMUD - Kleinfelder
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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094056-BLK1	File ID:	01DEC005.D
Prepared:	12/01/20 09:30	Preparation:	EPA 3550B	Initial/Final:	30 g / 1 ml
Analyzed:	12/01/20 14:20	Instrument:	MS-B2		
Batch:	B094056	Sequence:	2021422	Calibration:	2103032

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
59-50-7	4-Chloro-3-methylphenol	0.0067	U
95-57-8	2-Chlorophenol	0.0067	U
120-83-2	2,4-Dichlorophenol	0.0067	U
105-67-9	2,4-Dimethylphenol	0.0067	U
534-52-1	4,6-Dinitro-2-methylphenol	0.0067	U
51-28-5	2,4-Dinitrophenol	0.0067	U
95-48-7	2-Methylphenol	0.0067	U
15831-10-4	3- & 4-Methylphenol	0.014	U
88-75-5	2-Nitrophenol	0.0067	U
100-02-7	4-Nitrophenol	0.018	U
87-86-5	Pentachlorophenol	0.017	U
108-95-2	Phenol	0.0067	U
95-95-4	2,4,5-Trichlorophenol	0.011	U
88-06-2	2,4,6-Trichlorophenol	0.0067	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
2-Fluorophenol (Surrogate)	1.3333	1.1030	82.7	20 - 130	
Phenol-d5 (Surrogate)	1.3333	1.0760	80.7	30 - 130	
Nitrobenzene-d5 (Surrogate)	1.3333	1.0953	82.1	30 - 130	
2-Fluorobiphenyl (Surrogate)	1.3333	1.1660	87.5	30 - 140	
2,4,6-Tribromophenol (Surrogate)	1.3333	1.4897	112	20 - 150	
p-Terphenyl-d14 (Surrogate)	0.66667	0.46633	69.9	30 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Phenanthrene-d10 (IS)	476186	10.12	697575	10.27	

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8270C

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	B094056-BLK1	File ID:	01DEC005.D
Prepared:	12/01/20 09:30	Preparation:	EPA 3550B	Initial/Final:	30 g / 1 ml
Analyzed:	12/01/20 14:20	Instrument:	MS-B2		
Batch:	B094056	Sequence:	2021422	Calibration:	2103032

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Chrysene-d12 (IS)	364050	13.7	450915	13.95	
Acenaphthene-d10 (IS)	356430	8.67	498937	8.79	
1,4-Dichlorobenzene-d4 (IS)	265027	5.69	305728	5.83	
Perylene-d12 (IS)	384741	15.84	463812	16	
Naphthalene-d8 (IS)	860015	6.95	1080958	7.07	

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094056
Preparation: EPA 3550B
Source Sample Number: 2034773-06

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094056-MS1
Initial/Final: 29.7 g / 1 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Acenaphthene	1.6835	ND	0.93906	55.8	30 - 140
1,4-Dichlorobenzene	1.6835	ND	1.0519	62.5	50 - 130
2,4-Dinitrotoluene	1.6835	ND	1.3933	82.8	50 - 130
Hexachlorobenzene	1.6835	ND	0.90875	54.0	50 - 130
Hexachlorobutadiene	1.6835	ND	0.86296	51.3	50 - 130
Hexachloroethane	1.6835	ND	0.98485	58.5	50 - 130
Nitrobenzene	1.6835	ND	1.4535	86.3	30 - 120
N-Nitrosodi-N-propylamine	1.6835	ND	1.0636	63.2	20 - 130
Pyrene	1.6835	ND	0.94141	55.9	40 - 140
1,2,4-Trichlorobenzene	1.6835	ND	1.0801	64.2	50 - 130
4-Chloro-3-methylphenol	1.6835	ND	1.4438	85.8	50 - 130
2-Chlorophenol	1.6835	ND	1.2545	74.5	50 - 130
2-Methylphenol	1.6835	ND	1.2808	76.1	50 - 130
3- & 4-Methylphenol	3.3670	ND	2.5875	76.9	50 - 130
4-Nitrophenol	1.6835	ND	1.9367	115	30 - 140
Pentachlorophenol	1.6835	ND	1.3444	79.9	30 - 130
Phenol	1.6835	ND	1.2582	74.7	40 - 150
2,4,6-Trichlorophenol	1.6835	ND	1.3286	78.9	50 - 130

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.6447	0.95711	58.2	1.90	30	30 - 140
1,4-Dichlorobenzene	1.6447	1.0142	61.7	3.65	30	50 - 130
2,4-Dinitrotoluene	1.6447	1.3855	84.2	0.556	30	50 - 130
Hexachlorobenzene	1.6447	0.93938	57.1	3.31	30	50 - 130

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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8270C

Matrix Spike Dup

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094056
Preparation: EPA 3550B
Source Sample Number: 2034773-06

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094056-MSD1
Initial/Final: 30.4 g / 0.98 ml

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobutadiene	1.6447	0.84267	51.2	2.38	30	50 - 130
Hexachloroethane	1.6447	0.96936	58.9	1.58	30	50 - 130
Nitrobenzene	1.6447	1.3965	84.9	4.00	30	30 - 120
N-Nitrosodi-N-propylamine	1.6447	1.0567	64.2	0.652	30	20 - 130
Pyrene	1.6447	1.0193	62.0	7.95	30	40 - 140
1,2,4-Trichlorobenzene	1.6447	1.0693	65.0	1.01	30	50 - 130
4-Chloro-3-methylphenol	1.6447	1.4245	86.6	1.34	30	50 - 130
2-Chlorophenol	1.6447	1.2150	73.9	3.20	30	50 - 130
2-Methylphenol	1.6447	1.2782	77.7	0.205	30	50 - 130
3- & 4-Methylphenol	3.2895	2.5802	78.4	0.283	30	50 - 130
4-Nitrophenol	1.6447	1.6363	99.5	16.8	30	30 - 140
Pentachlorophenol	1.6447	1.1882	72.2	12.3	30	30 - 130
Phenol	1.6447	1.2411	75.5	1.37	30	40 - 150
2,4,6-Trichlorophenol	1.6447	1.3227	80.4	0.448	30	50 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B094056
Laboratory ID: B094056-BS1
Preparation: EPA 3550B
Initial/Final: 30.1 g / 0.95 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Acenaphthene	1.6611	1.2672	76.3	50 - 130
1,4-Dichlorobenzene	1.6611	1.2871	77.5	50 - 130
2,4-Dinitrotoluene	1.6611	1.6137	97.1	50 - 130
Hexachlorobenzene	1.6611	1.4995	90.3	40 - 130
Hexachlorobutadiene	1.6611	1.1747	70.7	50 - 130
Hexachloroethane	1.6611	1.3672	82.3	50 - 130
Nitrobenzene	1.6611	1.4872	89.5	50 - 130
N-Nitrosodi-N-propylamine	1.6611	1.1248	67.7	40 - 120
Pyrene	1.6611	1.2347	74.3	40 - 150
1,2,4-Trichlorobenzene	1.6611	1.3994	84.2	50 - 120
4-Chloro-3-methylphenol	1.6611	1.4020	84.4	50 - 130
2-Chlorophenol	1.6611	1.2019	72.4	50 - 130
2-Methylphenol	1.6611	1.2694	76.4	50 - 130
3- & 4-Methylphenol	3.3223	2.5508	76.8	50 - 130
4-Nitrophenol	1.6611	1.4502	87.3	30 - 130
Pentachlorophenol	1.6611	0.96231	57.9	20 - 130
Phenol	1.6611	1.1753	70.8	40 - 120
2,4,6-Trichlorophenol	1.6611	1.2012	72.3	50 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2021422	Instrument:	MS-B2
Matrix:	Solids	Calibration:	2103032

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2021422-TUN1	01DEC002.D	12/01/20 11:55
Calibration Check	2021422-CCV1	01DEC003.D	12/01/20 13:11
Calibration Blank	2021422-CCB1	01DEC004.D	12/01/20 13:55
Blank	B094056-BLK1	01DEC005.D	12/01/20 14:20
LCS	B094056-BS1	01DEC006.D	12/01/20 14:46
Matrix Spike	B094056-MS1	01DEC025.D	12/01/20 22:55
Matrix Spike Dup	B094056-MSD1	01DEC026.D	12/01/20 23:20

SMUD - Kleinfelder
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2021592	Instrument:	MS-B2
Matrix:	Solids	Calibration:	2103032

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2021592-TUN1	02DEC025.D	12/02/20 20:37
Calibration Check	2021592-CCV1	02DEC026.D	12/02/20 21:03
Calibration Blank	2021592-CCB1	02DEC029.D	12/02/20 22:19
VW-35-2	2034585-01	02DEC044.D	12/03/20 04:45
VW-31-2	2034585-02	02DEC045.D	12/03/20 05:11

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2104723	Instrument:	MS-B2
Matrix:	Solids	Calibration:	2103032

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2104723-TUN1	13NOV002.D	11/13/20 21:58
Cal Standard	2104723-CAL4	13NOV003.D	11/13/20 22:50
Cal Standard	2104723-CAL6	13NOV004.D	11/13/20 23:16
Cal Standard	2104723-CAL5	13NOV005.D	11/13/20 23:42
Cal Standard	2104723-CAL3	13NOV006.D	11/14/20 00:07
Cal Standard	2104723-CAL2	13NOV007.D	11/14/20 00:34
Cal Standard	2104723-CAL1	13NOV008.D	11/14/20 01:00
MS Tune	2104723-TUN2	13NOV009.D	11/14/20 01:26
Initial Cal Check	2104723-ICV1	13NOV010.D	11/14/20 01:52
Initial Cal Blank	2104723-ICB1	13NOV011.D	11/14/20 02:18

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	01DEC002.D	Injection Date:	12/01/20
Instrument ID:	MS-B2	Injection Time:	11:55
Sequence:	2021422	Lab Sample ID:	2021422-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	59	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	65.5	PASS
Mass 70	Less than 2% of Mass 69	0.0709	PASS
Mass 127	40 - 60% of Mass 198	44.4	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	7.04	PASS
Mass 275	10 - 30% of Mass 198	24.1	PASS
Mass 365	1 - 100% of Mass 198	2.05	PASS
Mass 441	0.01 - 100% of Mass 443	82.1	PASS
Mass 442	40 - 100% of Mass 198	78.6	PASS
Mass 443	17 - 23% of Mass 442	19.7	PASS

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	02DEC025.D	Injection Date:	12/02/20
Instrument ID:	MS-B2	Injection Time:	20:37
Sequence:	2021592	Lab Sample ID:	2021592-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	57.6	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	65.8	PASS
Mass 70	Less than 2% of Mass 69	0	PASS
Mass 127	40 - 60% of Mass 198	43.8	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	7.1	PASS
Mass 275	10 - 30% of Mass 198	23	PASS
Mass 365	1 - 100% of Mass 198	2.01	PASS
Mass 441	0.01 - 100% of Mass 443	83.6	PASS
Mass 442	40 - 100% of Mass 198	75.9	PASS
Mass 443	17 - 23% of Mass 442	19.7	PASS

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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	13NOV002.D	Injection Date:	11/13/20
Instrument ID:	MS-B2	Injection Time:	21:58
Sequence:	2104723	Lab Sample ID:	2104723-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	58	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	65.7	PASS
Mass 70	Less than 2% of Mass 69	0.506	PASS
Mass 127	40 - 60% of Mass 198	44.4	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	6.73	PASS
Mass 275	10 - 30% of Mass 198	24.6	PASS
Mass 365	1 - 100% of Mass 198	2.37	PASS
Mass 441	0.01 - 100% of Mass 443	82.1	PASS
Mass 442	40 - 100% of Mass 198	93.9	PASS
Mass 443	17 - 23% of Mass 442	20.1	PASS

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8270C

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	13NOV009.D	Injection Date:	11/14/20
Instrument ID:	MS-B2	Injection Time:	01:26
Sequence:	2104723	Lab Sample ID:	2104723-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 51	30 - 60% of Mass 198	54.7	PASS
Mass 68	Less than 2% of Mass 69	0	PASS
Mass 69	Less than 100% of Mass 198	63	PASS
Mass 70	Less than 2% of Mass 69	0.166	PASS
Mass 127	40 - 60% of Mass 198	42.3	PASS
Mass 197	Less than 1% of Mass 198	0	PASS
Mass 198	Base peak, 100% relative abundance	100	PASS
Mass 199	5 - 9% of Mass 198	6.99	PASS
Mass 275	10 - 30% of Mass 198	24.2	PASS
Mass 365	1 - 100% of Mass 198	2.39	PASS
Mass 441	0.01 - 100% of Mass 443	86.5	PASS
Mass 442	40 - 100% of Mass 198	93.6	PASS
Mass 443	17 - 23% of Mass 442	19.3	PASS

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 01DEC003.D
Sequence: 2021422
Lab Sample ID: 2021422-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 12/01/20
Injection Time: 13:11

COMPOUND	(1) CAL TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	50000	50120	1.256567	1.259668		0.2	20
1,4-Dichlorobenzene	A	50000	43800	1.415143	1.239675		-12.4	20
2,4-Dinitrotoluene	A	50000	54980	0.3352096	0.3685853		10.0	20
Hexachlorobenzene	A	50000	45680	0.3166182	0.2892683		-8.6	20
Hexachlorobutadiene	A	50000	45000	0.1992009	0.1792988		-10.0	20
Hexachloroethane	A	50000	48290	0.5237626	0.5058711		-3.4	20
Nitrobenzene	A	50000	48830	0.3093223	0.3020972		-2.3	20
N-Nitrosodi-N-propylamine	A	50000	46590	1.042441	0.9713119	0.05	-6.8	20
Pyrene	A	50000	46170	1.638203	1.512729		-7.7	20
1,2,4-Trichlorobenzene	A	50000	46250	0.3031699	0.2804596		-7.5	20
4-Chloro-3-methylphenol	A	50000	53400	0.2191811	0.2340958		6.8	20
2-Chlorophenol	A	50000	49310	1.32139	1.303071		-1.4	20
2-Methylphenol	A	50000	49220	1.037223	1.021023		-1.6	20
3- & 4-Methylphenol	A	100000	98340	1.189945	1.170171		-1.7	20
4-Nitrophenol	L	50000	66120	6.532785E-02	0.1233429	0.05	32.2	20 *
Pentachlorophenol	L	50000	50490	0.1387972	0.1917143		1.0	20
Phenol	A	50000	48970	1.581124	1.548424		-2.1	20
2,4,6-Trichlorophenol	A	50000	46130	0.4139238	0.4297049		3.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 02DEC026.D
Sequence: 2021592
Lab Sample ID: 2021592-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 12/02/20
Injection Time: 21:03

COMPOUND	(1) CAL TYPE	CONC. (ug/kg) STD	CONC. (ug/kg) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Acenaphthene	A	50000	49760	1.256567	1.2505		-0.5	20	
Acenaphthylene	A	50000	50440	1.879532	1.896159		0.9	20	
Aldrin	A	50000	54070	0.1557318	0.1684027		8.1	20	
Aniline	A	50000	45210	1.489322	1.346709		-9.6	20	
Anthracene	A	50000	51650	1.044862	1.079339		3.3	20	
Benzidine	L	50000	68150	2.644914E-02	3.947101E-02		36.3	20	*
Benzo[a]anthracene	A	50000	44420	1.239966	1.101604		-11.2	20	
Benzo[b]fluoranthene	A	50000	51960	1.026166	1.06639		3.9	20	
Benzo[k]fluoranthene	A	50000	49790	1.033686	1.02937		-0.4	20	
Benzo[a]pyrene	A	50000	52070	0.9082754	0.9459137		4.1	20	
Benzo[g,h,i]perylene	A	50000	35250	0.7678172	0.5412557		-29.5	20	*
Benzoic acid	L	100000	96000	0.1617673	0.2039999		-4.0	20	
Benzyl alcohol	A	50000	57100	0.7110631	0.8120436		14.2	20	
Benzyl butyl phthalate	A	50000	51410	0.7251327	0.7455278		2.8	20	
alpha-BHC	A	50000	48140	0.1628437	0.1567857		-3.7	20	
beta-BHC	A	50000	50960	9.657907E-02	9.843653E-02		1.9	20	
delta-BHC	A	50000	52130	9.972911E-02	0.103981		4.3	20	
gamma-BHC (Lindane)	A	50000	51040	0.1269059	0.1295396		2.1	20	
bis(2-Chloroethoxy)methane	A	50000	48090	0.4316117	0.415154		-3.8	20	
bis(2-Chloroethyl) ether	A	50000	46510	1.412717	1.314107		-7.0	20	
bis(2-Chloroisopropyl)ether	A	50000	46310	3.123389	2.892727		-7.4	20	
bis(2-Ethylhexyl)phthalate	A	50000	56340	0.9240091	1.04112		12.7	20	
4-Bromophenyl phenyl ether	A	50000	45940	0.2687079	0.2468637		-8.1	20	

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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 02DEC026.D
Sequence: 2021592
Lab Sample ID: 2021592-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 12/02/20
Injection Time: 21:03

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4-Chloroaniline	A	50000	51470	0.3196474	0.3290507		2.9	20
2-Chloronaphthalene	A	50000	49860	1.048596	1.045762		-0.3	20
4-Chlorophenyl phenyl ether	A	50000	50850	0.6402348	0.6510838		1.7	20
Chrysene	A	50000	45820	1.152132	1.055715		-8.4	20
4,4'-DDD	A	50000	47870	0.5632911	0.5393456		-4.3	20
4,4'-DDE	A	50000	47650	0.3005811	0.2864609		-4.7	20
4,4'-DDT	A	50000	50630	0.4328174	0.4382379		1.3	20
Dibenzo[a,h]anthracene	A	50000	43200	0.7855185	0.6786298		-13.6	20
Dibenzofuran	A	50000	50970	1.349468	1.3756		1.9	20
1,2-Dichlorobenzene	A	50000	48100	1.235074	1.188056		-3.8	20
1,3-Dichlorobenzene	A	50000	48310	1.300537	1.256557		-3.4	20
1,4-Dichlorobenzene	A	50000	45450	1.415143	1.286372		-9.1	20
3,3-Dichlorobenzidine	L	50000	46830	0.3868055	0.4078132		-6.3	20
Dieldrin	A	50000	47600	0.2652908	0.2525526		-4.8	20
Diethyl phthalate	A	50000	51720	1.333753	1.379557		3.4	20
Dimethyl phthalate	A	50000	49550	1.526362	1.512584		-0.9	20
Di-n-butyl phthalate	A	50000	56270	1.265104	1.423803		12.5	20
2,4-Dinitrotoluene	A	50000	54550	0.3352096	0.3656891		9.1	20
2,6-Dinitrotoluene	A	50000	51450	0.2914635	0.2999339		2.9	20
Di-n-octyl phthalate	A	50000	57210	1.290859	1.47696		14.4	20
1,2-Diphenylhydrazine	A	50000	51320	1.280563	1.314405		2.6	20
Endosulfan I	L	50000	52070	4.635237E-02	4.226813E-02		4.1	20
Endosulfan II	A	50000	47160	4.789292E-02	4.517733E-02		-5.7	20

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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 02DEC026.D
Sequence: 2021592
Lab Sample ID: 2021592-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 12/02/20
Injection Time: 21:03

COMPOUND	(1) CAL TYPE	CONC. (ug/kg) STD	CONC. (ug/kg) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Endosulfan sulfate	A	50000	45310	0.1025089	9.289895E-02		-9.4	20	
Endrin	A	50000	52870	7.400321E-02	0.0782532		5.7	20	
Endrin aldehyde	A	50000	49340	0.1245746	0.1229359		-1.3	20	
Fluoranthene	A	50000	53670	0.8745243	0.93874		7.3	20	
Fluorene	A	50000	54140	1.273042	1.378406		8.3	20	
Heptachlor	A	50000	57630	0.1372024	0.1581443		15.3	20	
Heptachlor epoxide	A	50000	51360	7.846489E-02	8.059758E-02		2.7	20	
Hexachlorobenzene	A	50000	44420	0.3166182	0.2812966		-11.2	20	
Hexachlorobutadiene	A	50000	45720	0.1992009	0.1821601		-8.6	20	
Hexachlorocyclopentadiene	L	50000	41210	0.2568356	0.2468964	0.05	-17.6	20	
Hexachloroethane	A	50000	47960	0.5237626	0.5023889		-4.1	20	
Indeno[1,2,3-cd]pyrene	A	50000	40440	0.9426836	0.7625274		-19.1	20	
Isophorone	A	50000	48050	0.6504416	0.6250632		-3.9	20	
2-Methylnaphthalene	A	50000	50620	0.5056658	0.5119153		1.2	20	
Naphthalene	A	50000	48530	0.9657515	0.9373525		-2.9	20	
2-Naphthylamine	A	50000	21760	0.144856	6.302727E-02		-56.5	20	*
2-Nitroaniline	A	50000	55100	0.3848039	0.4240383		10.2	20	
3-Nitroaniline	A	50000	59610	0.2357157	0.2810135		19.2	20	
4-Nitroaniline	L	50000	54000	0.2049367	0.2441727		8.0	20	
Nitrobenzene	A	50000	50490	0.3093223	0.3123545		1.0	20	
N-Nitrosodimethylamine	A	50000	50890	0.9737335	0.9911059		1.8	20	
N-Nitrosodi-N-propylamine	A	50000	47600	1.042441	0.9923952	0.05	-4.8	20	
N-Nitrosodiphenylamine	A	50000	54220	0.8279313	0.8978444		8.4	20	

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 02DEC026.D
Sequence: 2021592
Lab Sample ID: 2021592-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 12/02/20
Injection Time: 21:03

COMPOUND	(1) CAL TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Phenanthrene	A	50000	50790	1.080307	1.097379		1.6	20
Pyrene	A	50000	44740	1.638203	1.465714		-10.5	20
1,2,4-Trichlorobenzene	A	50000	47760	0.3031699	0.2895708		-4.5	20
4-Chloro-3-methylphenol	A	50000	56220	0.2191811	0.2464421		12.4	20
2-Chlorophenol	A	50000	50440	1.32139	1.333071		0.9	20
2,4-Dichlorophenol	A	50000	52600	0.2875543	0.3024827		5.2	20
2,4-Dimethylphenol	A	50000	51240	0.3135891	0.3213556		2.5	20
4,6-Dinitro-2-methylphenol	L	50000	40650	0.1924516	0.2057593		-18.7	20
2,4-Dinitrophenol	Q	50000	44510	0.1618283	0.1726575	0.05	-11.0	20
2-Methylphenol	A	50000	48660	1.037223	1.009511		-2.7	20
3- & 4-Methylphenol	A	100000	101410	1.189945	1.206775		1.4	20
2-Nitrophenol	A	50000	51100	0.2042112	0.2086949		2.2	20
4-Nitrophenol	L	50000	54560	6.532785E-02	9.989217E-02	0.05	9.1	20
Pentachlorophenol	L	50000	43890	0.1387972	0.1634285		-12.2	20
Phenol	A	50000	51390	1.581124	1.625145		2.8	20
2,4,5-Trichlorophenol	L	50000	50980	0.3888809	0.4572857		2.0	20
2,4,6-Trichlorophenol	A	50000	47430	0.4139238	0.4427352		7.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 13NOV010.D
Sequence: 2104723
Lab Sample ID: 2104723-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 11/14/20
Injection Time: 01:52

COMPOUND	(1) CAL TYPE	CONC. (ug/kg) STD	CONC. (ug/kg) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
Acenaphthene	A	50000	49230	1.256567	1.237244		-1.5	20
Acenaphthylene	A	50000	50080	1.879532	1.882691		0.2	20
Aldrin	A	50000	48070	0.1557318	0.1497323		-3.9	20
Aniline	A	50000	49020	1.489322	1.46012		-2.0	20
Anthracene	A	50000	50280	1.044862	1.050786		0.6	20
Benzidine	L	50000	41050	2.644914E-02	0.0237344		-17.9	20
Benzo[a]anthracene	A	50000	48620	1.239966	1.205785		-2.8	20
Benzo[b]fluoranthene	A	50000	47410	1.026166	0.9731005		-5.2	20
Benzo[k]fluoranthene	A	50000	50630	1.033686	1.046796		1.3	20
Benzo[a]pyrene	A	50000	49660	0.9082754	0.9021517		-0.7	20
Benzo[g,h,i]perylene	A	50000	43720	0.7678172	0.6713631		-12.6	20
Benzoic acid	L	100000	92100	0.1617673	0.1946895		-7.9	20
Benzyl alcohol	A	50000	53390	0.7110631	0.7592461		6.8	20
Benzyl butyl phthalate	A	50000	49110	0.7251327	0.712166		-1.8	20
alpha-BHC	A	50000	48860	0.1628437	0.1591185		-2.3	20
beta-BHC	A	50000	49090	9.657907E-02	0.0948262		-1.8	20
delta-BHC	A	50000	48810	9.972911E-02	9.735303E-02		-2.4	20
gamma-BHC (Lindane)	A	50000	48650	0.1269059	0.1234833		-2.7	20
bis(2-Chloroethoxy)methane	A	50000	49450	0.4316117	0.4268655		-1.1	20
bis(2-Chloroethyl) ether	A	50000	48050	1.412717	1.357673		-3.9	20
bis(2-Chloroisopropyl)ether	A	50000	48770	3.123389	3.046366		-2.5	20
bis(2-Ethylhexyl)phthalate	A	50000	49550	0.9240091	0.9156786		-0.9	20
4-Bromophenyl phenyl ether	A	50000	49300	0.2687079	0.2649654		-1.4	20

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 13NOV010.D
Sequence: 2104723
Lab Sample ID: 2104723-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 11/14/20
Injection Time: 01:52

COMPOUND	(1) CAL TYPE	CONC. (ug/kg) STD	CONC. (ug/kg) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)
4-Chloroaniline	A	50000	50160	0.3196474	0.3206406		0.3	20
2-Chloronaphthalene	A	50000	49500	1.048596	1.038158		-1.0	20
4-Chlorophenyl phenyl ether	A	50000	50940	0.6402348	0.6523067		1.9	20
Chrysene	A	50000	49430	1.152132	1.138899		-1.1	20
4,4'-DDD	A	50000	46760	0.5632911	0.5268155		-6.5	20
4,4'-DDE	A	50000	49490	0.3005811	0.2975141		-1.0	20
4,4'-DDT	A	50000	52840	0.4328174	0.4573626		5.7	20
Dibenzo[a,h]anthracene	A	50000	45930	0.7855185	0.7215556		-8.1	20
Dibenzofuran	A	50000	50170	1.349468	1.35414		0.3	20
1,2-Dichlorobenzene	A	50000	49420	1.235074	1.220735		-1.2	20
1,3-Dichlorobenzene	A	50000	50170	1.300537	1.304965		0.3	20
1,4-Dichlorobenzene	A	50000	46490	1.415143	1.315765		-7.0	20
3,3-Dichlorobenzidine	L	50000	46980	0.3868055	0.4091859		-6.0	20
Dieldrin	A	50000	48630	0.2652908	0.2580013		-2.7	20
Diethyl phthalate	A	50000	49550	1.333753	1.321738		-0.9	20
Dimethyl phthalate	A	50000	49770	1.526362	1.519436		-0.5	20
Di-n-butyl phthalate	A	50000	48550	1.265104	1.228403		-2.9	20
2,4-Dinitrotoluene	A	50000	52590	0.3352096	0.3525862		5.2	20
2,6-Dinitrotoluene	A	50000	52320	0.2914635	0.3049979		4.6	20
Di-n-octyl phthalate	A	50000	51360	1.290859	1.325899		2.7	20
1,2-Diphenylhydrazine	A	50000	49560	1.280563	1.269392		-0.9	20
Endosulfan I	L	50000	52730	4.635237E-02	4.278305E-02		5.5	20
Endosulfan II	A	50000	47420	4.789292E-02	4.542626E-02		-5.2	20

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 13NOV010.D
Sequence: 2104723
Lab Sample ID: 2104723-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 11/14/20
Injection Time: 01:52

COMPOUND	(1) CAL TYPE	CONC. (ug/kg) STD	CONC. (ug/kg) CCV	RESPONSE FACTOR ICAL	RESPONSE FACTOR CCV	RESPONSE FACTOR MIN (#)	% DIFF / DRIFT (2) CCV	% DIFF / DRIFT (2) LIMIT (#)	
Endosulfan sulfate	A	50000	50080	0.1025089	0.1026793		0.2	20	
Endrin	A	50000	51250	7.400321E-02	7.585106E-02		2.5	20	
Endrin aldehyde	A	50000	47240	0.1245746	0.1176924		-5.5	20	
Fluoranthene	A	50000	47820	0.8745243	0.8363319		-4.4	20	
Fluorene	A	50000	50940	1.273042	1.296996		1.9	20	
Heptachlor	A	50000	50510	0.1372024	0.1385929		1.0	20	
Heptachlor epoxide	A	50000	48710	7.846489E-02	7.644296E-02		-2.6	20	
Hexachlorobenzene	A	50000	49300	0.3166182	0.3121624		-1.4	20	
Hexachlorobutadiene	A	50000	50080	0.1992009	0.1994998		0.2	20	
Hexachlorocyclopentadiene	L	50000	46410	0.2568356	0.2811824	0.05	-7.2	20	
Hexachloroethane	A	50000	50490	0.5237626	0.528864		1.0	20	
Indeno[1,2,3-cd]pyrene	A	50000	45260	0.9426836	0.8533579		-9.5	20	
Isophorone	A	50000	49220	0.6504416	0.6402682		-1.6	20	
2-Methylnaphthalene	A	50000	49690	0.5056658	0.5024844		-0.6	20	
Naphthalene	A	50000	49470	0.9657515	0.9555377		-1.1	20	
2-Naphthylamine	A	50000	14830	0.144856	4.295126E-02		-70.3	20	*
2-Nitroaniline	A	50000	52710	0.3848039	0.4056307		5.4	20	
3-Nitroaniline	A	50000	52300	0.2357157	0.2465806		4.6	20	
4-Nitroaniline	L	50000	51760	0.2049367	0.2337729		3.5	20	
Nitrobenzene	A	50000	49660	0.3093223	0.3072434		-0.7	20	
N-Nitrosodimethylamine	A	50000	53870	0.9737335	1.049196		7.7	20	
N-Nitrosodi-N-propylamine	A	50000	49650	1.042441	1.035141	0.05	-0.7	20	
N-Nitrosodiphenylamine	A	50000	51720	0.8279313	0.8564572		3.4	20	

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CONTINUING CALIBRATION CHECK

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-B2
Lab File ID: 13NOV010.D
Sequence: 2104723
Lab Sample ID: 2104723-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Calibration Date: 11/13/20 22:50
Injection Date: 11/14/20
Injection Time: 01:52

COMPOUND	(1) CAL TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Phenanthrene	A	50000	48780	1.080307	1.053967		-2.4	20
Pyrene	A	50000	49180	1.638203	1.611186		-1.6	20
1,2,4-Trichlorobenzene	A	50000	49360	0.3031699	0.2993041		-1.3	20
4-Chloro-3-methylphenol	A	50000	53210	0.2191811	0.2332505		6.4	20
2-Chlorophenol	A	50000	50650	1.32139	1.338449		1.3	20
2,4-Dichlorophenol	A	50000	51450	0.2875543	0.2958777		2.9	20
2,4-Dimethylphenol	A	50000	51960	0.3135891	0.3259006		3.9	20
4,6-Dinitro-2-methylphenol	L	50000	46670	0.1924516	0.2412351		-6.7	20
2,4-Dinitrophenol	Q	50000	51280	0.1618283	0.2083822	0.05	2.6	20
2-Methylphenol	A	50000	50160	1.037223	1.040586		0.3	20
3- & 4-Methylphenol	A	100000	100900	1.189945	1.200634		0.9	20
2-Nitrophenol	A	50000	51090	0.2042112	0.2086509		2.2	20
4-Nitrophenol	L	50000	44400	6.532785E-02	7.928664E-02	0.05	-11.2	20
Pentachlorophenol	L	50000	44380	0.1387972	0.1655348		-11.2	20
Phenol	A	50000	50320	1.581124	1.591198		0.6	20
2,4,5-Trichlorophenol	L	50000	47310	0.3888809	0.4223671		-5.4	20
2,4,6-Trichlorophenol	A	50000	46760	0.4139238	0.4360008		5.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021422
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2021422-CCV1)			Lab File ID: 01DEC003.D		Analyzed: 12/01/20 13:11			
2-Fluorophenol (Surrogate)	50000	99.9	80 - 120	4.36	4.556667	-0.1967	+/-1.0	
Phenol-d5 (Surrogate)	50000	99.0	80 - 120	5.33	5.47	-0.1400	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	95.0	80 - 120	6.25	6.378333	-0.1283	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	95.2	80 - 120	8.01	8.118333	-0.1083	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	84.5	80 - 120	9.45	9.568333	-0.1183	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	91.1	80 - 120	11.87	12.03667	-0.1667	+/-1.0	
Calibration Blank (2021422-CCB1)			Lab File ID: 01DEC004.D		Analyzed: 12/01/20 13:55			
2-Fluorophenol (Surrogate)			20 - 130	0	4.556667	-4.5567	+/-1.0	
Phenol-d5 (Surrogate)			30 - 130	0	5.47	-5.4700	+/-1.0	
Nitrobenzene-d5 (Surrogate)			30 - 130	0	6.378333	-6.3783	+/-1.0	
2-Fluorobiphenyl (Surrogate)			30 - 140	0	8.118333	-8.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			20 - 150	0	9.568333	-9.5683	+/-1.0	
p-Terphenyl-d14 (Surrogate)			30 - 150	0	12.03667	-12.0367	+/-1.0	
Blank (B094056-BLK1)			Lab File ID: 01DEC005.D		Analyzed: 12/01/20 14:20			
2-Fluorophenol (Surrogate)	1.3333	82.7	20 - 130	4.38	4.556667	-0.1767	+/-1.0	
Phenol-d5 (Surrogate)	1.3333	80.7	30 - 130	5.33	5.47	-0.1400	+/-1.0	
Nitrobenzene-d5 (Surrogate)	1.3333	82.1	30 - 130	6.24	6.378333	-0.1383	+/-1.0	
2-Fluorobiphenyl (Surrogate)	1.3333	87.5	30 - 140	8	8.118333	-0.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	1.3333	112	20 - 150	9.43	9.568333	-0.1383	+/-1.0	
p-Terphenyl-d14 (Surrogate)	0.66667	69.9	30 - 150	11.86	12.03667	-0.1767	+/-1.0	
LCS (B094056-BS1)			Lab File ID: 01DEC006.D		Analyzed: 12/01/20 14:46			
2-Fluorophenol (Surrogate)	1.3289	71.0	20 - 130	4.39	4.556667	-0.1667	+/-1.0	
Phenol-d5 (Surrogate)	1.3289	73.6	30 - 130	5.34	5.47	-0.1300	+/-1.0	
Nitrobenzene-d5 (Surrogate)	1.3289	73.9	30 - 130	6.25	6.378333	-0.1283	+/-1.0	
2-Fluorobiphenyl (Surrogate)	1.3289	75.5	30 - 140	8	8.118333	-0.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	1.3289	96.7	20 - 150	9.44	9.568333	-0.1283	+/-1.0	
p-Terphenyl-d14 (Surrogate)	0.66445	61.6	30 - 150	11.86	12.03667	-0.1767	+/-1.0	

SMUD - Kleinfelder
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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021422
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Matrix Spike (B094056-MS1)			Lab File ID: 01DEC025.D		Analyzed: 12/01/20 22:55			
2-Fluorophenol (Surrogate)	1.3468	77.4	20 - 130	4.34	4.556667	-0.2167	+/-1.0	
Phenol-d5 (Surrogate)	1.3468	78.7	30 - 130	5.32	5.47	-0.1500	+/-1.0	
Nitrobenzene-d5 (Surrogate)	1.3468	70.6	30 - 130	6.25	6.378333	-0.1283	+/-1.0	
2-Fluorobiphenyl (Surrogate)	1.3468	57.2	30 - 140	7.99	8.118333	-0.1283	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	1.3468	110	20 - 150	9.44	9.568333	-0.1283	+/-1.0	
p-Terphenyl-d14 (Surrogate)	0.67340	48.9	30 - 150	11.86	12.03667	-0.1767	+/-1.0	
Matrix Spike Dup (B094056-MSD1)			Lab File ID: 01DEC026.D		Analyzed: 12/01/20 23:20			
2-Fluorophenol (Surrogate)	1.3158	76.2	20 - 130	4.34	4.556667	-0.2167	+/-1.0	
Phenol-d5 (Surrogate)	1.3158	78.6	30 - 130	5.32	5.47	-0.1500	+/-1.0	
Nitrobenzene-d5 (Surrogate)	1.3158	70.6	30 - 130	6.24	6.378333	-0.1383	+/-1.0	
2-Fluorobiphenyl (Surrogate)	1.3158	58.4	30 - 140	8	8.118333	-0.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	1.3158	109	20 - 150	9.44	9.568333	-0.1283	+/-1.0	
p-Terphenyl-d14 (Surrogate)	0.65789	51.7	30 - 150	11.86	12.03667	-0.1767	+/-1.0	

SMUD - Kleinfelder
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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021592
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2021592-CCV1)			Lab File ID: 02DEC026.D		Analyzed: 12/02/20 21:03			
2-Fluorophenol (Surrogate)	50000	98.1	80 - 120	4.22	4.556667	-0.3367	+/-1.0	
Phenol-d5 (Surrogate)	50000	102	80 - 120	5.25	5.47	-0.2200	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	98.9	80 - 120	6.2	6.378333	-0.1783	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	96.8	80 - 120	7.97	8.118333	-0.1483	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	86.6	80 - 120	9.41	9.568333	-0.1583	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	87.5	80 - 120	11.82	12.03667	-0.2167	+/-1.0	
Calibration Blank (2021592-CCB1)			Lab File ID: 02DEC029.D		Analyzed: 12/02/20 22:19			
2-Fluorophenol (Surrogate)			20 - 130	0	4.556667	-4.5567	+/-1.0	
Phenol-d5 (Surrogate)			30 - 130	0	5.47	-5.4700	+/-1.0	
Nitrobenzene-d5 (Surrogate)			30 - 130	0	6.378333	-6.3783	+/-1.0	
2-Fluorobiphenyl (Surrogate)			30 - 140	0	8.118333	-8.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			20 - 150	0	9.568333	-9.5683	+/-1.0	
p-Terphenyl-d14 (Surrogate)			30 - 150	0	12.03667	-12.0367	+/-1.0	
VW-35-2 (2034585-01)			Lab File ID: 02DEC044.D		Analyzed: 12/03/20 04:45			
2-Fluorophenol (Surrogate)	25.000	71.0	20 - 130	4.17	4.556667	-0.3867	+/-1.0	
Phenol-d5 (Surrogate)	25.000	78.7	30 - 130	5.2	5.47	-0.2700	+/-1.0	
Nitrobenzene-d5 (Surrogate)	25.000	82.6	30 - 130	6.17	6.378333	-0.2083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	25.000	91.2	30 - 140	7.96	8.118333	-0.1583	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	25.000	223	20 - 150	9.4	9.568333	-0.1683	+/-1.0	*
p-Terphenyl-d14 (Surrogate)	12.500	77.8	30 - 150	11.81	12.03667	-0.2267	+/-1.0	
VW-31-2 (2034585-02)			Lab File ID: 02DEC045.D		Analyzed: 12/03/20 05:11			
2-Fluorophenol (Surrogate)	1.3378	79.5	20 - 130	4.18	4.556667	-0.3767	+/-1.0	
Phenol-d5 (Surrogate)	1.3378	80.8	30 - 130	5.2	5.47	-0.2700	+/-1.0	
Nitrobenzene-d5 (Surrogate)	1.3378	77.1	30 - 130	6.18	6.378333	-0.1983	+/-1.0	
2-Fluorobiphenyl (Surrogate)	1.3378	73.0	30 - 140	7.96	8.118333	-0.1583	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	1.3378	154	20 - 150	9.4	9.568333	-0.1683	+/-1.0	*
p-Terphenyl-d14 (Surrogate)	0.66890	53.8	30 - 150	11.81	12.03667	-0.2267	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Sequence: 2104723
Instrument: MS-B2
Matrix: Solids
Calibration: 2103032

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104723-CAL4)			Lab File ID: 13NOV003.D		Analyzed: 11/13/20 22:50			
2-Fluorophenol (Surrogate)	50000	103		4.57	4.556667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	50000	105		5.48	5.47	0.0100	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	94.7		6.38	6.378333	0.0017	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	105		8.12	8.118333	0.0017	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	106		9.57	9.568333	0.0017	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	66.8		12.03	12.03667	-0.0067	+/-1.0	
Cal Standard (2104723-CAL6)			Lab File ID: 13NOV004.D		Analyzed: 11/13/20 23:16			
2-Fluorophenol (Surrogate)	100000	109		4.59	4.556667	0.0333	+/-1.0	
Phenol-d5 (Surrogate)	100000	112		5.5	5.47	0.0300	+/-1.0	
Nitrobenzene-d5 (Surrogate)	100000	102		6.4	6.378333	0.0217	+/-1.0	
2-Fluorobiphenyl (Surrogate)	100000	109		8.13	8.118333	0.0117	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	100000	121		9.58	9.568333	0.0117	+/-1.0	
p-Terphenyl-d14 (Surrogate)	50000	73.2		12.05	12.03667	0.0133	+/-1.0	
Cal Standard (2104723-CAL5)			Lab File ID: 13NOV005.D		Analyzed: 11/13/20 23:42			
2-Fluorophenol (Surrogate)	80000	99.7		4.57	4.556667	0.0133	+/-1.0	
Phenol-d5 (Surrogate)	80000	102		5.49	5.47	0.0200	+/-1.0	
Nitrobenzene-d5 (Surrogate)	80000	92.8		6.39	6.378333	0.0117	+/-1.0	
2-Fluorobiphenyl (Surrogate)	80000	103		8.13	8.118333	0.0117	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	80000	113		9.58	9.568333	0.0117	+/-1.0	
p-Terphenyl-d14 (Surrogate)	40000	72.0		12.05	12.03667	0.0133	+/-1.0	
Cal Standard (2104723-CAL3)			Lab File ID: 13NOV006.D		Analyzed: 11/14/20 00:07			
2-Fluorophenol (Surrogate)	20000	98.2		4.54	4.556667	-0.0167	+/-1.0	
Phenol-d5 (Surrogate)	20000	101		5.45	5.47	-0.0200	+/-1.0	
Nitrobenzene-d5 (Surrogate)	20000	90.2		6.37	6.378333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	20000	104		8.11	8.118333	-0.0083	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	20000	93.0		9.56	9.568333	-0.0083	+/-1.0	
p-Terphenyl-d14 (Surrogate)	10000	80.3		12.03	12.03667	-0.0067	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104723
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104723-CAL2)			Lab File ID: 13NOV007.D		Analyzed: 11/14/20 00:34			
2-Fluorophenol (Surrogate)	10000	95.3		4.54	4.556667	-0.0167	+/-1.0	
Phenol-d5 (Surrogate)	10000	95.5		5.45	5.47	-0.0200	+/-1.0	
Nitrobenzene-d5 (Surrogate)	10000	86.6		6.37	6.378333	-0.0083	+/-1.0	
2-Fluorobiphenyl (Surrogate)	10000	99.4		8.11	8.118333	-0.0083	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	10000	83.3		9.56	9.568333	-0.0083	+/-1.0	
p-Terphenyl-d14 (Surrogate)	5000.0	81.2		12.03	12.03667	-0.0067	+/-1.0	
Cal Standard (2104723-CAL1)			Lab File ID: 13NOV008.D		Analyzed: 11/14/20 01:00			
2-Fluorophenol (Surrogate)	2000.0	99.0		4.53	4.556667	-0.0267	+/-1.0	
Phenol-d5 (Surrogate)	2000.0	98.5		5.45	5.47	-0.0200	+/-1.0	
Nitrobenzene-d5 (Surrogate)	2000.0	92.0		6.36	6.378333	-0.0183	+/-1.0	
2-Fluorobiphenyl (Surrogate)	2000.0	101		8.11	8.118333	-0.0083	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	2000.0	65.0		9.56	9.568333	-0.0083	+/-1.0	
p-Terphenyl-d14 (Surrogate)	1000.0	81.0		12.03	12.03667	-0.0067	+/-1.0	
Initial Cal Check (2104723-ICV1)			Lab File ID: 13NOV010.D		Analyzed: 11/14/20 01:52			
2-Fluorophenol (Surrogate)	50000	101	80 - 120	4.56	4.556667	0.0033	+/-1.0	
Phenol-d5 (Surrogate)	50000	100	80 - 120	5.48	5.47	0.0100	+/-1.0	
Nitrobenzene-d5 (Surrogate)	50000	100	80 - 120	6.38	6.378333	0.0017	+/-1.0	
2-Fluorobiphenyl (Surrogate)	50000	99.4	80 - 120	8.12	8.118333	0.0017	+/-1.0	
2,4,6-Tribromophenol (Surrogate)	50000	95.3	80 - 120	9.57	9.568333	0.0017	+/-1.0	
p-Terphenyl-d14 (Surrogate)	25000	98.8	80 - 120	12.04	12.03667	0.0033	+/-1.0	
Initial Cal Blank (2104723-ICB1)			Lab File ID: 13NOV011.D		Analyzed: 11/14/20 02:18			
2-Fluorophenol (Surrogate)			20 - 130	0	4.556667	-4.5567	+/-1.0	
Phenol-d5 (Surrogate)			30 - 130	0	5.47	-5.4700	+/-1.0	
Nitrobenzene-d5 (Surrogate)			30 - 130	0	6.378333	-6.3783	+/-1.0	
2-Fluorobiphenyl (Surrogate)			30 - 140	0	8.118333	-8.1183	+/-1.0	
2,4,6-Tribromophenol (Surrogate)			20 - 150	0	9.568333	-9.5683	+/-1.0	
p-Terphenyl-d14 (Surrogate)			30 - 150	0	12.03667	-12.0367	+/-1.0	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021422
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B094056-BLK1)			Lab File ID: 01DEC005.D			Analyzed: 12/01/20 14:20			
Phenanthrene-d10 (IS)	476186	10.12	697575	10.27	68	50 - 200	-0.1500	+/-0.50	
Chrysene-d12 (IS)	364050	13.7	450915	13.95	81	50 - 200	-0.2500	+/-0.50	
Acenaphthene-d10 (IS)	356430	8.67	498937	8.79	71	50 - 200	-0.1200	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	265027	5.69	305728	5.83	87	50 - 200	-0.1400	+/-0.50	
Perylene-d12 (IS)	384741	15.84	463812	16	83	50 - 200	-0.1600	+/-0.50	
Naphthalene-d8 (IS)	860015	6.95	1080958	7.07	80	50 - 200	-0.1200	+/-0.50	

SMUD - Kleinfelder
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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021592
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2021592-CCV1)			Lab File ID: 02DEC026.D			Analyzed: 12/02/20 21:03			
Phenanthrene-d10 (IS)	851440	10.1	697575	10.27	122	50 - 200	-0.1700	+/-0.50	
Chrysene-d12 (IS)	561255	13.66	450915	13.95	124	50 - 200	-0.2900	+/-0.50	
Acenaphthene-d10 (IS)	565698	8.63	498937	8.79	113	50 - 200	-0.1600	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	349331	5.62	305728	5.83	114	50 - 200	-0.2100	+/-0.50	
Perylene-d12 (IS)	470936	15.81	463812	16	102	50 - 200	-0.1900	+/-0.50	
Naphthalene-d8 (IS)	1203671	6.92	1080958	7.07	111	50 - 200	-0.1500	+/-0.50	
Calibration Blank (2021592-CCB1)			Lab File ID: 02DEC029.D			Analyzed: 12/02/20 22:19			
Phenanthrene-d10 (IS)	611560	10.09	697575	10.27	88	50 - 200	-0.1800	+/-0.50	
Chrysene-d12 (IS)	329629	13.62	450915	13.95	73	50 - 200	-0.3300	+/-0.50	
Acenaphthene-d10 (IS)	475623	8.63	498937	8.79	95	50 - 200	-0.1600	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	302062	5.61	305728	5.83	99	50 - 200	-0.2200	+/-0.50	
Perylene-d12 (IS)	380523	15.8	463812	16	82	50 - 200	-0.2000	+/-0.50	
Naphthalene-d8 (IS)	1068840	6.9	1080958	7.07	99	50 - 200	-0.1700	+/-0.50	
VW-35-2 (2034585-01)			Lab File ID: 02DEC044.D			Analyzed: 12/03/20 04:45			
Phenanthrene-d10 (IS)	961117	10.09	697575	10.27	138	50 - 200	-0.1800	+/-0.50	
Chrysene-d12 (IS)	604512	13.63	450915	13.95	134	50 - 200	-0.3200	+/-0.50	
Acenaphthene-d10 (IS)	657548	8.63	498937	8.79	132	50 - 200	-0.1600	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	426666	5.6	305728	5.83	140	50 - 200	-0.2300	+/-0.50	
Perylene-d12 (IS)	461907	15.8	463812	16	100	50 - 200	-0.2000	+/-0.50	
Naphthalene-d8 (IS)	1420039	6.9	1080958	7.07	131	50 - 200	-0.1700	+/-0.50	
VW-31-2 (2034585-02)			Lab File ID: 02DEC045.D			Analyzed: 12/03/20 05:11			
Phenanthrene-d10 (IS)	916651	10.09	697575	10.27	131	50 - 200	-0.1800	+/-0.50	
Chrysene-d12 (IS)	560598	13.63	450915	13.95	124	50 - 200	-0.3200	+/-0.50	
Acenaphthene-d10 (IS)	633163	8.63	498937	8.79	127	50 - 200	-0.1600	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	427463	5.59	305728	5.83	140	50 - 200	-0.2400	+/-0.50	
Perylene-d12 (IS)	519923	15.8	463812	16	112	50 - 200	-0.2000	+/-0.50	
Naphthalene-d8 (IS)	1416326	6.9	1080958	7.07	131	50 - 200	-0.1700	+/-0.50	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104723
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104723-CAL4)			Lab File ID: 13NOV003.D			Analyzed: 11/13/20 22:50			
Phenanthrene-d10 (IS)	697575	10.27	697575	10.27	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	450915	13.95	450915	13.95	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	498937	8.79	498937	8.79	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	305728	5.83	305728	5.83	100	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	463812	16	463812	16	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	1080958	7.07	1080958	7.07	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2104723-CAL6)			Lab File ID: 13NOV004.D			Analyzed: 11/13/20 23:16			
Phenanthrene-d10 (IS)	666963	10.28	697575	10.27	96	50 - 200	0.0100	+/-0.50	
Chrysene-d12 (IS)	422772	13.96	450915	13.95	94	50 - 200	0.0100	+/-0.50	
Acenaphthene-d10 (IS)	473205	8.8	498937	8.79	95	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	290445	5.84	305728	5.83	95	50 - 200	0.0100	+/-0.50	
Perylene-d12 (IS)	410294	16	463812	16	88	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (IS)	1052241	7.08	1080958	7.07	97	50 - 200	0.0100	+/-0.50	
Cal Standard (2104723-CAL5)			Lab File ID: 13NOV005.D			Analyzed: 11/13/20 23:42			
Phenanthrene-d10 (IS)	698459	10.27	697575	10.27	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	388325	13.95	450915	13.95	86	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (IS)	514197	8.8	498937	8.79	103	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	309859	5.84	305728	5.83	101	50 - 200	0.0100	+/-0.50	
Perylene-d12 (IS)	363490	15.99	463812	16	78	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	1103095	7.08	1080958	7.07	102	50 - 200	0.0100	+/-0.50	
Cal Standard (2104723-CAL3)			Lab File ID: 13NOV006.D			Analyzed: 11/14/20 00:07			
Phenanthrene-d10 (IS)	631980	10.27	697575	10.27	91	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	304324	13.93	450915	13.95	67	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	469984	8.79	498937	8.79	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	296024	5.82	305728	5.83	97	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	292955	15.99	463812	16	63	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	1025702	7.07	1080958	7.07	95	50 - 200	0.0000	+/-0.50	

SMUD - Kleinfelder
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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104723
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration: 2103032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104723-CAL2)			Lab File ID: 13NOV007.D			Analyzed: 11/14/20 00:34			
Phenanthrene-d10 (IS)	604718	10.26	697575	10.27	87	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	274215	13.92	450915	13.95	61	50 - 200	-0.0300	+/-0.50	
Acenaphthene-d10 (IS)	474819	8.79	498937	8.79	95	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	302026	5.83	305728	5.83	99	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	253384	15.99	463812	16	55	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	1029726	7.07	1080958	7.07	95	50 - 200	0.0000	+/-0.50	
Cal Standard (2104723-CAL1)			Lab File ID: 13NOV008.D			Analyzed: 11/14/20 01:00			
Phenanthrene-d10 (IS)	610119	10.26	697575	10.27	87	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	287178	13.93	450915	13.95	64	50 - 200	-0.0200	+/-0.50	
Acenaphthene-d10 (IS)	485593	8.79	498937	8.79	97	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	311079	5.82	305728	5.83	102	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	266803	15.99	463812	16	58	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	1070143	7.07	1080958	7.07	99	50 - 200	0.0000	+/-0.50	
Initial Cal Check (2104723-ICV1)			Lab File ID: 13NOV010.D			Analyzed: 11/14/20 01:52			
Phenanthrene-d10 (IS)	653465	10.27	697575	10.27	94	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (IS)	343220	13.94	450915	13.95	76	50 - 200	-0.0100	+/-0.50	
Acenaphthene-d10 (IS)	469779	8.79	498937	8.79	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	287109	5.83	305728	5.83	94	50 - 200	0.0000	+/-0.50	
Perylene-d12 (IS)	328304	15.99	463812	16	71	50 - 200	-0.0100	+/-0.50	
Naphthalene-d8 (IS)	1014000	7.08	1080958	7.07	94	50 - 200	0.0100	+/-0.50	
Initial Cal Blank (2104723-ICB1)			Lab File ID: 13NOV011.D			Analyzed: 11/14/20 02:18			
Phenanthrene-d10 (IS)	428111	10.26	697575	10.27	61	50 - 200	-0.0100	+/-0.50	
Chrysene-d12 (IS)	188699	13.92	450915	13.95	42	50 - 200	-0.0300	+/-0.50	*
Acenaphthene-d10 (IS)	357224	8.78	498937	8.79	72	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4 (IS)	240341	5.82	305728	5.83	79	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (IS)	175404	15.99	463812	16	38	50 - 200	-0.0100	+/-0.50	*
Naphthalene-d8 (IS)	811173	7.07	1080958	7.07	75	50 - 200	0.0000	+/-0.50	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION STANDARDS

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104723
Calibration: 2103032

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
9K21024	8270 BNA IC4	2104723-CAL4	13NOV003.D	11/13/20 22:50
9K21022	8270 BNA IC6	2104723-CAL6	13NOV004.D	11/13/20 23:16
9K21023	8270 BNA IC5	2104723-CAL5	13NOV005.D	11/13/20 23:42
9K21025	8270 BNA IC3	2104723-CAL3	13NOV006.D	11/14/20 00:07
9K21026	8270 BNA IC2	2104723-CAL2	13NOV007.D	11/14/20 00:34
9K21027	8270 BNA IC1	2104723-CAL1	13NOV008.D	11/14/20 01:00

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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
Acenaphthene	100000	1.291246	80000	1.224428	50000	1.266756	20000	1.2428	10000	1.209665	2000	1.304508
Acenaphthylene	100000	1.949753	80000	1.822395	50000	1.882596	20000	1.876809	10000	1.818428	2000	1.927211
Aldrin	100000	0.1590655	80000	0.1455268	50000	0.1553095	20000	0.1459888	10000	0.152567	2000	0.1759329
Aniline	100000	1.500536	80000	1.446122	50000	1.469853	20000	1.514215	10000	1.469264	2000	1.535944
Anthracene	100000	1.11595	80000	1.064928	50000	1.077927	20000	1.017906	10000	0.9913447	2000	1.001116
Benzidine	100000	~~4.575726E-02~~	80000	2.851492E-02	50000	2.989327E-02	20000	3.136808E-02	10000	2.358785E-02	2000	1.888156E-02
Benzo[a]anthracene	100000	1.260945	80000	1.208865	50000	1.201944	20000	1.231937	10000	1.197352	2000	1.338752
Benzo[b]fluoranthene	100000	1.150141	80000	1.071798	50000	1.052121	20000	1.027721	10000	0.9241152	2000	0.931099
Benzo[k]fluoranthene	100000	1.086401	80000	1.061793	50000	0.9471338	20000	1.039402	10000	1.049032	2000	1.018354
Benzo[a]pyrene	100000	1.007975	80000	0.9623002	50000	0.9211267	20000	0.8962537	10000	0.8678527	2000	0.794144
Benzo[g,h,i]perylene	100000	0.8233442	80000	0.7197997	50000	0.7382491	20000	0.7371508	10000	0.7376946	2000	0.8506651
Benzoic acid	200000	0.2382044	160000	0.2111294	100000	0.2001499	40000	0.150222	20000	0.115083	4000	5.581497E-02
Benzyl alcohol	100000	0.8254079	80000	0.73826	50000	0.7747566	20000	0.6697092	10000	0.65499	2000	0.6032551
Benzyl butyl phthalate	100000	0.7415297	80000	0.6918741	50000	0.6732462	20000	0.7342832	10000	0.7611983	2000	0.7486646
alpha-BHC	100000	0.1658125	80000	0.1562418	50000	0.1560251	20000	0.1593531	10000	0.1611726	2000	0.178457
beta-BHC	100000	0.1004392	80000	9.199466E-02	50000	9.401254E-02	20000	9.256939E-02	10000	9.769182E-02	2000	0.1027668
delta-BHC	100000	9.757243E-02	80000	0.0909853	50000	9.824549E-02	20000	9.985126E-02	10000	9.970929E-02	2000	0.1120109
gamma-BHC (Lindane)	100000	0.1300156	80000	0.1230523	50000	0.1247568	20000	0.1189974	10000	0.1291643	2000	0.135449
bis(2-Chloroethoxy)methane	100000	0.4464605	80000	0.4209026	50000	0.4335754	20000	0.4234953	10000	0.4201933	2000	0.4450433
bis(2-Chloroethyl) ether	100000	1.579927	80000	1.359709	50000	1.373807	20000	1.290058	10000	1.335316	2000	1.537487
bis(2-Chloroisopropyl)ether	100000	3.326613	80000	3.067195	50000	3.115773	20000	2.981387	10000	2.94821	2000	3.301155
bis(2-Ethylhexyl)phthalate	100000	1.005051	80000	0.9299736	50000	0.89858	20000	0.9323024	10000	0.9251573	2000	0.8529901
4-Bromophenyl phenyl ether	100000	0.2858425	80000	0.2735594	50000	0.2653019	20000	0.2611697	10000	0.2612127	2000	0.2651614
4-Chloroaniline	100000	0.3375565	80000	0.329677	50000	0.3219922	20000	0.3223197	10000	0.305557	2000	0.3007822
2-Chloronaphthalene	100000	1.132136	80000	1.051226	50000	1.062395	20000	1.022456	10000	0.9786634	2000	1.044702

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
4-Chlorophenyl phenyl ether	100000	0.6938177	80000	0.6516306	50000	0.6498295	20000	0.6213275	10000	0.6040365	2000	0.6207668
Chrysene	100000	1.222763	80000	1.138553	50000	1.131348	20000	1.158666	10000	1.110676	2000	1.150785
4,4'-DDD	100000	0.5628112	80000	0.5221709	50000	0.487063	20000	0.5786596	10000	0.598771	2000	0.6302711
4,4'-DDE	100000	0.284823	80000	0.2738647	50000	0.259444	20000	0.3087959	10000	0.3265321	2000	0.3500268
4,4'-DDT	100000	0.4586264	80000	0.4373811	50000	0.4301582	20000	0.4647481	10000	0.4365334	2000	0.3694573
Dibenzo[a,h]anthracene	100000	0.8851536	80000	0.8086123	50000	0.7964468	20000	0.7972624	10000	0.7192719	2000	0.7063639
Dibenzofuran	100000	1.464535	80000	1.358226	50000	1.388583	20000	1.31233	10000	1.259402	2000	1.313734
1,2-Dichlorobenzene	100000	1.306865	80000	1.219837	50000	1.249207	20000	1.213834	10000	1.168866	2000	1.251836
1,3-Dichlorobenzene	100000	1.360307	80000	1.279966	50000	1.305639	20000	1.276863	10000	1.239628	2000	1.340817
1,4-Dichlorobenzene	100000	1.392505	80000	1.298863	50000	1.325858	20000	1.344634	10000	1.34199	2000	1.787006
3,3-Dichlorobenzidine	100000	0.4673687	80000	0.4298204	50000	0.4199816	20000	0.3749294	10000	0.3306602	2000	0.298073
Dieldrin	100000	0.245547	80000	0.2387575	50000	0.2266432	20000	0.272039	10000	0.3081086	2000	0.3006498
Diethyl phthalate	100000	1.373204	80000	1.28662	50000	1.350505	20000	1.323709	10000	1.295399	2000	1.373084
Dimethyl phthalate	100000	1.590659	80000	1.509646	50000	1.545107	20000	1.50526	10000	1.467978	2000	1.53952
Di-n-butyl phthalate	100000	1.254227	80000	1.163505	50000	1.262658	20000	1.243755	10000	1.289633	2000	1.376846
2,4-Dinitrotoluene	100000	0.3883518	80000	0.3588313	50000	0.360294	20000	0.3292367	10000	0.3191448	2000	0.2553991
2,6-Dinitrotoluene	100000	0.3290895	80000	0.3070914	50000	0.3044505	20000	0.2860693	10000	0.2693995	2000	0.2526807
Di-n-octyl phthalate	100000	1.479174	80000	1.395911	50000	1.404611	20000	1.326028	10000	1.170206	2000	0.9692247
1,2-Diphenylhydrazine	100000	1.454938	80000	1.349767	50000	1.285446	20000	1.217778	10000	1.1681	2000	1.207349
Endosulfan I	100000	4.029027E-02	80000	4.040816E-02	50000	3.683532E-02	20000	4.775831E-02	10000	5.369509E-02	2000	5.912709E-02
Endosulfan II	100000	4.531331E-02	80000	4.309535E-02	50000	4.215429E-02	20000	4.685138E-02	10000	5.903397E-02	2000	5.090919E-02
Endosulfan sulfate	100000	0.1058377	80000	9.436039E-02	50000	9.670115E-02	20000	0.1015562	10000	0.1087905	2000	0.1078077
Endrin	100000	7.395097E-02	80000	7.079122E-02	50000	6.643558E-02	20000	7.718747E-02	10000	8.211075E-02	2000	7.354324E-02
Endrin aldehyde	100000	0.1300871	80000	0.118218	50000	0.1169746	20000	0.1192742	10000	0.1272286	2000	0.135665
Fluoranthene	100000	0.9529524	80000	0.8392289	50000	0.9091083	20000	0.842052	10000	0.8271227	2000	0.8766814
Fluorene	100000	1.38175	80000	1.289495	50000	1.310962	20000	1.238021	10000	1.191772	2000	1.226253

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA
EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
Heptachlor	100000	0.1490547	80000	0.1347788	50000	0.1422494	20000	0.1321434	10000	0.1344891	2000	0.1304991
Heptachlor epoxide	100000	8.333896E-02	80000	0.0756723	50000	7.701996E-02	20000	0.0762271	10000	7.605529E-02	2000	8.247571E-02
Hexachlorobenzene	100000	0.3268277	80000	0.3127829	50000	0.3108678	20000	0.3004241	10000	0.3105117	2000	0.3382947
Hexachlorobutadiene	100000	0.2075734	80000	0.1982962	50000	0.2001499	20000	0.1955344	10000	0.1918841	2000	0.2017674
Hexachlorocyclopentadiene	100000	0.3347834	80000	0.2923403	50000	0.2917867	20000	0.2514681	10000	0.2136309	2000	0.1570039
Hexachloroethane	100000	0.5650447	80000	0.5209482	50000	0.5457845	20000	0.5042091	10000	0.4847927	2000	0.5217967
Indeno[1,2,3-cd]pyrene	100000	1.032403	80000	0.9343022	50000	0.9343803	20000	0.9436876	10000	0.8554921	2000	0.9558363
Isophorone	100000	0.6778192	80000	0.6332206	50000	0.6479023	20000	0.6354984	10000	0.631197	2000	0.6770123
2-Methylnaphthalene	100000	0.5244875	80000	0.5028996	50000	0.5139708	20000	0.5017383	10000	0.4885921	2000	0.5023067
Naphthalene	100000	0.9688636	80000	0.9190532	50000	0.9523945	20000	0.9670548	10000	0.9541218	2000	1.033021
2-Naphthylamine	100000	6.183705E-02	80000	7.492459E-02	50000	4.596813E-02	20000	0.1531712	10000	0.229359	2000	0.3038759
2-Nitroaniline	100000	0.4428381	80000	0.4085905	50000	0.4144956	20000	0.3762809	10000	0.3524459	2000	0.3141726
3-Nitroaniline	100000	0.2609288	80000	0.2431169	50000	0.2551569	20000	0.2386251	10000	0.2251131	2000	0.1913537
4-Nitroaniline	100000	0.2362131	80000	0.2097581	50000	0.2446289	20000	0.2031431	10000	0.1885518	2000	0.147325
Nitrobenzene	100000	0.3281636	80000	0.3003953	50000	0.3114349	20000	0.2990518	10000	0.3002391	2000	0.3166493
N-Nitrosodimethylamine	100000	0.8170111	80000	0.9975102	50000	1.049351	20000	1.025039	10000	0.9669234	2000	0.9865661
N-Nitrosodi-N-propylamine	100000	1.141448	80000	1.050578	50000	1.050419	20000	1.008384	10000	0.9924973	2000	1.011319
N-Nitrosodiphenylamine	100000	0.9188178	80000	0.8674603	50000	0.8597719	20000	0.8143128	10000	0.7582847	2000	0.74894
Phenanthrene	100000	1.122707	80000	1.059437	50000	1.073895	20000	1.057132	10000	1.052398	2000	1.116274
Pyrene	100000	1.545467	80000	1.522549	50000	1.430677	20000	1.711334	10000	1.785971	2000	1.833218
1,2,4-Trichlorobenzene	100000	0.3190444	80000	0.298434	50000	0.2951967	20000	0.2957955	10000	0.2891526	2000	0.3213963
4-Chloro-3-methylphenol	100000	0.2499792	80000	0.2333988	50000	0.2380799	20000	0.21695	10000	0.1999173	2000	0.1767614
2-Chlorophenol	100000	1.433036	80000	1.313835	50000	1.345876	20000	1.284031	10000	1.257746	2000	1.293819
2,4-Dichlorophenol	100000	0.3200852	80000	0.3033905	50000	0.2991746	20000	0.2828404	10000	0.2671584	2000	0.2526765
2,4-Dimethylphenol	100000	0.3361481	80000	0.31665	50000	0.3246032	20000	0.3001886	10000	0.2929206	2000	0.3110239
4,6-Dinitro-2-methylphenol	100000	0.2937306	80000	0.256004	50000	0.2468432	20000	0.1734016	10000	0.1291692	2000	5.556093E-02

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Instrument: MS-B2
Matrix: Solids
Calibration Date: 11/13/20 22:50

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
2,4-Dinitrophenol	100000	0.2675855	80000	0.2289337	50000	0.2173004	20000	0.1387068	10000	9.496671E-02	2000	2.347645E-02
2-Methylphenol	100000	1.145188	80000	1.028565	50000	1.044683	20000	0.9834338	10000	0.9570434	2000	1.064424
3- & 4-Methylphenol	200000	1.305349	160000	1.189999	100000	1.220753	40000	1.152775	20000	1.106044	4000	1.164752
2-Nitrophenol	100000	0.2427702	80000	0.2123471	50000	0.2094009	20000	0.2021991	10000	0.1916937	2000	0.1668562
4-Nitrophenol	100000	9.786625E-02	80000	9.267071E-02	50000	9.114578E-02	20000	5.809559E-02	10000	3.921494E-02	2000	1.297383E-02
Pentachlorophenol	100000	0.212407	80000	0.1864991	50000	0.1837291	20000	0.1183107	10000	9.564789E-02	2000	3.618966E-02
Phenol	100000	1.739747	80000	1.562125	50000	1.611956	20000	1.538037	10000	1.482217	2000	1.55266
2,4,5-Trichlorophenol	100000	0.4783348	80000	0.4335897	50000	0.4484526	20000	0.3767277	10000	0.3331206	2000	0.2630598
2,4,6-Trichlorophenol	100000	0.5016921	80000	0.4648248	50000	0.4370395	20000	0.4041712	10000	0.3618895	2000	0.3139254
2-Fluorophenol (Surrogate)	100000	1.402196	80000	1.279212	50000	1.316339	20000	1.259445	10000	1.222862	2000	1.268552
Phenol-d5 (Surrogate)	100000	1.756401	80000	1.589144	50000	1.637547	20000	1.574264	10000	1.492401	2000	1.541088
Nitrobenzene-d5 (Surrogate)	100000	1.488136	80000	1.355993	50000	1.383162	20000	1.317447	10000	1.265004	2000	1.341717
2-Fluorobiphenyl (Surrogate)	100000	1.60618	80000	1.522171	50000	1.539925	20000	1.534116	10000	1.463269	2000	1.487295
2,4,6-Tribromophenol (Surrogate)	100000	0.1569946	80000	0.1467552	50000	0.1374912	20000	0.1207918	10000	0.1083216	2000	8.431142E-02
p-Terphenyl-d14 (Surrogate)	50000	1.357167	40000	1.335523	25000	1.237743	10000	1.488558	5000	1.505797	1000	1.506661

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Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Acenaphthene	1.256567	2.983446	8.823333	5.859935E-02			CCC (20)	
Acenaphthylene	1.879532	2.837295	8.655	6.428274E-02			15	
Aldrin	0.1557318	7.199066	11.07333	4.429919E-02			15	
Aniline	1.489322	2.240368	5.521667	0.2402255			15	
Anthracene	1.044862	4.699152	10.345	0.1008777			15	
Benzidine	2.644914E-02	19.44293	11.718	7.375603E-02	0.9974429		0.99	
Benzo[a]anthracene	1.239966	4.341799	13.91667	0.1178042			15	
Benzo[b]fluoranthene	1.026166	8.448464	15.55333	7.787891E-02			15	
Benzo[k]fluoranthene	1.033686	4.652306	15.59	8.263839E-02			15	
Benzo[a]pyrene	0.9082754	8.213749	15.93	7.849963E-02			CCC (20)	
Benzo[g,h,i]perylene	0.7678172	7.12748	17.41	7.055272E-02			15	
Benzoic acid	0.1617673	42.19093	6.896667	1.497464	0.9915892		0.99	
Benzyl alcohol	0.7110631	11.65624	5.968333	0.3245396			15	
Benzyl butyl phthalate	0.7251327	4.77936	12.85	9.840727E-02			15	
alpha-BHC	0.1628437	5.19362	9.82	9.123669E-02			15	
beta-BHC	9.657907E-02	4.586516	10.03833	9.641284E-02			15	
delta-BHC	9.972911E-02	6.862041	10.35333	4.660175E-02			15	
gamma-BHC (Lindane)	0.1269059	4.591595	10.12	8.835853E-02			15	
bis(2-Chloroethoxy)methane	0.4316117	2.77197	6.823333	0.2000488			15	
bis(2-Chloroethyl) ether	1.412717	8.308598	5.576667	0.292733			15	
bis(2-Chloroisopropyl)ether	3.123389	5.101963	6.083333	8.534847E-02			15	
bis(2-Ethylhexyl)phthalate	0.9240091	5.381635	14.06	0.0638611			15	
4-Bromophenyl phenyl ether	0.2687079	3.547401	9.801667	7.550509E-02			15	
4-Chloroaniline	0.3196474	4.398565	7.145	7.735825E-02			15	
2-Chloronaphthalene	1.048596	4.818618	8.245	6.777308E-02			15	
4-Chlorophenyl phenyl ether	0.6402348	5.007856	9.318333	0.1058202			15	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Chrysene	1.152132	3.331927	13.99333	0.1400068			15	
4,4'-DDD	0.5632911	9.218865	12.47	6.948882E-02			15	
4,4'-DDE	0.3005811	11.37013	11.95333	3.771221E-02			15	
4,4'-DDT	0.4328174	7.829559	12.99833	7.561832E-02			15	
Dibenzo[a,h]anthracene	0.7855185	8.322993	17.14167	6.735943E-02			15	
Dibenzofuran	1.349468	5.303959	8.991666	8.455684E-02			15	
1,2-Dichlorobenzene	1.235074	3.745785	5.995	9.061081E-02			15	
1,3-Dichlorobenzene	1.300537	3.423952	5.773333	0.1405806			15	
1,4-Dichlorobenzene	1.415143	13.05321	5.848333	0.1691771			CCC (20)	
3,3-Dichlorobenzidine	0.3868055	16.59747	13.90667	0.1179461	0.9961192		0.99	
Dieldrin	0.2652908	12.74568	12.105	3.897035E-02			15	
Diethyl phthalate	1.333753	2.840671	9.203333	0.1643528			15	
Dimethyl phthalate	1.526362	2.747288	8.516667	0.1920327			15	
Di-n-butyl phthalate	1.265104	5.475298	10.82333	4.777102E-02			15	
2,4-Dinitrotoluene	0.3352096	13.78409	8.98	0.1864284			15	
2,6-Dinitrotoluene	0.2914635	9.518862	8.586667	0.1413269			15	
Di-n-octyl phthalate	1.290859	14.64452	15.13333	3.102483E-02			CCC (20)	
1,2-Diphenylhydrazine	1.280563	8.350213	9.476667	0.1104773			15	
Endosulfan I	4.635237E-02	18.85074	11.80833	8.208078E-02	0.9955606		0.99	
Endosulfan II	4.789292E-02	13.10316	12.505	6.706126E-02			15	
Endosulfan sulfate	0.1025089	5.847488	13.01833	7.571243E-02			15	
Endrin	7.400321E-02	7.243525	12.37667	4.085082E-02			15	
Endrin aldehyde	0.1245746	6.078425	13.79	9.193579E-02			15	
Fluoranthene	0.8745243	5.578201	11.53833	8.489765E-02			CCC (20)	
Fluorene	1.273042	5.390573	9.33	9.601737E-02			15	
Heptachlor	0.1372024	5.150794	10.76167	3.643903E-02			15	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103032
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-B2
Calibration Date: 11/13/20 22:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Heptachlor epoxide	7.846489E-02	4.434782	11.41833	3.000067E-02			15	
Hexachlorobenzene	0.3166182	4.287568	9.868333	0.1011484			15	
Hexachlorobutadiene	0.1992009	2.706931	7.196667	7.147751E-02			CCC (20)	
Hexachlorocyclopentadiene	0.2568356	24.88204	7.905	6.711508E-02	0.9914501		SPCC (0.05)	
Hexachloroethane	0.5237626	5.468608	6.316667	8.250341E-02			15	
Indeno[1,2,3-cd]pyrene	0.9426836	5.994272	17.12	7.045238E-02			15	
Isophorone	0.6504416	3.334595	6.635	0.412625			15	
2-Methylnaphthalene	0.5056658	2.420565	7.763333	6.389285E-02			15	
Naphthalene	0.9657515	3.882922	7.096667	0.1145971			15	
2-Naphthylamine	0.144856	71.78122	9.156667	0.131647			15	*
2-Nitroaniline	0.3848039	12.14683	8.351667	0.1764587			15	
3-Nitroaniline	0.2357157	10.66068	8.76	0.1907487			15	
4-Nitroaniline	0.2049367	17.1379	9.366667	0.2586013	0.991459		0.99	
Nitrobenzene	0.3093223	3.772424	6.396667	0.2556671			15	
N-Nitrosodimethylamine	0.9737335	8.429778	3.406667	3.396279			15	
N-Nitrosodi-N-propylamine	1.042441	5.175706	6.241667	0.4690414			SPCC (0.05)	
N-Nitrosodiphenylamine	0.8279313	8.032293	9.44	0.1337503			CCC (20)	
Phenanthrene	1.080307	2.893052	10.295	0.1204179			15	
Pyrene	1.638203	9.852533	11.83167	0.1122349			15	
1,2,4-Trichlorobenzene	0.3031699	4.476874	7.008333	0.1068647			15	
4-Chloro-3-methylphenol	0.2191811	12.38319	7.603333	6.753869E-02			CCC (20)	
2-Chlorophenol	1.32139	4.70518	5.631667	0.2358905			15	
2,4-Dichlorophenol	0.2875543	8.657428	6.935	0.1991995			CCC (20)	
2,4-Dimethylphenol	0.3135891	5.047969	6.733333	0.2237564			15	
4,6-Dinitro-2-methylphenol	0.1924516	46.68492	9.383333	0.2095024	0.989953		0.99	*
2,4-Dinitrophenol	0.1618283	57.24608	8.856667	0.1366225		0.9973103	SPCC (0.05)	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Calibration: 2103032
Instrument: MS-B2
Matrix: Solids
Calibration Date: 11/13/20 22:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
2-Methylphenol	1.037223	6.373211	6.061667	0.1923759			15	
3- & 4-Methylphenol	1.189945	5.739587	6.223333	0.3759726			15	
2-Nitrophenol	0.2042112	12.26386	6.7	0.1327641			CCC (20)	
4-Nitrophenol	6.532785E-02	52.79648	8.921666	0.2050566	0.9962849		SPCC (0.05)	
Pentachlorophenol	0.1387972	48.35526	10.065	5.180687E-02	0.9907752		CCC (20)	*
Phenol	1.581124	5.580183	5.485	0.4717564			CCC (20)	
2,4,5-Trichlorophenol	0.3888809	20.77576	8.075	0.1030078	0.9956114		0.99	
2,4,6-Trichlorophenol	0.4139238	16.60866	8.036667	0.1027546			CCC (20)	
2-Fluorophenol (Surrogate)	1.291434	4.809201	4.556667	0.5130026			15	
Phenol-d5 (Surrogate)	1.598474	5.712177	5.47	0.4166417			15	
Nitrobenzene-d5 (Surrogate)	1.358577	5.520823	6.378333	0.2307256			15	
2-Fluorobiphenyl (Surrogate)	1.525493	3.229435	8.118333	0.1205754			15	
2,4,6-Tribromophenol (Surrogate)	0.1257776	21.33586	9.568333	0.1023962	0.9962237		0.99	
p-Terphenyl-d14 (Surrogate)	1.405242	7.960397	12.03667	8.254306E-02			15	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

HOLDING TIME SUMMARY

EPA-8270C

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-2	11/23/20 14:25	11/24/20 09:50	12/01/20 09:30	8.00	14.00	12/03/20 04:45	2.00	40.00	
VW-31-2	11/23/20 14:48	11/24/20 09:50	12/01/20 09:30	8.00	14.00	12/03/20 05:11	2.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 9:58:05AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2034585

Laboratory Documentation Requirements
For Data Validation of
Pesticide Analysis

Prepared By

BC Laboratories

For SMUD - Kleinfelder

60632793.6 SMUD SVM

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-8082

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Case Narrative

Sample Receipt

Work Order: 2034585
COC Number:
Default Cooler was received at 2.5 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-8082	GC-14

Sample Qualifier Summary

Surrogate is low due to matrix interference. Interference verified through second extraction/analysis.

Lab Number	Method	Analyte
2034585-02	EPA-8082	Decachlorobiphenyl (Surrogate)

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B094172	EPA-8082	2032744-97	<Not Client Sample>

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

AECOM
2020 L Street, Suite 400
Sacramento, California 95811, United States
T +1-916-414-5800
F +1-916-414-5850
aecom.com

20-34585

RUSH! CHAIN OF CUSTODY RECORD 100802

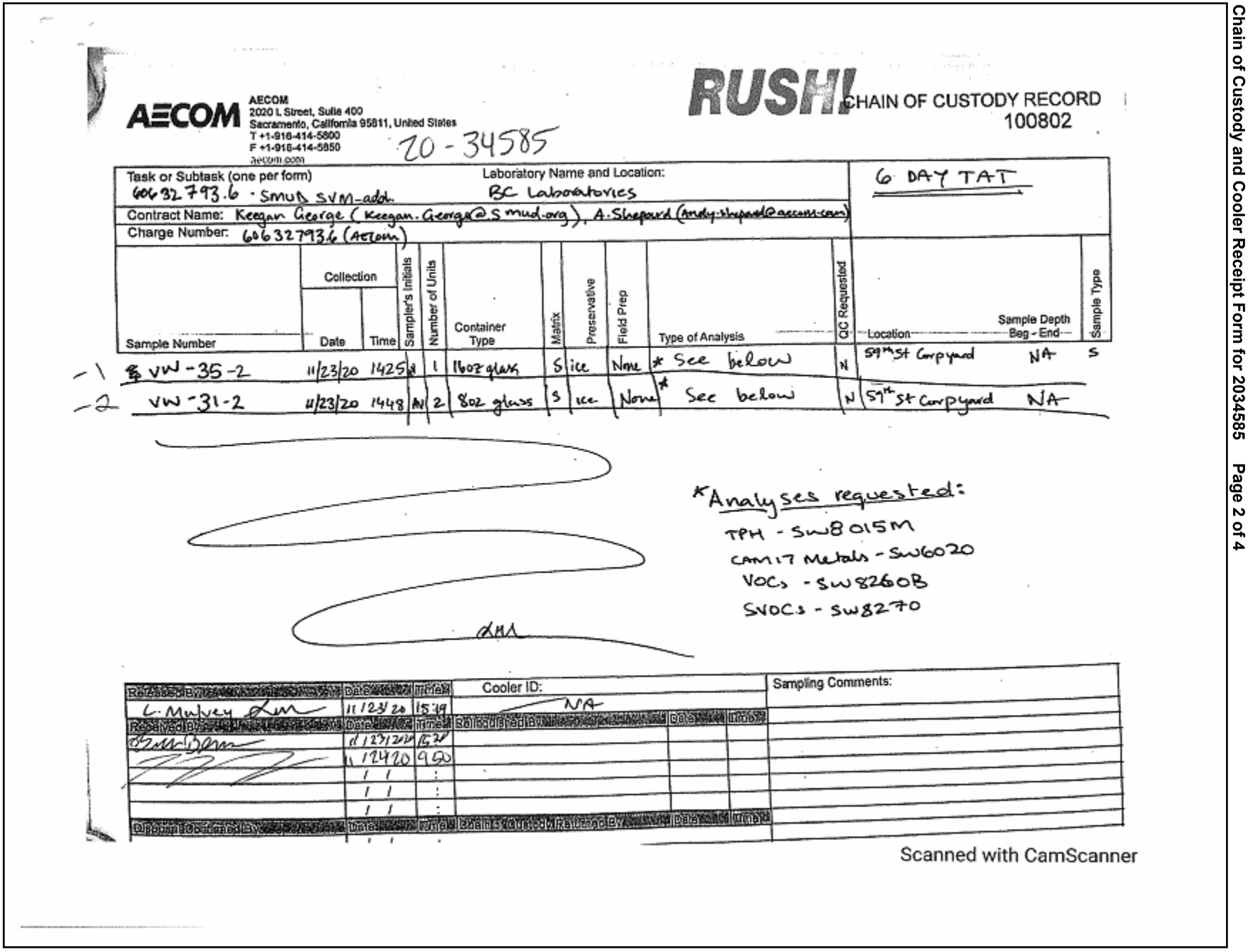
Task or Subtask (one per form): 60632793.6 - SMUD SVM-addl.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
1 SVW-35-2	11/23/20	1425	AN	1	160z glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
2 VW-31-2	11/23/20	1448	AN	2	80z glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270
* PCB's per client 11/24/20 see email

CHK BY
DISTRIBUTION
SUB OUT

Released By:	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:19	NA			
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
	11/23/2020	1620		11/23/2020	1600	
	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				



AECOM
AECOM
2020 L Street, Suite 400
Sacramento, California 95811, United States
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F +1-916-414-5850
aecom.com

RUSH!

CHAIN OF CUSTODY RECORD
100802

20-34585

Task or Subtask (one per form): 60632793.6 · SMUD SVM-add.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

	Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
-1	VW-35-2	11/23/20	1425	N	1	16oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
-2	VW-31-2	11/23/20	1448	AN	2	8oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270

Released By	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:49	NA			
Received By	Date	Time	Relinquished By	Date	Time	
[signature]	11/23/2020	1530				
[signature]	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By	Date	Time	Chain of Custody Returned By	Date	Time	
	/ /	:				

Scanned with CamScanner

Mark Ellis 20-34585

From: Mulvey, Lucy <lucy.mulvey@aecom.com>
Sent: Monday, November 23, 2020 3:30 PM
To: Mark Ellis; Shepard, Andy (Sacramento); Kohlhardt, Robert
Subject: SMUD COC correction 11/23
Attachments: CoC- 11.23.20_1.pdf

Mark,

Please see attached CoC from earlier today. I didn't grab Bill before he left site. I forgot to include PCBs to the analyses list.
Please include PCBs by EPA method SW8082 to the existing list that includes TPH, Cam 17 metals, VOCs and SVOCs.

Thank you,

Lucy
Get Outlook for Android

1

Chain of Custody and Cooler Receipt Form for 2034585 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34585

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 11-24-20 950

Temperature: (A) 2.9 °C / (C) 2.5 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
~~8oz / 16oz / 32oz AMBER~~ SMR		AB								
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 11/24/20 1213

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **PEST**
Method: **EPA-8082**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8082

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: GC-14

Analyte	MDL	PQL	Units
PCB-1016	0.0023	0.01	mg/kg
PCB-1221	0.0033	0.01	mg/kg
PCB-1232	0.0026	0.01	mg/kg
PCB-1242	0.0015	0.01	mg/kg
PCB-1248	0.0021	0.01	mg/kg
PCB-1254	0.0016	0.01	mg/kg
PCB-1260	0.0018	0.01	mg/kg
Total PCB's (Summation)	0.005	0.01	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8082

VW-35-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-01	File ID:	03DEC007.D
Sampled:	11/23/20 14:25	Prepared:	12/02/20 13:00	Analyzed:	12/03/20 15:19
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.6 g / 10 ml
Batch:	B094172	Sequence:	2021540	Calibration:	2103026
Instrument:	GC-14				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
12674-11-2	PCB-1016	5.07	0.012	UD
11104-28-2	PCB-1221	5.07	0.016	UD
11141-16-5	PCB-1232	5.07	0.013	UD
53469-21-9	PCB-1242	5.07	0.0075	UD
12672-29-6	PCB-1248	5.07	0.010	UD
11097-69-1	PCB-1254	5.07	0.0080	UD
11096-82-5	PCB-1260	5.07	0.035	JD
1336-36-3	Total PCB's (Summation)	5.07	0.035	JD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Decachlorobiphenyl (Surrogate)	0.020270	0.011824	58.3	40 - 120	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8082

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 03DEC006.D
Sampled: 11/23/20 14:48
Prepared: 12/02/20 13:00
Analyzed: 12/03/20 15:09
Solids:
Preparation: EPA 3550B
Initial/Final: 29.7 g / 10 ml
Batch: B094172
Sequence: 2021540
Calibration: 2103026
Instrument: GC-14

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
12674-11-2	PCB-1016	1.01	0.0023	U
11104-28-2	PCB-1221	1.01	0.0033	U
11141-16-5	PCB-1232	1.01	0.0026	U
53469-21-9	PCB-1242	1.01	0.0015	U
12672-29-6	PCB-1248	1.01	0.0021	U
11097-69-1	PCB-1254	1.01	0.0016	U
11096-82-5	PCB-1260	1.01	0.0077	J
1336-36-3	Total PCB's (Summation)	1.01	0.0077	J

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Decachlorobiphenyl (Surrogate)	0.020202	0.0077441	38.3	40 - 120	*

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-8082

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B094172 Batch Matrix: Solids
Preparation: EPA 3550B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	03DEC007.D	12/02/20 13:00	
VW-31-2	2034585-02	03DEC006.D	12/02/20 13:00	
Blank	B094172-BLK1	02DEC068.D	12/02/20 13:00	
LCS	B094172-BS1	02DEC069.D	12/02/20 13:00	
Matrix Spike	B094172-MS1	02DEC070.D	12/02/20 13:00	
Matrix Spike Dup	B094172-MSD1	02DEC071.D	12/02/20 13:00	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8082

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B094172-BLK1	File ID:	02DEC068.D
Prepared:	12/02/20 13:00	Preparation:	EPA 3550B	Initial/Final:	30 g / 10 ml
Analyzed:	12/02/20 22:43	Instrument:	GC-14		
Batch:	B094172	Sequence:	2021515	Calibration:	2103026

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
12674-11-2	PCB-1016	0.0023	U
11104-28-2	PCB-1221	0.0033	U
11141-16-5	PCB-1232	0.0026	U
53469-21-9	PCB-1242	0.0015	U
12672-29-6	PCB-1248	0.0021	U
11097-69-1	PCB-1254	0.0016	U
11096-82-5	PCB-1260	0.0018	U
1336-36-3	Total PCB's (Summation)	0.0050	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Decachlorobiphenyl (Surrogate)	0.020000	0.017667	88.3	40 - 120	

SMUD - Kleinfelder
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Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8082

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094172
Preparation: EPA 3550B
Source Sample Number: 2032744-97

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094172-MS1
Initial/Final: 29.9 g / 10 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
PCB-1016	0.083612	ND	0.070903	84.8	60 - 120
PCB-1260	0.083612	ND	0.069900	83.6	60 - 120

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
PCB-1016	0.084175	0.068350	81.2	3.67	30	60 - 120
PCB-1260	0.084175	0.072391	86.0	3.50	30	60 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-8082

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B094172
Laboratory ID: B094172-BS1
Preparation: EPA 3550B
Initial/Final: 29.8 g / 10 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
PCB-1016	0.083893	0.067114	80.0	60 - 120
PCB-1260	0.083893	0.066443	79.2	60 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021515
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration: 2103026

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2021515-CCV3	02DEC064.D	12/02/20 22:00
Calibration Blank	2021515-CCB3	02DEC065.D	12/02/20 22:11
Blank	B094172-BLK1	02DEC068.D	12/02/20 22:43
LCS	B094172-BS1	02DEC069.D	12/02/20 22:54
Matrix Spike	B094172-MS1	02DEC070.D	12/02/20 23:04
Matrix Spike Dup	B094172-MSD1	02DEC071.D	12/02/20 23:15
Calibration Check	2021515-CCV4	02DEC074.D	12/02/20 23:58
Calibration Blank	2021515-CCB4	02DEC075.D	12/03/20 08:32

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021540
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration: 2103026

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2021540-CCV1	03DEC002.D	12/03/20 11:57
Calibration Blank	2021540-CCB1	03DEC004.D	12/03/20 12:18
VW-31-2	2034585-02	03DEC006.D	12/03/20 15:09
VW-35-2	2034585-01	03DEC007.D	12/03/20 15:19
Calibration Check	2021540-CCV2	03DEC009.D	12/03/20 16:35
Calibration Blank	2021540-CCB2	03DEC010.D	12/03/20 16:46

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2104603	Instrument:	GC-14
Matrix:	Solids	Calibration:	2103026

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2104603-CAL1	30NOV008.D	11/30/20 18:24
Cal Standard	2104603-CAL2	30NOV009.D	11/30/20 18:35
Cal Standard	2104603-CAL3	30NOV010.D	11/30/20 18:46
Cal Standard	2104603-CAL4	30NOV011.D	11/30/20 18:56
Cal Standard	2104603-CAL5	30NOV012.D	11/30/20 19:07
Cal Standard	2104603-CAL6	30NOV013.D	11/30/20 19:18
Initial Cal Check	2104603-ICV1	30NOV014.D	11/30/20 19:43
Initial Cal Blank	2104603-ICB1	30NOV015.D	11/30/20 19:55

SMUD - Kleinfelder
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Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-14	Calibration:	2103026
Lab File ID:	02DEC064.D	Calibration Date:	11/30/20 18:24
Sequence:	2021515	Injection Date:	12/02/20
Lab Sample ID:	2021515-CCV3	Injection Time:	22:00

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
PCB-1016	A	250.00	268.00	707767.8	758400		7.2	15
PCB-1260	A	250.00	266.00	993658.7	1056000		6.3	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-14	Calibration:	2103026
Lab File ID:	02DEC074.D	Calibration Date:	11/30/20 18:24
Sequence:	2021515	Injection Date:	12/02/20
Lab Sample ID:	2021515-CCV4	Injection Time:	23:58

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
PCB-1016	A	250.00	242.00	707767.8	685600		-3.1	15
PCB-1260	A	250.00	251.00	993658.7	996800		0.3	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-14	Calibration:	2103026
Lab File ID:	03DEC002.D	Calibration Date:	11/30/20 18:24
Sequence:	2021540	Injection Date:	12/03/20
Lab Sample ID:	2021540-CCV1	Injection Time:	11:57

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
PCB-1016	A	250.00	284.00	707767.8	805600		13.8	15
PCB-1260	A	250.00	249.00	993658.7	991200		-0.2	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-14	Calibration:	2103026
Lab File ID:	03DEC009.D	Calibration Date:	11/30/20 18:24
Sequence:	2021540	Injection Date:	12/03/20
Lab Sample ID:	2021540-CCV2	Injection Time:	16:35

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
PCB-1016	A	250.00	279.00	707767.8	788800		11.4	15
PCB-1260	A	250.00	235.00	993658.7	934000		-6.0	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8082

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-14	Calibration:	2103026
Lab File ID:	30NOV014.D	Calibration Date:	11/30/20 18:24
Sequence:	2104603	Injection Date:	11/30/20
Lab Sample ID:	2104603-ICV1	Injection Time:	19:43

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
PCB-1016	A	250.00	238.00	707767.8	674400		-4.7	15
PCB-1260	A	250.00	263.00	993658.7	1046800		5.3	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021515
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration: 2103026

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2021515-CCV3)			Lab File ID: 02DEC064.D		Analyzed: 12/02/20 22:00			
Decachlorobiphenyl (Surrogate)	60.000	113	85 - 115	7.19	7.171667	0.0183	+/-1.0	
Calibration Blank (2021515-CCB3)			Lab File ID: 02DEC065.D		Analyzed: 12/02/20 22:11			
Decachlorobiphenyl (Surrogate)			40 - 120		7.171667	Null Found	+/-1.0	
Blank (B094172-BLK1)			Lab File ID: 02DEC068.D		Analyzed: 12/02/20 22:43			
Decachlorobiphenyl (Surrogate)	0.020000	88.3	40 - 120	7.19	7.171667	0.0183	+/-1.0	
LCS (B094172-BS1)			Lab File ID: 02DEC069.D		Analyzed: 12/02/20 22:54			
Decachlorobiphenyl (Surrogate)	0.020134	65.0	40 - 120	7.19	7.171667	0.0183	+/-1.0	
Matrix Spike (B094172-MS1)			Lab File ID: 02DEC070.D		Analyzed: 12/02/20 23:04			
Decachlorobiphenyl (Surrogate)	0.020067	70.0	40 - 120	7.19	7.171667	0.0183	+/-1.0	
Matrix Spike Dup (B094172-MSD1)			Lab File ID: 02DEC071.D		Analyzed: 12/02/20 23:15			
Decachlorobiphenyl (Surrogate)	0.020202	70.0	40 - 120	7.19	7.171667	0.0183	+/-1.0	
Calibration Check (2021515-CCV4)			Lab File ID: 02DEC074.D		Analyzed: 12/02/20 23:58			
Decachlorobiphenyl (Surrogate)	60.000	96.7	85 - 115	7.19	7.171667	0.0183	+/-1.0	
Calibration Blank (2021515-CCB4)			Lab File ID: 02DEC075.D		Analyzed: 12/03/20 08:32			
Decachlorobiphenyl (Surrogate)			40 - 120	0	7.171667	-7.1717	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8082

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Sequence: 2021540
Instrument: GC-14
Matrix: Solids
Calibration: 2103026

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2021540-CCV1)			Lab File ID: 03DEC002.D		Analyzed: 12/03/20 11:57			
Decachlorobiphenyl (Surrogate)	60.000	107	85 - 115	7.21	7.171667	0.0383	+/-1.0	
Calibration Blank (2021540-CCB1)			Lab File ID: 03DEC004.D		Analyzed: 12/03/20 12:18			
Decachlorobiphenyl (Surrogate)			40 - 120		7.171667	Null Found	+/-1.0	
VW-31-2 (2034585-02)			Lab File ID: 03DEC006.D		Analyzed: 12/03/20 15:09			
Decachlorobiphenyl (Surrogate)	0.020202	38.3	40 - 120	7.19	7.171667	0.0183	+/-1.0	*
VW-35-2 (2034585-01)			Lab File ID: 03DEC007.D		Analyzed: 12/03/20 15:19			
Decachlorobiphenyl (Surrogate)	0.020270	58.3	40 - 120	7.19	7.171667	0.0183	+/-1.0	
Calibration Check (2021540-CCV2)			Lab File ID: 03DEC009.D		Analyzed: 12/03/20 16:35			
Decachlorobiphenyl (Surrogate)	60.000	90.0	85 - 115	7.2	7.171667	0.0283	+/-1.0	
Calibration Blank (2021540-CCB2)			Lab File ID: 03DEC010.D		Analyzed: 12/03/20 16:46			
Decachlorobiphenyl (Surrogate)			40 - 120		7.171667	Null Found	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104603
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration: 2103026

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104603-CAL1)			Lab File ID: 30NOV008.D		Analyzed: 11/30/20 18:24			
Decachlorobiphenyl (Surrogate)	24.000	91.7		7.17	7.171667	-0.0017	+/-1.0	
Cal Standard (2104603-CAL2)			Lab File ID: 30NOV009.D		Analyzed: 11/30/20 18:35			
Decachlorobiphenyl (Surrogate)	36.000	94.4		7.18	7.171667	0.0083	+/-1.0	
Cal Standard (2104603-CAL3)			Lab File ID: 30NOV010.D		Analyzed: 11/30/20 18:46			
Decachlorobiphenyl (Surrogate)	48.000	79.2		7.17	7.171667	-0.0017	+/-1.0	
Cal Standard (2104603-CAL4)			Lab File ID: 30NOV011.D		Analyzed: 11/30/20 18:56			
Decachlorobiphenyl (Surrogate)	60.000	108		7.17	7.171667	-0.0017	+/-1.0	
Cal Standard (2104603-CAL5)			Lab File ID: 30NOV012.D		Analyzed: 11/30/20 19:07			
Decachlorobiphenyl (Surrogate)	72.000	86.1		7.17	7.171667	-0.0017	+/-1.0	
Cal Standard (2104603-CAL6)			Lab File ID: 30NOV013.D		Analyzed: 11/30/20 19:18			
Decachlorobiphenyl (Surrogate)	84.000	104		7.17	7.171667	-0.0017	+/-1.0	
Initial Cal Check (2104603-ICV1)			Lab File ID: 30NOV014.D		Analyzed: 11/30/20 19:43			
Decachlorobiphenyl (Surrogate)	60.000	107	85 - 115	7.2	7.171667	0.0283	+/-1.0	
Initial Cal Blank (2104603-ICB1)			Lab File ID: 30NOV015.D		Analyzed: 11/30/20 19:55			
Decachlorobiphenyl (Surrogate)			40 - 120		7.171667	Null Found	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION STANDARDS

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104603
Calibration: 2103026

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0D06039	8082 PCB 1016/1260 IC-1	2104603-CAL1	30NOV008.D	11/30/20 18:24
0D06040	8082 PCB 1016/1260 IC-2	2104603-CAL2	30NOV009.D	11/30/20 18:35
0D06041	8082 PCB 1016/1260 IC-3	2104603-CAL3	30NOV010.D	11/30/20 18:46
0D06042	8082 PCB 1016/1260 IC-4	2104603-CAL4	30NOV011.D	11/30/20 18:56
0D06043	8082 PCB 1016/1260 IC-5	2104603-CAL5	30NOV012.D	11/30/20 19:07
0D06044	8082 PCB 1016/1260 IC-6	2104603-CAL6	30NOV013.D	11/30/20 19:18

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103026
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration Date: 11/30/20 18:24

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
PCB-1016	20	882438.5	100	643905.7	150	637605.6	250	711200	350	648857.1	500	722600
PCB-1260	20	1063177	100	952166.4	150	900666.7	250	1061200	350	903142.9	500	1081600
Decachlorobiphenyl (Surrogate)	24	1223170	36	1249740	48	1042877	60	1438920	72	1142043	84	1382143

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Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8082

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103026
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-14
Calibration Date: 11/30/20 18:24

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
PCB-1016	707767.8	13.13507	0	0			20	
PCB-1260	993658.7	8.502642					20	
Decachlorobiphenyl (Surrogate)	1246482	11.80997	7.171667	5.751817E-02			20	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

HOLDING TIME SUMMARY

EPA-8082

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-2	11/23/20 14:25	11/24/20 09:50	12/02/20 13:00	9.00	180.00	12/03/20 15:19	1.00	40.00	
VW-31-2	11/23/20 14:48	11/24/20 09:50	12/02/20 13:00	9.00	180.00	12/03/20 15:09	1.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument GC-14

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:03:46AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2034585

Laboratory Documentation Requirements
For Data Validation of
GC Analysis

Prepared By

BC Laboratories

For SMUD - Kleinfelder

60632793.6 SMUD SVM

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-8015B/FFP

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Case Narrative

Sample Receipt

Work Order: 2034585
COC Number:
Default Cooler was received at 2.5 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-8015B/FFP	GC-19

Sample Qualifier Summary

Chromatogram not typical of diesel.

Lab Number	Method	Analyte
2034585-01	EPA-8015B/FFP	TPH - Diesel (FFP)
2034585-02	EPA-8015B/FFP	TPH - Diesel (FFP)

Chromatogram not typical of motor oil.

Lab Number	Method	Analyte
2034585-01	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2034585-02	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil

The surrogate recovery for this compound was not within the control limits.

Lab Number	Method	Analyte
2034585-01	EPA-8015B/FFP	Tetracosane (Surrogate)

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The surrogate recovery for this compound was not within the control limits.

Lab Number	Method	Analyte
2021464-CCV1	EPA-8015B/FFP	Tetracosane (Surrogate)
2021464-CCV2	EPA-8015B/FFP	Tetracosane (Surrogate)
2021464-CCV3	EPA-8015B/FFP	Tetracosane (Surrogate)
2021464-CCV5	EPA-8015B/FFP	Tetracosane (Surrogate)

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B094055	EPA-8015B/FFP	2034773-04	<Not Client Sample>

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

AECOM
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Sacramento, California 95811, United States
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aecom.com

20-34585

RUSH! CHAIN OF CUSTODY RECORD 100802

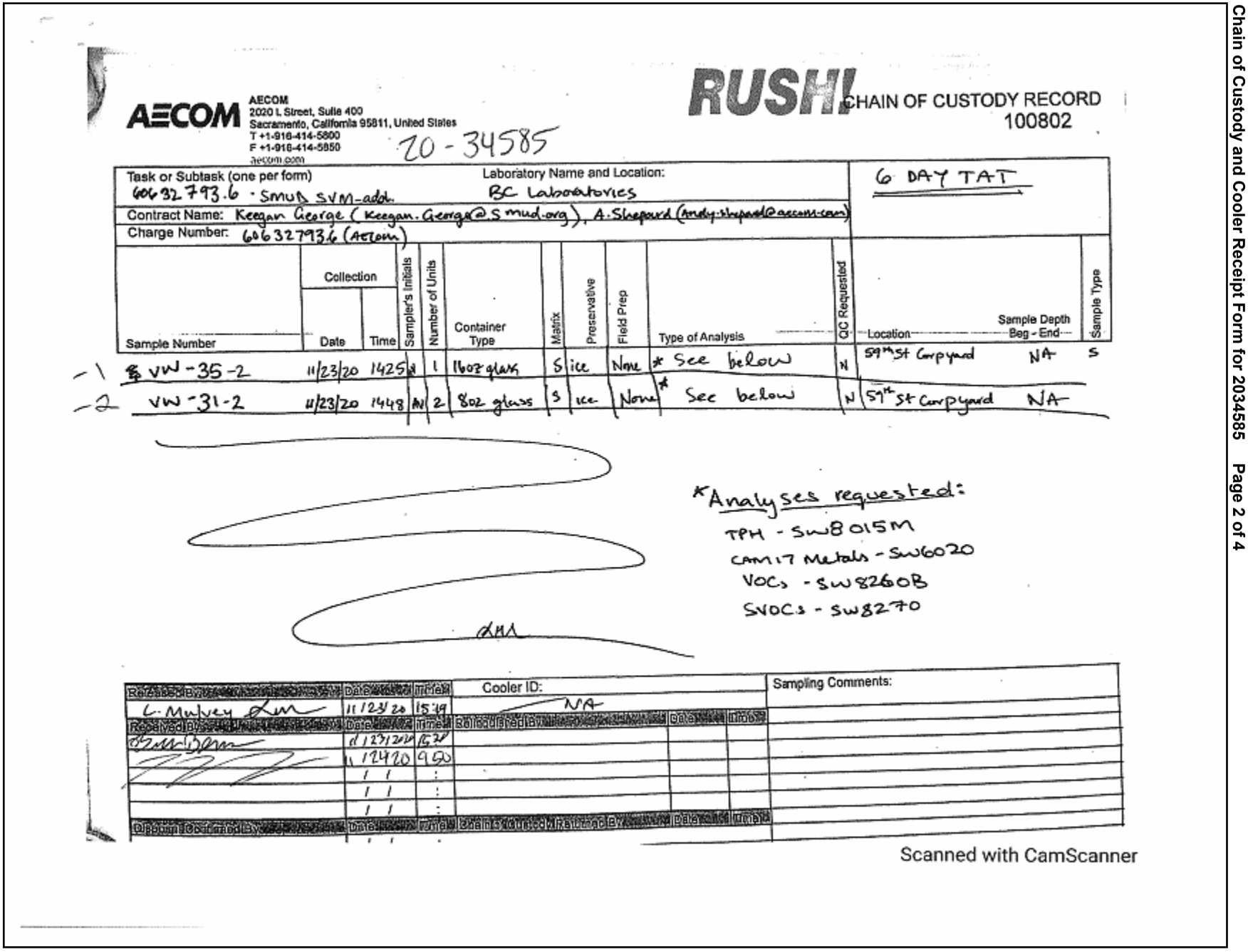
Task or Subtask (one per form): 60632793.6 - SMUD SVM-addl.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
1 SVW-35-2	11/23/20	1425	AN	1	160z glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
2 VW-31-2	11/23/20	1448	AN	2	80z glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270
* PCB's per client 11/24/20 see email

CHK BY
DISTRIBUTION
SUB OUT

Released By:	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:19	NA			
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
	11/23/2020	1620		11/23/2020	1600	
	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				



AECOM
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aecom.com

20-34585

RUSH! CHAIN OF CUSTODY RECORD
100802

Task or Subtask (one per form): 60632793.6 - SMUD SVM-addt.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@SMUD.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
-1 VW-35-2	11/23/20	1425	AH	1	160z glass	S	ice	None	* See below	N	59th St Carpyard	NA	S
-2 VW-31-2	11/23/20	1448	AH	2	80z glass	S	ice	None	* See below	N	59th St Carpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM 17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270

AMA

Relinquished By	Date	Time	Received By	Date	Time
L. Mulvey	11/23/20	15:19			
	11/23/20	1620			
	11/24/20	900			
	/ /	:			
	/ /	:			
	/ /	:			
Custody Sealed Upon Receipt	Date	Time	Chain of Custody Sealed	Date	Time
	/ /	:			

Cooler ID: NA

Sampling Comments:

Scanned with CamScanner

Mark Ellis 20-34585

From: Mulvey, Lucy <lucy.mulvey@aecom.com>
Sent: Monday, November 23, 2020 3:30 PM
To: Mark Ellis; Shepard, Andy (Sacramento); Kohlhardt, Robert
Subject: SMUD COC correction 11/23
Attachments: CoC- 11.23.20_1.pdf

Mark,

Please see attached CoC from earlier today. I didn't grab Bill before he left site. I forgot to include PCBs to the analyses list.
Please include PCBs by EPA method SW8082 to the existing list that includes TPH, Cam 17 metals, VOCs and SVOCs.

Thank you,

Lucy
Get Outlook for Android

1

Chain of Custody and Cooler Receipt Form for 2034585 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34585

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 11-24-20 950

Temperature: (A) 2.9 °C / (C) 2.5 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
~~8oz / 16oz / 32oz AMBER~~ JAR		AB								
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 11/24/20 1213

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **GC**
Method: **EPA-8015B/FFP**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-23-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: GC-19

Analyte	MDL	PQL	Units
TPH - Light Naptha	20	50	mg/kg
TPH - Aviation Gas	20	50	mg/kg
TPH - Stoddard Solvent	5	20	mg/kg
TPH - Heavy Naptha	5	10	mg/kg
TPH - Gasoline	5	20	mg/kg
TPH - Jet Fuel (JP4)	5	10	mg/kg
TPH - Jet Fuel (JP5)	4.6	10	mg/kg
TPH - Jet Fuel (JP8)	5	10	mg/kg
TPH - Kerosene	1.4	10	mg/kg
TPH - Diesel (FFP)	2.2	10	mg/kg
TPH - Fuel Oil #6	5	10	mg/kg
TPH - Crude Oil	2.8	20	mg/kg
TPH - Hydraulic Oil / Motor Oil	7	20	mg/kg
TPH - WD-40	5	10	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-01	File ID:	02DEC027.D
Sampled:	11/23/20 14:25	Prepared:	12/01/20 12:15	Analyzed:	12/02/20 17:30
Solids:		Preparation:	EPA 3550B	Initial/Final:	1.3 g / 5 ml
Batch:	B094055	Sequence:	2021464	Calibration:	2103018
Instrument:	GC-19				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	115	2300	UD
---	TPH - Aviation Gas	115	2300	UD
---	TPH - Stoddard Solvent	115	580	UD
---	TPH - Heavy Naptha	115	580	UD
---	TPH - Gasoline	115	580	UD
---	TPH - Jet Fuel (JP4)	115	580	UD
---	TPH - Jet Fuel (JP5)	115	530	UD
---	TPH - Jet Fuel (JP8)	115	580	UD
---	TPH - Kerosene	115	160	UD
---	TPH - Diesel (FFP)	115	630	JD
---	TPH - Fuel Oil #6	115	580	UD
---	TPH - Crude Oil	115	320	UD
---	TPH - Hydraulic Oil / Motor Oil	115	3500	D
---	TPH - WD-40	115	580	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	76.923	41.962	54.6	30 - 130	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-31-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-02	File ID:	02DEC028.D
Sampled:	11/23/20 14:48	Prepared:	12/01/20 12:15	Analyzed:	12/02/20 17:57
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.7 g / 5 ml
Batch:	B094055	Sequence:	2021464	Calibration:	2103018
Instrument:	GC-19				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1.01	20	U
---	TPH - Aviation Gas	1.01	20	U
---	TPH - Stoddard Solvent	1.01	5.0	U
---	TPH - Heavy Naptha	1.01	5.0	U
---	TPH - Gasoline	1.01	5.0	U
---	TPH - Jet Fuel (JP4)	1.01	5.0	U
---	TPH - Jet Fuel (JP5)	1.01	4.6	U
---	TPH - Jet Fuel (JP8)	1.01	5.0	U
---	TPH - Kerosene	1.01	1.4	U
---	TPH - Diesel (FFP)	1.01	6.3	J
---	TPH - Fuel Oil #6	1.01	5.0	U
---	TPH - Crude Oil	1.01	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1.01	29	
---	TPH - WD-40	1.01	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3670	1.7224	51.2	30 - 130	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B094055 Batch Matrix: Solids
Preparation: EPA 3550B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	02DEC027.D	12/01/20 12:15	
VW-31-2	2034585-02	02DEC028.D	12/01/20 12:15	
Blank	B094055-BLK1	02DEC001.D	12/01/20 12:15	
LCS	B094055-BS1	02DEC002.D	12/01/20 12:15	
Matrix Spike	B094055-MS1	02DEC003.D	12/01/20 12:15	
Matrix Spike Dup	B094055-MSD1	02DEC004.D	12/01/20 12:15	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8015B/FFP

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	B094055-BLK1	File ID:	02DEC001.D
Prepared:	12/01/20 12:15	Preparation:	EPA 3550B	Initial/Final:	30 g / 5 ml
Analyzed:	12/02/20 05:47	Instrument:	GC-19		
Batch:	B094055	Sequence:	2021464	Calibration:	2103018

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
---	TPH - Light Naptha	20	U
---	TPH - Aviation Gas	20	U
---	TPH - Stoddard Solvent	5.0	U
---	TPH - Heavy Naptha	5.0	U
---	TPH - Gasoline	5.0	U
---	TPH - Jet Fuel (JP4)	5.0	U
---	TPH - Jet Fuel (JP5)	4.6	U
---	TPH - Jet Fuel (JP8)	5.0	U
---	TPH - Kerosene	1.4	U
---	TPH - Diesel (FFP)	2.2	U
---	TPH - Fuel Oil #6	5.0	U
---	TPH - Crude Oil	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	7.0	U
---	TPH - WD-40	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3333	4.1957	126	30 - 130	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8015B/FFP

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B094055
Preparation: EPA 3550B
Source Sample Number: 2034773-04

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B094055-MS1
Initial/Final: 30.1 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	83.056	ND	58.582	70.5	52 - 131

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
TPH - Diesel (FFP)	83.333	70.656	84.8	18.7	30	52 - 131

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B094055
Laboratory ID: B094055-BS1
Preparation: EPA 3550B
Initial/Final: 29.6 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	84.459	81.183	96.1	64 - 124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021464
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-19
Calibration: 2103018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2021464-CCV5	01DEC050.D	12/02/20 03:59
Calibration Blank	2021464-CCB4	01DEC052.D	12/02/20 04:54
Blank	B094055-BLK1	02DEC001.D	12/02/20 05:47
LCS	B094055-BS1	02DEC002.D	12/02/20 06:14
Matrix Spike	B094055-MS1	02DEC003.D	12/02/20 06:41
Matrix Spike Dup	B094055-MSD1	02DEC004.D	12/02/20 07:08
Calibration Check	2021464-CCV1	02DEC011.D	12/02/20 10:11
Calibration Blank	2021464-CCB1	02DEC012.D	12/02/20 10:38
Calibration Check	2021464-CCV2	02DEC024.D	12/02/20 16:08
Calibration Blank	2021464-CCB2	02DEC025.D	12/02/20 16:35
VW-35-2	2034585-01	02DEC027.D	12/02/20 17:30
VW-31-2	2034585-02	02DEC028.D	12/02/20 17:57
Calibration Check	2021464-CCV3	02DEC037.D	12/02/20 22:03
Calibration Blank	2021464-CCB3	02DEC040.D	12/02/20 23:25

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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104507
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-19
Calibration: 2103018

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2104507-CAL6	26NOV019.D	11/26/19 17:01
Cal Standard	2104507-CAL5	26NOV020.D	11/26/19 17:28
Cal Standard	2104507-CAL4	26NOV021.D	11/26/19 17:55
Cal Standard	2104507-CAL3	26NOV022.D	11/26/19 18:22
Cal Standard	2104507-CAL2	26NOV023.D	11/26/19 18:50
Cal Standard	2104507-CAL1	26NOV024.D	11/26/19 19:18
Initial Cal Check	2104507-ICV1	26NOV026.D	11/26/19 20:13
Initial Cal Blank	2104507-ICB1	26NOV027.D	11/26/19 20:40

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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-19	Calibration:	2103018
Lab File ID:	01DEC050.D	Calibration Date:	11/26/19 17:01
Sequence:	2021464	Injection Date:	12/02/20
Lab Sample ID:	2021464-CCV5	Injection Time:	03:59

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	572280	20.04357	22.94104		14.5	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	884870	17.49338	15.47936		-11.5	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-19	Calibration:	2103018
Lab File ID:	02DEC011.D	Calibration Date:	11/26/19 17:01
Sequence:	2021464	Injection Date:	12/02/20
Lab Sample ID:	2021464-CCV1	Injection Time:	10:11

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	552210	20.04357	22.13664		10.4	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	860670	17.49338	15.05609		-13.9	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-19	Calibration:	2103018
Lab File ID:	02DEC024.D	Calibration Date:	11/26/19 17:01
Sequence:	2021464	Injection Date:	12/02/20
Lab Sample ID:	2021464-CCV2	Injection Time:	16:08

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	562370	20.04357	22.54394		12.5	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	889670	17.49338	15.56337		-11.0	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-19	Calibration:	2103018
Lab File ID:	02DEC037.D	Calibration Date:	11/26/19 17:01
Sequence:	2021464	Injection Date:	12/02/20
Lab Sample ID:	2021464-CCV3	Injection Time:	22:03

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	555140	20.04357	22.25402		11.0	15
TPH - Hydraulic Oil / Motor Oil	A	1000000	896260	17.49338	15.67858		-10.4	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	GC-19	Calibration:	2103018
Lab File ID:	26NOV026.D	Calibration Date:	11/26/19 17:01
Sequence:	2104507	Injection Date:	11/26/19
Lab Sample ID:	2104507-ICV1	Injection Time:	20:13

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	A	500000	502490	20.04357	20.14352		0.5	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021464
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-19
Calibration: 2103018

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2021464-CCV5)			Lab File ID: 01DEC050.D		Analyzed: 12/02/20 03:59			
Tetracosane (Surrogate)	20000	132	85 - 115	9.22	9.04	0.1800	+/-1.0	*
Calibration Blank (2021464-CCB4)			Lab File ID: 01DEC052.D		Analyzed: 12/02/20 04:54			
Tetracosane (Surrogate)			30 - 130		9.04	Null Found	+/-1.0	
Blank (B094055-BLK1)			Lab File ID: 02DEC001.D		Analyzed: 12/02/20 05:47			
Tetracosane (Surrogate)	3.3333	126	30 - 130	9.22	9.04	0.1800	+/-1.0	
LCS (B094055-BS1)			Lab File ID: 02DEC002.D		Analyzed: 12/02/20 06:14			
Tetracosane (Surrogate)	3.3784	128	30 - 130	9.22	9.04	0.1800	+/-1.0	
Matrix Spike (B094055-MS1)			Lab File ID: 02DEC003.D		Analyzed: 12/02/20 06:41			
Tetracosane (Surrogate)	3.3223	100	30 - 130	9.22	9.04	0.1800	+/-1.0	
Matrix Spike Dup (B094055-MSD1)			Lab File ID: 02DEC004.D		Analyzed: 12/02/20 07:08			
Tetracosane (Surrogate)	3.3333	128	30 - 130	9.22	9.04	0.1800	+/-1.0	
Calibration Check (2021464-CCV1)			Lab File ID: 02DEC011.D		Analyzed: 12/02/20 10:11			
Tetracosane (Surrogate)	20000	129	85 - 115	9.22	9.04	0.1800	+/-1.0	*
Calibration Blank (2021464-CCB1)			Lab File ID: 02DEC012.D		Analyzed: 12/02/20 10:38			
Tetracosane (Surrogate)			30 - 130		9.04	Null Found	+/-1.0	
Calibration Check (2021464-CCV2)			Lab File ID: 02DEC024.D		Analyzed: 12/02/20 16:08			
Tetracosane (Surrogate)	20000	130	85 - 115	9.23	9.04	0.1900	+/-1.0	*
Calibration Blank (2021464-CCB2)			Lab File ID: 02DEC025.D		Analyzed: 12/02/20 16:35			
Tetracosane (Surrogate)			30 - 130		9.04	Null Found	+/-1.0	
VW-35-2 (2034585-01)			Lab File ID: 02DEC027.D		Analyzed: 12/02/20 17:30			
Tetracosane (Surrogate)	76.923	54.6	30 - 130	9.23	9.04	0.1900	+/-1.0	
VW-31-2 (2034585-02)			Lab File ID: 02DEC028.D		Analyzed: 12/02/20 17:57			
Tetracosane (Surrogate)	3.3670	51.2	30 - 130	9.23	9.04	0.1900	+/-1.0	
Calibration Check (2021464-CCV3)			Lab File ID: 02DEC037.D		Analyzed: 12/02/20 22:03			
Tetracosane (Surrogate)	20000	131	85 - 115	9.23	9.04	0.1900	+/-1.0	*

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2021464	Instrument:	GC-19
Matrix:	Solids	Calibration:	2103018

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Blank (2021464-CCB3)			Lab File ID: 02DEC040.D		Analyzed: 12/02/20 23:25			
Tetracosane (Surrogate)			30 - 130		9.04	Null Found	+/-1.0	

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Reported: 3/23/2021 10:09:17AM
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Sequence: 2104507
Instrument: GC-19
Matrix: Solids
Calibration: 2103018

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104507-CAL6)			Lab File ID: 26NOV019.D		Analyzed: 11/26/19 17:01			
Tetracosane (Surrogate)	40000	105		9.04	9.04	0.0000	+/-1.0	
Cal Standard (2104507-CAL5)			Lab File ID: 26NOV020.D		Analyzed: 11/26/19 17:28			
Tetracosane (Surrogate)	30000	115		9.04	9.04	0.0000	+/-1.0	
Cal Standard (2104507-CAL4)			Lab File ID: 26NOV021.D		Analyzed: 11/26/19 17:55			
Tetracosane (Surrogate)	20000	104		9.04	9.04	0.0000	+/-1.0	
Cal Standard (2104507-CAL3)			Lab File ID: 26NOV022.D		Analyzed: 11/26/19 18:22			
Tetracosane (Surrogate)	10000	128		9.04	9.04	0.0000	+/-1.0	
Cal Standard (2104507-CAL2)			Lab File ID: 26NOV023.D		Analyzed: 11/26/19 18:50			
Tetracosane (Surrogate)	5000.0	135		9.04	9.04	0.0000	+/-1.0	
Cal Standard (2104507-CAL1)			Lab File ID: 26NOV024.D		Analyzed: 11/26/19 19:18			
Tetracosane (Surrogate)	2000.0	199		9.04	9.04	0.0000	+/-1.0	
Initial Cal Check (2104507-ICV1)			Lab File ID: 26NOV026.D		Analyzed: 11/26/19 20:13			
Tetracosane (Surrogate)	20000	94.7	85 - 115	9.04	9.04	0.0000	+/-1.0	
Initial Cal Blank (2104507-ICB1)			Lab File ID: 26NOV027.D		Analyzed: 11/26/19 20:40			
Tetracosane (Surrogate)			30 - 130		9.04	Null Found	+/-1.0	

SMUD - Kleinfelder
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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION STANDARDS

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104507
Calibration: 2103018

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-19

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
9C11010	8015M Diesel/MOTOR OIL IC6	2104507-CAL6	26NOV019.D	11/26/19 17:01
9C11011	8015M Diesel/MOTOR OIL IC5	2104507-CAL5	26NOV020.D	11/26/19 17:28
9C11012	8015M Diesel/MOTOR OIL IC4	2104507-CAL4	26NOV021.D	11/26/19 17:55
9C11013	8015M Diesel/MOTOR OIL IC3	2104507-CAL3	26NOV022.D	11/26/19 18:22
9C11014	8015M Diesel/MOTOR OIL IC2	2104507-CAL2	26NOV023.D	11/26/19 18:50
9C11015	8015M Diesel/MOTOR OIL IC1	2104507-CAL1	26NOV024.D	11/26/19 19:18

SMUD - Kleinfelder
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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Calibration: 2103018
Instrument: GC-19
Matrix: Solids
Calibration Date: 11/26/19 17:01

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
TPH - Diesel (FFP)	40000	17.31555	200000	19.10364	400000	22.32258	500000	20.14134	800000	22.1769	1000000	19.20142
TPH - Hydraulic Oil / Motor Oil	100000	18.58497	500000	17.42934	800000	17.94631	1000000	17.48541	1500000	17.83647	2000000	15.67779
Tetracosane (Surrogate)	2000	33.662	5000	22.8192	10000	21.6494	20000	17.62055	30000	19.5123	40000	17.75242

SMUD - Kleinfelder
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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103018
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: GC-19
Calibration Date: 11/26/19 17:01

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
TPH - Diesel (FFP)	20.04357	9.671538	7.08	1.603628E-02			20	
TPH - Hydraulic Oil / Motor Oil	17.49338	5.609672	11.68	1.302511E-02			20	
Tetracosane (Surrogate)	22.16931	27.06702	9.04	2.281919E-02	0.9935494		0.99	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

HOLDING TIME SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-2	11/23/20 14:25	11/24/20 09:50	12/01/20 12:15	8.00	14.00	12/02/20 17:30	1.00	40.00	
VW-31-2	11/23/20 14:48	11/24/20 09:50	12/01/20 12:15	8.00	14.00	12/02/20 17:57	1.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

SMUD - Kleinfelder
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Reported: 3/23/2021 10:09:17AM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2034585

Laboratory Documentation Requirements
For Data Validation of
Volatiles Analysis

Prepared By

BC Laboratories

For SMUD - Kleinfelder

60632793.6 SMUD SVM

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-8260B

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Case Narrative

Sample Receipt

Work Order: 2034585
COC Number:
Default Cooler was received at 2.5 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-8260B	MS-V17

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

The Initial Calibration Verification (ICV) recovery is not within established control limits.

Lab Number	Method	Analyte
2021261-ICV1	EPA-8260B	Dichlorodifluoromethane
2021261-ICV1	EPA-8260B	1,1-Dichloroethene

The Continuing Calibration Verification (CCV) recovery was not within established control limits.

Lab Number	Method	Analyte
2021261-CCV3	EPA-8260B	Total Purgeable Petroleum Hydrocarbons
2021261-CCV6	EPA-8260B	Total Purgeable Petroleum Hydrocarbons

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B093879	EPA-8260B	2034722-50	<Not Client Sample>

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Discussion

For sequence 2021261- the ending CCV6 flag listed above is irrelevant. The CCV acceptance criteria is based on 20% forbeginning CCV and 50% for the ending CCV.
For sequence 2021261 regular Initial calibration standards curve and second source ICV standard were analyzed on 11/30/2020. The second source ICV standard had failed for Dichlorodifluoromethane and 1,1-Dichloroethene. The confirmation second source ICV standard was not reanalyzed.

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20-34585

RUSH! CHAIN OF CUSTODY RECORD 100802

Task or Subtask (one per form): 60632793.6 - SMUD SVM-add.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.Shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
1 SVW-35-2	11/23/20	1425	AN	1	160z glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
2 VW-31-2	11/23/20	1448	AN	2	80z glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270
* PCB's per client 11/24/20 see email

CHK BY
DISTRIBUTION
SUB OUT

Released By:	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:19	NA			
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
	11/23/2020	1620		11/23/2020	1600	
	11/24/20	9:50				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				

AECOM
AECOM
2020 L Street, Suite 400
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RUSH!

CHAIN OF CUSTODY RECORD
100802

20-34585

Task or Subtask (one per form): 60632793.6 · SMUD SVM-add.
Laboratory Name and Location: BC Laboratories
6 DAY TAT
Contract Name: Keegan George (Keegan.George@smud.org), A. Shepard (Andy.shepard@aecom.com)
Charge Number: 60632793.6 (AECOM)

	Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
-1	VW-35-2	11/23/20	1425	AN	1	16oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	S
-2	VW-31-2	11/23/20	1448	AN	2	8oz glass	S	ice	None	* See below	N	59th St Corpyard	NA	

*Analyses requested:
TPH - SW8015M
CAM17 Metals - SW6020
VOCs - SW8260B
SVOCs - SW8270

Released By	Date	Time	Cooler ID:			Sampling Comments:
L. Mulvey	11/23/20	15:49	NA			
Received By	Date	Time	Relinquished By	Date	Time	
[signature]	11/23/2020	1530				
[signature]	11/24/20	950				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By	Date	Time	Chain of Custody Returned By	Date	Time	
	/ /	:				

Scanned with CamScanner

Mark Ellis 20-34585

From: Mulvey, Lucy <lucy.mulvey@aecom.com>
Sent: Monday, November 23, 2020 3:30 PM
To: Mark Ellis; Shepard, Andy (Sacramento); Kohlhardt, Robert
Subject: SMUD COC correction 11/23
Attachments: CoC- 11.23.20_1.pdf

Mark,

Please see attached CoC from earlier today. I didn't grab Bill before he left site. I forgot to include PCBs to the analyses list.
Please include PCBs by EPA method SW8082 to the existing list that includes TPH, Cam 17 metals, VOCs and SVOCs.

Thank you,

Lucy
Get Outlook for Android

1

Chain of Custody and Cooler Receipt Form for 2034585 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34585

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: Glass Thermometer ID: 274 Date/Time 11-24-20 950

Temperature: (A) 2.9 °C / (C) 2.5 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
~~8oz / 16oz / 32oz AMBER~~ JAR		AB								
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 11/24/20 1213

A = Actual / C = Corrected

Rev 21 05/23/2016
(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2034585**
Class: **VOA**
Method: **EPA-8260B**

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSES DATA PACKAGE COVER PAGE

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
SDG: 2034585
Project: SMUD Soil Samples-CLP

Client Sample Id:	Lab Sample Id:
VW-35-2	2034585-01
VW-31-2	2034585-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 03-31-2021
Title: QA/QC Manager

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-V17

Analyte	MDL	PQL	Units
Benzene	0.00067	0.0050	mg/kg
Bromobenzene	0.00087	0.0050	mg/kg
Bromochloromethane	0.00081	0.0050	mg/kg
Bromodichloromethane	0.00078	0.0050	mg/kg
Bromoform	0.00070	0.0050	mg/kg
Bromomethane	0.0017	0.0050	mg/kg
n-Butylbenzene	0.00076	0.0050	mg/kg
sec-Butylbenzene	0.00071	0.0050	mg/kg
tert-Butylbenzene	0.00085	0.0050	mg/kg
Carbon tetrachloride	0.00078	0.0050	mg/kg
Chlorobenzene	0.00077	0.0050	mg/kg
Chloroethane	0.0011	0.0050	mg/kg
Chloroform	0.00090	0.0050	mg/kg
Chloromethane	0.0011	0.0050	mg/kg
2-Chlorotoluene	0.00087	0.0050	mg/kg
4-Chlorotoluene	0.00070	0.0050	mg/kg
Dibromochloromethane	0.00080	0.0050	mg/kg
1,2-Dibromo-3-chloropropane	0.00096	0.0050	mg/kg
1,2-Dibromoethane	0.00082	0.0050	mg/kg
Dibromomethane	0.0014	0.0050	mg/kg
1,2-Dichlorobenzene	0.00079	0.0050	mg/kg
1,3-Dichlorobenzene	0.00073	0.0050	mg/kg
1,4-Dichlorobenzene	0.00073	0.0050	mg/kg
Dichlorodifluoromethane	0.00079	0.0050	mg/kg
1,1-Dichloroethane	0.00064	0.0050	mg/kg
1,2-Dichloroethane	0.00073	0.0050	mg/kg
1,1-Dichloroethene	0.0011	0.0050	mg/kg
cis-1,2-Dichloroethene	0.00054	0.0050	mg/kg
trans-1,2-Dichloroethene	0.0037	0.0050	mg/kg
Total 1,2-Dichloroethene	0.0043	0.010	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-V17

Analyte	MDL	PQL	Units
1,2-Dichloropropane	0.00080	0.0050	mg/kg
1,3-Dichloropropane	0.00067	0.0050	mg/kg
2,2-Dichloropropane	0.00067	0.0050	mg/kg
1,1-Dichloropropene	0.00067	0.0050	mg/kg
cis-1,3-Dichloropropene	0.00058	0.0050	mg/kg
trans-1,3-Dichloropropene	0.00066	0.0050	mg/kg
Total 1,3-Dichloropropene	0.0013	0.010	mg/kg
Ethylbenzene	0.00069	0.0050	mg/kg
Hexachlorobutadiene	0.00067	0.0050	mg/kg
Isopropylbenzene	0.00080	0.0050	mg/kg
p-Isopropyltoluene	0.00059	0.0050	mg/kg
Methylene chloride	0.0011	0.010	mg/kg
Methyl t-butyl ether	0.00056	0.0050	mg/kg
Naphthalene	0.00099	0.0050	mg/kg
n-Propylbenzene	0.00071	0.0050	mg/kg
Styrene	0.00062	0.0050	mg/kg
1,1,1,2-Tetrachloroethane	0.00095	0.0050	mg/kg
1,1,2,2-Tetrachloroethane	0.00084	0.0050	mg/kg
Tetrachloroethene	0.00097	0.0050	mg/kg
Toluene	0.00069	0.0050	mg/kg
1,2,3-Trichlorobenzene	0.0015	0.0050	mg/kg
1,2,4-Trichlorobenzene	0.0014	0.0050	mg/kg
1,1,1-Trichloroethane	0.00067	0.0050	mg/kg
1,1,2-Trichloroethane	0.00094	0.0050	mg/kg
Trichloroethene	0.00074	0.0050	mg/kg
Trichlorofluoromethane	0.0015	0.0050	mg/kg
1,2,3-Trichloropropane	0.0019	0.0050	mg/kg
1,1,2-Trichloro-1,2,2-trifluoroethane	0.0010	0.0050	mg/kg
1,2,4-Trimethylbenzene	0.00080	0.0050	mg/kg
1,3,5-Trimethylbenzene	0.00066	0.0050	mg/kg

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD DETECTION AND REPORTING LIMITS

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Instrument: MS-V17

Analyte	MDL	PQL	Units
Vinyl chloride	0.00059	0.0050	mg/kg
Total Xylenes	0.0025	0.010	mg/kg
Total Purgeable Petroleum Hydrocarbon	0.058	0.20	mg/kg

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: 01DEC019.D
Sampled: 11/23/20 14:25
Prepared: 12/01/20 09:27
Analyzed: 12/01/20 15:06
Solids:
Preparation: EPA 5030 Soil MS
Initial/Final: 5 g / 5 ml
Batch: B093879
Sequence: 2021261
Calibration: 2103021
Instrument: MS-V17

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
71-43-2	Benzene	1	0.00067	U
108-86-1	Bromobenzene	1	0.00087	U
74-97-5	Bromochloromethane	1	0.00081	U
75-27-4	Bromodichloromethane	1	0.00078	U
75-25-2	Bromoform	1	0.00070	U
74-83-9	Bromomethane	1	0.0017	U
104-51-8	n-Butylbenzene	1	0.00076	U
135-98-8	sec-Butylbenzene	1	0.00071	U
98-06-6	tert-Butylbenzene	1	0.00085	U
56-23-5	Carbon tetrachloride	1	0.00078	U
108-90-7	Chlorobenzene	1	0.00077	U
75-00-3	Chloroethane	1	0.0011	U
67-66-3	Chloroform	1	0.00090	U
74-87-3	Chloromethane	1	0.0011	U
95-49-8	2-Chlorotoluene	1	0.00087	U
106-43-4	4-Chlorotoluene	1	0.00070	U
124-48-1	Dibromochloromethane	1	0.00080	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.00096	U
106-93-4	1,2-Dibromoethane	1	0.00082	U
74-95-3	Dibromomethane	1	0.0014	U
95-50-1	1,2-Dichlorobenzene	1	0.00079	U
541-73-1	1,3-Dichlorobenzene	1	0.00073	U
106-46-7	1,4-Dichlorobenzene	1	0.00073	U
75-71-8	Dichlorodifluoromethane	1	0.00079	U
75-34-3	1,1-Dichloroethane	1	0.00064	U
107-06-2	1,2-Dichloroethane	1	0.00073	U
75-35-4	1,1-Dichloroethene	1	0.0011	U
156-59-2	cis-1,2-Dichloroethene	1	0.00054	U
156-60-5	trans-1,2-Dichloroethene	1	0.0037	U
540-59-0	Total 1,2-Dichloroethene	1	0.0043	U
78-87-5	1,2-Dichloropropane	1	0.00080	U
142-28-9	1,3-Dichloropropane	1	0.00067	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-35-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-01
File ID: 01DEC019.D
Sampled: 11/23/20 14:25
Prepared: 12/01/20 09:27
Analyzed: 12/01/20 15:06
Solids:
Preparation: EPA 5030 Soil MS
Initial/Final: 5 g / 5 ml
Batch: B093879
Sequence: 2021261
Calibration: 2103021
Instrument: MS-V17

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
594-20-7	2,2-Dichloropropane	1	0.00067	U
563-58-6	1,1-Dichloropropene	1	0.00067	U
10061-01-5	cis-1,3-Dichloropropene	1	0.00058	U
10061-02-6	trans-1,3-Dichloropropene	1	0.00066	U
542-75-6	Total 1,3-Dichloropropene	1	0.0013	U
100-41-4	Ethylbenzene	1	0.00069	U
87-68-3	Hexachlorobutadiene	1	0.00067	U
98-82-8	Isopropylbenzene	1	0.00080	U
99-87-6	p-Isopropyltoluene	1	0.00059	U
75-09-2	Methylene chloride	1	0.0011	U
1634-04-4	Methyl t-butyl ether	1	0.00056	U
91-20-3	Naphthalene	1	0.00099	U
103-65-1	n-Propylbenzene	1	0.00071	U
100-42-5	Styrene	1	0.00062	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.00095	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.00084	U
127-18-4	Tetrachloroethene	1	0.0017	J
108-88-3	Toluene	1	0.00069	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0015	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0014	U
71-55-6	1,1,1-Trichloroethane	1	0.00067	U
79-00-5	1,1,2-Trichloroethane	1	0.00094	U
79-01-6	Trichloroethene	1	0.00074	U
75-69-4	Trichlorofluoromethane	1	0.0015	U
96-18-4	1,2,3-Trichloropropane	1	0.0019	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1	0.0010	U
95-63-6	1,2,4-Trimethylbenzene	1	0.00080	U
108-67-8	1,3,5-Trimethylbenzene	1	0.00066	U
75-01-4	Vinyl chloride	1	0.00059	U
1330-20-7	Total Xylenes	1	0.0025	U
---	Total Purgeable Petroleum Hydrocarbons	1	0.058	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-35-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-01	File ID:	01DEC019.D
Sampled:	11/23/20 14:25	Prepared:	12/01/20 09:27	Analyzed:	12/01/20 15:06
Solids:		Preparation:	EPA 5030 Soil MS	Initial/Final:	5 g / 5 ml
Batch:	B093879	Sequence:	2021261	Calibration:	2103021
Instrument:	MS-V17				

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	0.050000	0.052680	105	70 - 121	
Toluene-d8 (Surrogate)	0.050000	0.047930	95.9	81 - 117	
4-Bromofluorobenzene (Surrogate)	0.050000	0.045550	91.1	74 - 121	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	144091	6.81	143582	6.8	
Chlorobenzene-d5 (IS)	50601	9.77	51106	9.77	
1,4-Difluorobenzene (IS)	178303	7.58	164056	7.58	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 01DEC020.D
Sampled: 11/23/20 14:48
Prepared: 12/01/20 09:27
Analyzed: 12/01/20 15:27
Solids:
Preparation: EPA 5030 Soil MS
Initial/Final: 5 g / 5 ml
Batch: B093879
Sequence: 2021261
Calibration: 2103021
Instrument: MS-V17

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
71-43-2	Benzene	1	0.00067	U
108-86-1	Bromobenzene	1	0.00087	U
74-97-5	Bromochloromethane	1	0.00081	U
75-27-4	Bromodichloromethane	1	0.00078	U
75-25-2	Bromoform	1	0.00070	U
74-83-9	Bromomethane	1	0.0017	U
104-51-8	n-Butylbenzene	1	0.00076	U
135-98-8	sec-Butylbenzene	1	0.00071	U
98-06-6	tert-Butylbenzene	1	0.00085	U
56-23-5	Carbon tetrachloride	1	0.00078	U
108-90-7	Chlorobenzene	1	0.00077	U
75-00-3	Chloroethane	1	0.0011	U
67-66-3	Chloroform	1	0.00090	U
74-87-3	Chloromethane	1	0.0011	U
95-49-8	2-Chlorotoluene	1	0.00087	U
106-43-4	4-Chlorotoluene	1	0.00070	U
124-48-1	Dibromochloromethane	1	0.00080	U
96-12-8	1,2-Dibromo-3-chloropropane	1	0.00096	U
106-93-4	1,2-Dibromoethane	1	0.00082	U
74-95-3	Dibromomethane	1	0.0014	U
95-50-1	1,2-Dichlorobenzene	1	0.00079	U
541-73-1	1,3-Dichlorobenzene	1	0.00073	U
106-46-7	1,4-Dichlorobenzene	1	0.00073	U
75-71-8	Dichlorodifluoromethane	1	0.00079	U
75-34-3	1,1-Dichloroethane	1	0.00064	U
107-06-2	1,2-Dichloroethane	1	0.00073	U
75-35-4	1,1-Dichloroethene	1	0.0011	U
156-59-2	cis-1,2-Dichloroethene	1	0.00054	U
156-60-5	trans-1,2-Dichloroethene	1	0.0037	U
540-59-0	Total 1,2-Dichloroethene	1	0.0043	U
78-87-5	1,2-Dichloropropane	1	0.00080	U
142-28-9	1,3-Dichloropropane	1	0.00067	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-31-2

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Laboratory ID: 2034585-02
File ID: 01DEC020.D
Sampled: 11/23/20 14:48
Prepared: 12/01/20 09:27
Analyzed: 12/01/20 15:27
Solids:
Preparation: EPA 5030 Soil MS
Initial/Final: 5 g / 5 ml
Batch: B093879
Sequence: 2021261
Calibration: 2103021
Instrument: MS-V17

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
594-20-7	2,2-Dichloropropane	1	0.00067	U
563-58-6	1,1-Dichloropropene	1	0.00067	U
10061-01-5	cis-1,3-Dichloropropene	1	0.00058	U
10061-02-6	trans-1,3-Dichloropropene	1	0.00066	U
542-75-6	Total 1,3-Dichloropropene	1	0.0013	U
100-41-4	Ethylbenzene	1	0.00069	U
87-68-3	Hexachlorobutadiene	1	0.00067	U
98-82-8	Isopropylbenzene	1	0.00080	U
99-87-6	p-Isopropyltoluene	1	0.00059	U
75-09-2	Methylene chloride	1	0.0011	U
1634-04-4	Methyl t-butyl ether	1	0.00056	U
91-20-3	Naphthalene	1	0.00099	U
103-65-1	n-Propylbenzene	1	0.00071	U
100-42-5	Styrene	1	0.00062	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.00095	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.00084	U
127-18-4	Tetrachloroethene	1	0.00097	U
108-88-3	Toluene	1	0.00069	U
87-61-6	1,2,3-Trichlorobenzene	1	0.0015	U
120-82-1	1,2,4-Trichlorobenzene	1	0.0014	U
71-55-6	1,1,1-Trichloroethane	1	0.00067	U
79-00-5	1,1,2-Trichloroethane	1	0.00094	U
79-01-6	Trichloroethene	1	0.00074	U
75-69-4	Trichlorofluoromethane	1	0.0015	U
96-18-4	1,2,3-Trichloropropane	1	0.0019	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1	0.0010	U
95-63-6	1,2,4-Trimethylbenzene	1	0.00080	U
108-67-8	1,3,5-Trimethylbenzene	1	0.00066	U
75-01-4	Vinyl chloride	1	0.00059	U
1330-20-7	Total Xylenes	1	0.0025	U
---	Total Purgeable Petroleum Hydrocarbons	1	0.058	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ORGANIC ANALYSIS DATA SHEET
EPA-8260B

VW-31-2

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	2034585-02	File ID:	01DEC020.D
Sampled:	11/23/20 14:48	Prepared:	12/01/20 09:27	Analyzed:	12/01/20 15:27
Solids:		Preparation:	EPA 5030 Soil MS	Initial/Final:	5 g / 5 ml
Batch:	B093879	Sequence:	2021261	Calibration:	2103021
Instrument:	MS-V17				

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	0.050000	0.053540	107	70 - 121	
Toluene-d8 (Surrogate)	0.050000	0.049370	98.7	81 - 117	
4-Bromofluorobenzene (Surrogate)	0.050000	0.047280	94.6	74 - 121	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	146289	6.81	143582	6.8	
Chlorobenzene-d5 (IS)	53687	9.77	51106	9.77	
1,4-Difluorobenzene (IS)	178879	7.58	164056	7.58	

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

PREPARATION BATCH SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Batch: B093879 Batch Matrix: Solids
Preparation: EPA 5030 Soil MS

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-2	2034585-01	01DEC019.D	12/01/20 09:27	VOCs + TPHg
VW-31-2	2034585-02	01DEC020.D	12/01/20 09:27	VOCs + TPHg
Blank	B093879-BLK1	01DEC009.D	12/01/20 09:27	
LCS	B093879-BS1	01DEC011.D	12/01/20 09:27	
Matrix Spike	B093879-MS1	01DEC012.D	12/01/20 09:27	
Matrix Spike Dup	B093879-MSD1	01DEC013.D	12/01/20 09:27	

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories			SDG:	2034585
Client:	SMUD - Kleinfelder			Project:	SMUD Soil Samples-CLP
Matrix:	Solids	Laboratory ID:	B093879-BLK1	File ID:	01DEC009.D
Prepared:	12/01/20 09:27	Preparation:	EPA 5030 Soil MS	Initial/Final:	5 g / 5 ml
Analyzed:	12/01/20 11:37	Instrument:	MS-V17		
Batch:	B093879	Sequence:	2021261	Calibration:	2103021

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
71-43-2	Benzene	0.00067	U
108-86-1	Bromobenzene	0.00087	U
74-97-5	Bromochloromethane	0.00081	U
75-27-4	Bromodichloromethane	0.00078	U
75-25-2	Bromoform	0.00070	U
74-83-9	Bromomethane	0.0017	U
104-51-8	n-Butylbenzene	0.00076	U
135-98-8	sec-Butylbenzene	0.00071	U
98-06-6	tert-Butylbenzene	0.00085	U
56-23-5	Carbon tetrachloride	0.00078	U
108-90-7	Chlorobenzene	0.00077	U
75-00-3	Chloroethane	0.0011	U
67-66-3	Chloroform	0.00090	U
74-87-3	Chloromethane	0.0011	U
95-49-8	2-Chlorotoluene	0.00087	U
106-43-4	4-Chlorotoluene	0.00070	U
124-48-1	Dibromochloromethane	0.00080	U
96-12-8	1,2-Dibromo-3-chloropropane	0.00096	U
106-93-4	1,2-Dibromoethane	0.00082	U
74-95-3	Dibromomethane	0.0014	U
95-50-1	1,2-Dichlorobenzene	0.00079	U
541-73-1	1,3-Dichlorobenzene	0.00073	U
106-46-7	1,4-Dichlorobenzene	0.00073	U
75-71-8	Dichlorodifluoromethane	0.00079	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B093879-BLK1	File ID:	01DEC009.D
Prepared:	12/01/20 09:27	Preparation:	EPA 5030 Soil MS	Initial/Final:	5 g / 5 ml
Analyzed:	12/01/20 11:37	Instrument:	MS-V17		
Batch:	B093879	Sequence:	2021261	Calibration:	2103021

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
75-34-3	1,1-Dichloroethane	0.00064	U
107-06-2	1,2-Dichloroethane	0.00073	U
75-35-4	1,1-Dichloroethene	0.0011	U
156-59-2	cis-1,2-Dichloroethene	0.00054	U
156-60-5	trans-1,2-Dichloroethene	0.0037	U
540-59-0	Total 1,2-Dichloroethene	0.0043	U
78-87-5	1,2-Dichloropropane	0.00080	U
142-28-9	1,3-Dichloropropane	0.00067	U
594-20-7	2,2-Dichloropropane	0.00067	U
563-58-6	1,1-Dichloropropene	0.00067	U
10061-01-5	cis-1,3-Dichloropropene	0.00058	U
10061-02-6	trans-1,3-Dichloropropene	0.00066	U
542-75-6	Total 1,3-Dichloropropene	0.0013	U
100-41-4	Ethylbenzene	0.00069	U
87-68-3	Hexachlorobutadiene	0.00067	U
98-82-8	Isopropylbenzene	0.00080	U
99-87-6	p-Isopropyltoluene	0.00059	U
75-09-2	Methylene chloride	0.0011	U
1634-04-4	Methyl t-butyl ether	0.00056	U
91-20-3	Naphthalene	0.00099	U
103-65-1	n-Propylbenzene	0.00071	U
100-42-5	Styrene	0.00062	U
630-20-6	1,1,1,2-Tetrachloroethane	0.00095	U
79-34-5	1,1,2,2-Tetrachloroethane	0.00084	U

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

METHOD BLANK DATA SHEET
EPA-8260B

Laboratory:	BC Laboratories		SDG:	2034585	
Client:	SMUD - Kleinfelder		Project:	SMUD Soil Samples-CLP	
Matrix:	Solids	Laboratory ID:	B093879-BLK1	File ID:	01DEC009.D
Prepared:	12/01/20 09:27	Preparation:	EPA 5030 Soil MS	Initial/Final:	5 g / 5 ml
Analyzed:	12/01/20 11:37	Instrument:	MS-V17		
Batch:	B093879	Sequence:	2021261	Calibration:	2103021

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
127-18-4	Tetrachloroethene	0.00097	U
108-88-3	Toluene	0.00069	U
87-61-6	1,2,3-Trichlorobenzene	0.0015	U
120-82-1	1,2,4-Trichlorobenzene	0.0014	U
71-55-6	1,1,1-Trichloroethane	0.00067	U
79-00-5	1,1,2-Trichloroethane	0.00094	U
79-01-6	Trichloroethene	0.00074	U
75-69-4	Trichlorofluoromethane	0.0015	U
96-18-4	1,2,3-Trichloropropane	0.0019	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.0010	U
95-63-6	1,2,4-Trimethylbenzene	0.00080	U
108-67-8	1,3,5-Trimethylbenzene	0.00066	U
75-01-4	Vinyl chloride	0.00059	U
1330-20-7	Total Xylenes	0.0025	U
---	Total Purgeable Petroleum Hydrocarbons	0.058	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
1,2-Dichloroethane-d4 (Surrogate)	0.050000	0.045300	90.6	70 - 121	
Toluene-d8 (Surrogate)	0.050000	0.049190	98.4	81 - 117	
4-Bromofluorobenzene (Surrogate)	0.050000	0.046270	92.5	74 - 121	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	185209	6.81	143582	6.8	
Chlorobenzene-d5 (IS)	65767	9.77	51106	9.77	
1,4-Difluorobenzene (IS)	220645	7.58	164056	7.58	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8260B

Matrix Spike

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Matrix: Solids
Batch: B093879
Preparation: EPA 5030 Soil MS
Source Sample Number: 2034722-50

SDG: 2034585
Project: SMUD Soil Samples-CLP
Laboratory ID: B093879-MS1
Initial/Final: 5 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Benzene	0.12500	ND	0.14180	113	70 - 130
Bromodichloromethane	0.12500	ND	0.12932	103	70 - 130
Chlorobenzene	0.12500	ND	0.13649	109	70 - 130
Chloroethane	0.12500	ND	0.12392	99.1	70 - 130
1,4-Dichlorobenzene	0.12500	ND	0.12834	103	70 - 130
1,1-Dichloroethane	0.12500	ND	0.13557	108	70 - 130
1,1-Dichloroethene	0.12500	ND	0.13025	104	70 - 130
Toluene	0.12500	ND	0.13282	106	70 - 130
Trichloroethene	0.12500	ND	0.13241	106	70 - 130

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	0.12500	0.14268	114	0.619	20	70 - 130
Bromodichloromethane	0.12500	0.12836	103	0.745	20	70 - 130
Chlorobenzene	0.12500	0.13859	111	1.53	20	70 - 130
Chloroethane	0.12500	0.12608	101	1.73	20	70 - 130
1,4-Dichlorobenzene	0.12500	0.13389	107	4.23	20	70 - 130
1,1-Dichloroethane	0.12500	0.13617	109	0.442	20	70 - 130
1,1-Dichloroethene	0.12500	0.12910	103	0.887	20	70 - 130
Toluene	0.12500	0.13495	108	1.59	20	70 - 130
Trichloroethene	0.12500	0.13205	106	0.272	20	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

LCS RECOVERY

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP
Matrix: Solids
Batch: B093879
Laboratory ID: B093879-BS1
Preparation: EPA 5030 Soil MS
Initial/Final: 5 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Benzene	0.12500	0.13851	111	70 - 130
Bromodichloromethane	0.12500	0.12714	102	70 - 130
Chlorobenzene	0.12500	0.13535	108	70 - 130
Chloroethane	0.12500	0.12263	98.1	70 - 130
1,4-Dichlorobenzene	0.12500	0.12958	104	70 - 130
1,1-Dichloroethane	0.12500	0.13463	108	70 - 130
1,1-Dichloroethene	0.12500	0.12953	104	70 - 130
Toluene	0.12500	0.13107	105	70 - 130
Trichloroethene	0.12500	0.12993	104	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021261
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2021261-ICV2	12NOV046.D	11/12/20 22:12
Initial Cal Blank	2021261-ICB2	12NOV048.D	11/12/20 22:54
Initial Cal Check	2021261-ICV1	30NOV022.D	11/30/20 16:04
Initial Cal Blank	2021261-ICB1	30NOV024.D	11/30/20 16:46
MS Tune	2021261-TUN1	01DEC002.D	12/01/20 08:45
Calibration Check	2021261-CCV1	01DEC003.D	12/01/20 09:06
Calibration Check	2021261-CCV3	01DEC007.D	12/01/20 10:41
Calibration Blank	2021261-CCB1	01DEC008.D	12/01/20 11:16
Blank	B093879-BLK1	01DEC009.D	12/01/20 11:37
LCS	B093879-BS1	01DEC011.D	12/01/20 12:19
Matrix Spike	B093879-MS1	01DEC012.D	12/01/20 12:39
Matrix Spike Dup	B093879-MSD1	01DEC013.D	12/01/20 13:00
VW-35-2	2034585-01	01DEC019.D	12/01/20 15:06
VW-31-2	2034585-02	01DEC020.D	12/01/20 15:27
MS Tune	2021261-TUN2	01DEC035.D	12/01/20 20:40
Calibration Check	2021261-CCV4	01DEC037.D	12/01/20 21:22
Calibration Check	2021261-CCV6	01DEC039.D	12/01/20 22:04
Calibration Blank	2021261-CCB2	01DEC040.D	12/01/20 22:25

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104552
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2104552-TUN1	12NOV036.D	11/12/20 18:42
Cal Standard	2104552-CALD	12NOV038.D	11/12/20 19:24
Cal Standard	2104552-CALE	12NOV039.D	11/12/20 19:45
Cal Standard	2104552-CALF	12NOV040.D	11/12/20 20:06
Cal Standard	2104552-CALG	12NOV041.D	11/12/20 20:27
Cal Standard	2104552-CALH	12NOV042.D	11/12/20 20:48
Cal Standard	2104552-CALI	12NOV043.D	11/12/20 21:09
MS Tune	2104552-TUN2	30NOV003.D	11/30/20 09:08
Cal Standard	2104552-CAL1	30NOV012.D	11/30/20 12:35
Cal Standard	2104552-CAL2	30NOV014.D	11/30/20 13:17
Cal Standard	2104552-CAL3	30NOV015.D	11/30/20 13:38
Cal Standard	2104552-CAL4	30NOV016.D	11/30/20 13:59
Cal Standard	2104552-CAL5	30NOV017.D	11/30/20 14:20
Cal Standard	2104552-CAL6	30NOV018.D	11/30/20 14:41

SMUD - Kleinfelder
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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	01DEC002.D	Injection Date:	12/01/20
Instrument ID:	MS-V17	Injection Time:	08:45
Sequence:	2021261	Lab Sample ID:	2021261-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	15	PASS
Mass 75	30 - 60% of Mass 95	59.5	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.26	PASS
Mass 173	Less than 2% of Mass 174	0.548	PASS
Mass 174	50 - 100% of Mass 95	77.4	PASS
Mass 175	5 - 9% of Mass 174	8.07	PASS
Mass 176	95 - 101% of Mass 174	98	PASS
Mass 177	5 - 9% of Mass 176	6.18	PASS

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Reported: 3/31/2021 4:48:58PM
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	01DEC035.D	Injection Date:	12/01/20
Instrument ID:	MS-V17	Injection Time:	20:40
Sequence:	2021261	Lab Sample ID:	2021261-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	28.9	PASS
Mass 75	30 - 60% of Mass 95	57.3	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.01	PASS
Mass 173	Less than 2% of Mass 174	1.49	PASS
Mass 174	50 - 100% of Mass 95	78.3	PASS
Mass 175	5 - 9% of Mass 174	7.7	PASS
Mass 176	95 - 101% of Mass 174	95.7	PASS
Mass 177	5 - 9% of Mass 176	7.69	PASS

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	12NOV036.D	Injection Date:	11/12/20
Instrument ID:	MS-V17	Injection Time:	18:42
Sequence:	2104552	Lab Sample ID:	2104552-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	23	PASS
Mass 75	30 - 60% of Mass 95	49.4	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.56	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 100% of Mass 95	62.9	PASS
Mass 175	5 - 9% of Mass 174	8.35	PASS
Mass 176	95 - 101% of Mass 174	96.6	PASS
Mass 177	5 - 9% of Mass 176	7.85	PASS

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Lab File ID:	30NOV003.D	Injection Date:	11/30/20
Instrument ID:	MS-V17	Injection Time:	09:08
Sequence:	2104552	Lab Sample ID:	2104552-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
Mass 50	15 - 40% of Mass 95	27.3	PASS
Mass 75	30 - 60% of Mass 95	56.4	PASS
Mass 95	Base peak, 100% relative abundance	100	PASS
Mass 96	5 - 9% of Mass 95	7.4	PASS
Mass 173	Less than 2% of Mass 174	0	PASS
Mass 174	50 - 100% of Mass 95	69.4	PASS
Mass 175	5 - 9% of Mass 174	7.36	PASS
Mass 176	95 - 101% of Mass 174	95.4	PASS
Mass 177	5 - 9% of Mass 176	7.68	PASS

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Reported: 3/31/2021 4:48:58PM
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	MS-V17	Calibration:	2103021
Lab File ID:	12NOV046.D	Calibration Date:	11/12/20 19:24
Sequence:	2021261	Injection Date:	11/12/20
Lab Sample ID:	2021261-ICV2	Injection Time:	22:12

	(1) CAL	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Total Purgeable Petroleum Hydrocarb	A	1.0000	1.0222	2.4453	2.499571		2.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 30NOV022.D
Sequence: 2021261
Lab Sample ID: 2021261-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 11/30/20
Injection Time: 16:04

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	0.12500	0.10946	0.8429437	0.7381603		-12.4	30
Bromobenzene	A	0.12500	0.11115	0.8932219	0.7942431		-11.1	30
Bromochloromethane	A	0.12500	0.11144	0.1070676	9.545708E-02		-10.8	30
Bromodichloromethane	A	0.12500	0.10346	0.4569241	0.37817		-17.2	30
Bromoform	L	0.12500	0.10753	0.4938285	0.4587914	0.1	-14.0	30
Bromomethane	L	0.12500	0.096900	0.1705291	0.1397326		-22.5	30
n-Butylbenzene	A	0.12500	0.11347	3.47133	3.151121		-9.2	30
sec-Butylbenzene	A	0.12500	0.11441	4.371841	4.001431		-8.5	30
tert-Butylbenzene	A	0.12500	0.10689	3.356356	2.870148		-14.5	30
Carbon tetrachloride	A	0.12500	0.093700	0.7178083	0.5380534		-25.0	30
Chlorobenzene	A	0.12500	0.11277	1.846274	1.665659	0.3	-9.8	30
Chloroethane	L	0.12500	0.11684	0.1590024	0.1528346		-6.5	30
Chloroform	A	0.12500	0.10618	0.7035705	0.5976495		-15.1	30
Chloromethane	A	0.12500	0.10332	0.2662985	0.2201217	0.1	-17.3	30
2-Chlorotoluene	A	0.12500	0.10752	3.714774	3.195387		-14.0	30
4-Chlorotoluene	A	0.12500	0.10629	3.365786	2.861902		-15.0	30
Dibromochloromethane	L	0.12500	0.10204	0.246343	0.2171937		-18.4	30
1,2-Dibromo-3-chloropropane	A	0.12500	0.11016	0.212317	0.1871171		-11.9	30
1,2-Dibromoethane	A	0.12500	0.10957	0.1796411	0.1574666		-12.3	30
Dibromomethane	A	0.12500	0.10034	0.1362465	0.1093653		-19.7	30
1,2-Dichlorobenzene	A	0.12500	0.10957	1.589333	1.393083		-12.3	30
1,3-Dichlorobenzene	A	0.12500	0.10737	1.782966	1.531479		-14.1	30
1,4-Dichlorobenzene	A	0.12500	0.10856	1.741543	1.512555		-13.1	30

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 30NOV022.D
Sequence: 2021261
Lab Sample ID: 2021261-ICV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 11/30/20
Injection Time: 16:04

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Dichlorodifluoromethane	A	0.12500	0.078680	0.5822872	0.3665351		-37.1	30 *
1,1-Dichloroethane	A	0.12500	0.10239	0.5372316	0.4400478	0.1	-18.1	30
1,2-Dichloroethane	A	0.12500	0.091920	0.7311767	0.5376506		-26.5	30
1,1-Dichloroethene	A	0.12500	0.080860	0.5810033	0.3758598		-35.3	30 *
cis-1,2-Dichloroethene	A	0.12500	0.11147	0.2431254	0.2168087		-10.8	30
trans-1,2-Dichloroethene	A	0.12500	0.10231	0.2274288	0.1861471		-18.2	30
Total 1,2-Dichloroethene	A	0.25000	0.21378	0.2352771	0.2014779		-14.4	30
1,2-Dichloropropane	A	0.12500	0.11100	0.1701032	0.1510525		-11.2	30
1,3-Dichloropropane	A	0.12500	0.10882	0.303295	0.2640272		-12.9	30
2,2-Dichloropropane	A	0.12500	0.097890	0.7995219	0.6261448		-21.7	30
1,1-Dichloropropene	A	0.12500	0.098310	0.4738103	0.3726606		-21.3	30
cis-1,3-Dichloropropene	A	0.12500	0.11127	0.3640383	0.3240483		-11.0	30
trans-1,3-Dichloropropene	A	0.12500	0.10985	0.4165891	0.366112		-12.1	30
Total 1,3-Dichloropropene	A	0.25000	0.22112	0.3903137	0.3450801		-11.6	30
Ethylbenzene	A	0.12500	0.10891	1.2019	1.047215		-12.9	30
Hexachlorobutadiene	A	0.12500	0.10585	1.429905	1.210847		-15.3	30
Isopropylbenzene	A	0.12500	0.11376	4.32921	3.94		-9.0	30
p-Isopropyltoluene	A	0.12500	0.11467	3.961033	3.63366		-8.3	30
Methylene chloride	A	0.12500	0.10125	0.2142735	0.1735662		-19.0	30
Methyl t-butyl ether	A	0.12500	0.10815	0.8618717	0.7457034		-13.5	30
Naphthalene	A	0.12500	0.11743	1.991763	1.87121		-6.1	30
n-Propylbenzene	A	0.12500	0.11142	4.624537	4.122111		-10.9	30
Styrene	A	0.12500	0.11234	2.225809	2.000405		-10.1	30

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Reported: 3/31/2021 4:48:58PM
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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	MS-V17	Calibration:	2103021
Lab File ID:	30NOV022.D	Calibration Date:	11/12/20 19:24
Sequence:	2021261	Injection Date:	11/30/20
Lab Sample ID:	2021261-ICV1	Injection Time:	16:04

	(1) CAL	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,1,1,2-Tetrachloroethane	A	0.12500	0.10351	0.983601	0.814474		-17.2	30
1,1,2,2-Tetrachloroethane	A	0.12500	0.11408	0.5416506	0.4943525	0.3	-8.7	30
Tetrachloroethene	A	0.12500	0.099000	0.3095791	0.2451901		-20.8	30
Toluene	A	0.12500	0.11059	0.5134676	0.4542677		-11.5	30
1,2,3-Trichlorobenzene	A	0.12500	0.11236	1.155332	1.038531		-10.1	30
1,2,4-Trichlorobenzene	A	0.12500	0.10892	1.279311	1.114691		-12.9	30
1,1,1-Trichloroethane	A	0.12500	0.096750	0.8734135	0.6759929		-22.6	30
1,1,2-Trichloroethane	A	0.12500	0.10698	0.1558593	0.133391		-14.4	30
Trichloroethene	A	0.12500	0.10304	0.2385811	0.1966642		-17.6	30
Trichlorofluoromethane	A	0.12500	0.096130	1.025041	0.7883179		-23.1	30
1,2,3-Trichloropropane	A	0.12500	0.11201	0.3136702	0.281071		-10.4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	A	0.12500	0.11472	0.3371787	0.3094579		-8.2	30
1,2,4-Trimethylbenzene	A	0.12500	0.10972	3.933652	3.452685		-12.2	30
1,3,5-Trimethylbenzene	A	0.12500	0.10887	4.073027	3.547423		-12.9	30
Vinyl chloride	A	0.12500	0.10530	0.2622747	0.2209341		-15.8	30
Total Xylenes	A	0.37500	0.32385	1.421447	1.22777		-13.6	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 01DEC003.D
Sequence: 2021261
Lab Sample ID: 2021261-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 12/01/20
Injection Time: 09:06

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	0.12500	0.13384	0.8429437	0.9025239		7.1	20
Bromobenzene	A	0.12500	0.13033	0.8932219	0.9312864		4.3	20
Bromochloromethane	A	0.12500	0.13783	0.1070676	0.1180592		10.3	20
Bromodichloromethane	A	0.12500	0.12521	0.4569241	0.4577041		0.2	20
Bromoform	L	0.12500	0.11812	0.4938285	0.5056983	0.1	-5.5	20
Bromomethane	L	0.12500	0.12315	0.1705291	0.1821945		-1.5	20
n-Butylbenzene	A	0.12500	0.13128	3.47133	3.645598		5.0	20
sec-Butylbenzene	A	0.12500	0.13379	4.371841	4.679149		7.0	20
tert-Butylbenzene	A	0.12500	0.12729	3.356356	3.417766		1.8	20
Carbon tetrachloride	A	0.12500	0.12083	0.7178083	0.6938676		-3.3	20
Chlorobenzene	A	0.12500	0.13308	1.846274	1.965681	0.3	6.5	20
Chloroethane	L	0.12500	0.11921	0.1590024	0.1564829		-4.6	20
Chloroform	A	0.12500	0.12488	0.7035705	0.7028846		-0.1	20
Chloromethane	A	0.12500	0.13822	0.2662985	0.2944608	0.1	10.6	20
2-Chlorotoluene	A	0.12500	0.12921	3.714774	3.839967		3.4	20
4-Chlorotoluene	A	0.12500	0.12836	3.365786	3.456128		2.7	20
Dibromochloromethane	L	0.12500	0.12328	0.246343	0.2637009		-1.4	20
1,2-Dibromo-3-chloropropane	A	0.12500	0.12023	0.212317	0.2042188		-3.8	20
1,2-Dibromoethane	A	0.12500	0.13245	0.1796411	0.1903537		6.0	20
Dibromomethane	A	0.12500	0.12712	0.1362465	0.1385543		1.7	20
1,2-Dichlorobenzene	A	0.12500	0.12942	1.589333	1.645481		3.5	20
1,3-Dichlorobenzene	A	0.12500	0.12742	1.782966	1.817455		1.9	20
1,4-Dichlorobenzene	A	0.12500	0.12941	1.741543	1.802965		3.5	20

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Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 01DEC003.D
Sequence: 2021261
Lab Sample ID: 2021261-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 12/01/20
Injection Time: 09:06

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Dichlorodifluoromethane	A	0.12500	0.12677	0.5822872	0.590546		1.4	20
1,1-Dichloroethane	A	0.12500	0.12808	0.5372316	0.5504854	0.1	2.5	20
1,2-Dichloroethane	A	0.12500	0.11629	0.7311767	0.6802048		-7.0	20
1,1-Dichloroethene	A	0.12500	0.12459	0.5810033	0.5791048		-0.3	20
cis-1,2-Dichloroethene	A	0.12500	0.13467	0.2431254	0.2619395		7.7	20
trans-1,2-Dichloroethene	A	0.12500	0.13290	0.2274288	0.2417935		6.3	20
Total 1,2-Dichloroethene	A	0.25000	0.26757	0.2352771	0.2518665		7.1	20
1,2-Dichloropropane	A	0.12500	0.13136	0.1701032	0.1787574		5.1	20
1,3-Dichloropropane	A	0.12500	0.12616	0.303295	0.3060984		0.9	20
2,2-Dichloropropane	A	0.12500	0.12365	0.7995219	0.7908591		-1.1	20
1,1-Dichloropropene	A	0.12500	0.12845	0.4738103	0.4868895		2.8	20
cis-1,3-Dichloropropene	A	0.12500	0.13311	0.3640383	0.3876663		6.5	20
trans-1,3-Dichloropropene	A	0.12500	0.13032	0.4165891	0.4343253		4.3	20
Total 1,3-Dichloropropene	A	0.25000	0.26343	0.3903137	0.4109958		5.3	20
Ethylbenzene	A	0.12500	0.12848	1.2019	1.235315		2.8	20
Hexachlorobutadiene	A	0.12500	0.12754	1.429905	1.458928		2.0	20
Isopropylbenzene	A	0.12500	0.13348	4.32921	4.622905		6.8	20
p-Isopropyltoluene	A	0.12500	0.13200	3.961033	4.18289		5.6	20
Methylene chloride	A	0.12500	0.13036	0.2142735	0.2234558		4.3	20
Methyl t-butyl ether	A	0.12500	0.12662	0.8618717	0.8730427		1.3	20
Naphthalene	A	0.12500	0.12962	1.991763	2.065315		3.7	20
n-Propylbenzene	A	0.12500	0.13251	4.624537	4.90244		6.0	20
Styrene	A	0.12500	0.13310	2.225809	2.37		6.5	20

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 01DEC003.D
Sequence: 2021261
Lab Sample ID: 2021261-CCV1

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 12/01/20
Injection Time: 09:06

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,1,1,2-Tetrachloroethane	A	0.12500	0.12830	0.983601	1.00958		2.6	20
1,1,2,2-Tetrachloroethane	A	0.12500	0.12906	0.5416506	0.5592594	0.3	3.3	20
Tetrachloroethene	A	0.12500	0.13060	0.3095791	0.3234508		4.5	20
Toluene	A	0.12500	0.13038	0.5134676	0.5355653		4.3	20
1,2,3-Trichlorobenzene	A	0.12500	0.13116	1.155332	1.212234		4.9	20
1,2,4-Trichlorobenzene	A	0.12500	0.12700	1.279311	1.299792		1.6	20
1,1,1-Trichloroethane	A	0.12500	0.12197	0.8734135	0.8522085		-2.4	20
1,1,2-Trichloroethane	A	0.12500	0.13175	0.1558593	0.1642813		5.4	20
Trichloroethene	A	0.12500	0.13168	0.2385811	0.2513296		5.3	20
Trichlorofluoromethane	A	0.12500	0.11833	1.025041	0.970309		-5.3	20
1,2,3-Trichloropropane	A	0.12500	0.12446	0.3136702	0.3123077		-0.4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	0.12500	0.12964	0.3371787	0.3496949		3.7	20
1,2,4-Trimethylbenzene	A	0.12500	0.13208	3.933652	4.156505		5.7	20
1,3,5-Trimethylbenzene	A	0.12500	0.13092	4.073027	4.265837		4.7	20
Vinyl chloride	A	0.12500	0.14413	0.2622747	0.3024175		15.3	20
Total Xylenes	A	0.37500	0.39070	1.421447	1.480805		4.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	MS-V17	Calibration:	2103021
Lab File ID:	01DEC007.D	Calibration Date:	11/12/20 19:24
Sequence:	2021261	Injection Date:	12/01/20
Lab Sample ID:	2021261-CCV3	Injection Time:	10:41

	(1) CAL	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Total Purgeable Petroleum Hydrocarb	A	1.0000	1.3773	2.4453	3.367807		37.7	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 01DEC037.D
Sequence: 2021261
Lab Sample ID: 2021261-CCV4

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 12/01/20
Injection Time: 21:22

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	0.12500	0.13415	0.8429437	0.904674		7.3	50
Bromobenzene	A	0.12500	0.12642	0.8932219	0.9033891		1.1	50
Bromochloromethane	A	0.12500	0.13104	0.1070676	0.1122398		4.8	50
Bromodichloromethane	A	0.12500	0.11322	0.4569241	0.4138602		-9.4	50
Bromoform	L	0.12500	0.11192	0.4938285	0.4782385	0.1	-10.5	50
Bromomethane	L	0.12500	0.11654	0.1705291	0.1715102		-6.8	50
n-Butylbenzene	A	0.12500	0.12577	3.47133	3.492681		0.6	50
sec-Butylbenzene	A	0.12500	0.13249	4.371841	4.633805		6.0	50
tert-Butylbenzene	A	0.12500	0.13691	3.356356	3.67602		9.5	50
Carbon tetrachloride	A	0.12500	0.11677	0.7178083	0.6705253		-6.6	50
Chlorobenzene	A	0.12500	0.13131	1.846274	1.939535	0.3	5.1	50
Chloroethane	L	0.12500	0.12000	0.1590024	0.1576925		-4.0	50
Chloroform	A	0.12500	0.11856	0.7035705	0.6673343		-5.2	50
Chloromethane	A	0.12500	0.13558	0.2662985	0.2888331	0.1	8.5	50
2-Chlorotoluene	A	0.12500	0.12486	3.714774	3.710595		-0.1	50
4-Chlorotoluene	A	0.12500	0.12316	3.365786	3.31623		-1.5	50
Dibromochloromethane	L	0.12500	0.11173	0.246343	0.2384054		-10.6	50
1,2-Dibromo-3-chloropropane	A	0.12500	0.11684	0.212317	0.1984537		-6.5	50
1,2-Dibromoethane	A	0.12500	0.11990	0.1796411	0.1723068		-4.1	50
Dibromomethane	A	0.12500	0.11391	0.1362465	0.1241626		-8.9	50
1,2-Dichlorobenzene	A	0.12500	0.12558	1.589333	1.596651		0.5	50
1,3-Dichlorobenzene	A	0.12500	0.12368	1.782966	1.764111		-1.1	50
1,4-Dichlorobenzene	A	0.12500	0.12440	1.741543	1.733148		-0.5	50

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Instrument ID: MS-V17
Lab File ID: 01DEC037.D
Sequence: 2021261
Lab Sample ID: 2021261-CCV4

SDG: 2034585
Project: SMUD Soil Samples-CLP
Calibration: 2103021
Calibration Date: 11/12/20 19:24
Injection Date: 12/01/20
Injection Time: 21:22

COMPOUND	(1) CAL TYPE	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Dichlorodifluoromethane	A	0.12500	0.12061	0.5822872	0.5618327		-3.5	50
1,1-Dichloroethane	A	0.12500	0.12314	0.5372316	0.5292273	0.1	-1.5	50
1,2-Dichloroethane	A	0.12500	0.10565	0.7311767	0.6179974		-15.5	50
1,1-Dichloroethene	A	0.12500	0.12258	0.5810033	0.5697334		-1.9	50
cis-1,2-Dichloroethene	A	0.12500	0.13205	0.2431254	0.2568462		5.6	50
trans-1,2-Dichloroethene	A	0.12500	0.13422	0.2274288	0.2442038		7.4	50
Total 1,2-Dichloroethene	A	0.25000	0.26627	0.2352771	0.250525		6.5	50
1,2-Dichloropropane	A	0.12500	0.12673	0.1701032	0.172457		1.4	50
1,3-Dichloropropane	A	0.12500	0.11917	0.303295	0.289144		-4.7	50
2,2-Dichloropropane	A	0.12500	0.11676	0.7995219	0.7468087		-6.6	50
1,1-Dichloropropene	A	0.12500	0.12601	0.4738103	0.4776358		0.8	50
cis-1,3-Dichloropropene	A	0.12500	0.12169	0.3640383	0.3544103		-2.6	50
trans-1,3-Dichloropropene	A	0.12500	0.11655	0.4165891	0.3884266		-6.8	50
Total 1,3-Dichloropropene	A	0.25000	0.23824	0.3903137	0.3714185		-4.8	50
Ethylbenzene	A	0.12500	0.12757	1.2019	1.226617		2.1	50
Hexachlorobutadiene	A	0.12500	0.12427	1.429905	1.421526		-0.6	50
Isopropylbenzene	A	0.12500	0.13395	4.32921	4.639086		7.2	50
p-Isopropyltoluene	A	0.12500	0.12898	3.961033	4.087101		3.2	50
Methylene chloride	A	0.12500	0.12241	0.2142735	0.2098258		-2.1	50
Methyl t-butyl ether	A	0.12500	0.11723	0.8618717	0.8082676		-6.2	50
Naphthalene	A	0.12500	0.12538	1.991763	1.997794		0.3	50
n-Propylbenzene	A	0.12500	0.13131	4.624537	4.857806		5.0	50
Styrene	A	0.12500	0.13052	2.225809	2.324145		4.4	50

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	MS-V17	Calibration:	2103021
Lab File ID:	01DEC037.D	Calibration Date:	11/12/20 19:24
Sequence:	2021261	Injection Date:	12/01/20
Lab Sample ID:	2021261-CCV4	Injection Time:	21:22

	(1) CAL	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,1,1,2-Tetrachloroethane	A	0.12500	0.12257	0.983601	0.9644898		-1.9	50
1,1,2,2-Tetrachloroethane	A	0.12500	0.12242	0.5416506	0.5304709	0.3	-2.1	50
Tetrachloroethene	A	0.12500	0.12779	0.3095791	0.3164952		2.2	50
Toluene	A	0.12500	0.12613	0.5134676	0.5180909		0.9	50
1,2,3-Trichlorobenzene	A	0.12500	0.12446	1.155332	1.150341		-0.4	50
1,2,4-Trichlorobenzene	A	0.12500	0.12016	1.279311	1.22982		-3.9	50
1,1,1-Trichloroethane	A	0.12500	0.11811	0.8734135	0.8252764		-5.5	50
1,1,2-Trichloroethane	A	0.12500	0.12059	0.1558593	0.150356		-3.5	50
Trichloroethene	A	0.12500	0.12920	0.2385811	0.2466064		3.4	50
Trichlorofluoromethane	A	0.12500	0.11694	1.025041	0.9589616		-6.4	50
1,2,3-Trichloropropane	A	0.12500	0.11762	0.3136702	0.2951624		-5.9	50
1,1,2-Trichloro-1,2,2-trifluoroethane	A	0.12500	0.12754	0.3371787	0.3440422		2.0	50
1,2,4-Trimethylbenzene	A	0.12500	0.12859	3.933652	4.046646		2.9	50
1,3,5-Trimethylbenzene	A	0.12500	0.12977	4.073027	4.228335		3.8	50
Vinyl chloride	A	0.12500	0.14628	0.2622747	0.3069275		17.0	50
Total Xylenes	A	0.37500	0.38314	1.421447	1.452336		2.2	50

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

CONTINUING CALIBRATION CHECK

EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Instrument ID:	MS-V17	Calibration:	2103021
Lab File ID:	01DEC039.D	Calibration Date:	11/12/20 19:24
Sequence:	2021261	Injection Date:	12/01/20
Lab Sample ID:	2021261-CCV6	Injection Time:	22:04

	(1) CAL	CONC. (mg/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Total Purgeable Petroleum Hydrocarb	A	1.0000	1.2035	2.4453	2.942995		20.4	50

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits for beginning CCVs. For ending CCVs, limit is 50.

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021261
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021261-ICV1)			Lab File ID: 30NOV022.D		Analyzed: 11/30/20 16:04			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	90.6	70 - 130	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	97.8	70 - 130	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	95.9	70 - 130	10.49	10.49667	-0.0067	+/-1.0	
Initial Cal Blank (2021261-ICB1)			Lab File ID: 30NOV024.D		Analyzed: 11/30/20 16:46			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	87.8	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	98.0	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	92.7	74 - 121	10.5	10.49667	0.0033	+/-1.0	
Calibration Check (2021261-CCV1)			Lab File ID: 01DEC003.D		Analyzed: 12/01/20 09:06			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	88.4	80 - 120	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	101	80 - 120	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	93.8	80 - 120	10.5	10.49667	0.0033	+/-1.0	
Calibration Blank (2021261-CCB1)			Lab File ID: 01DEC008.D		Analyzed: 12/01/20 11:16			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	88.3	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	98.9	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	90.1	74 - 121	10.5	10.49667	0.0033	+/-1.0	
Blank (B093879-BLK1)			Lab File ID: 01DEC009.D		Analyzed: 12/01/20 11:37			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	90.6	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	98.4	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	92.5	74 - 121	10.5	10.49667	0.0033	+/-1.0	
LCS (B093879-BS1)			Lab File ID: 01DEC011.D		Analyzed: 12/01/20 12:19			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	90.4	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	100	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	93.3	74 - 121	10.49	10.49667	-0.0067	+/-1.0	
Matrix Spike (B093879-MS1)			Lab File ID: 01DEC012.D		Analyzed: 12/01/20 12:39			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	91.5	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	99.3	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	92.6	74 - 121	10.49	10.49667	-0.0067	+/-1.0	

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021261
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B093879-MSD1)			Lab File ID: 01DEC013.D		Analyzed: 12/01/20 13:00			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	87.9	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	100	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	93.6	74 - 121	10.49	10.49667	-0.0067	+/-1.0	
VW-35-2 (2034585-01)			Lab File ID: 01DEC019.D		Analyzed: 12/01/20 15:06			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	105	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	95.9	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	91.1	74 - 121	10.49	10.49667	-0.0067	+/-1.0	
VW-31-2 (2034585-02)			Lab File ID: 01DEC020.D		Analyzed: 12/01/20 15:27			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	107	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	98.7	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	94.6	74 - 121	10.5	10.49667	0.0033	+/-1.0	
Calibration Check (2021261-CCV4)			Lab File ID: 01DEC037.D		Analyzed: 12/01/20 21:22			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	86.7	80 - 120	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	98.9	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	92.0	80 - 120	10.49	10.49667	-0.0067	+/-1.0	
Calibration Blank (2021261-CCB2)			Lab File ID: 01DEC040.D		Analyzed: 12/01/20 22:25			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	86.1	70 - 121	7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	97.5	81 - 117	8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	90.5	74 - 121	10.49	10.49667	-0.0067	+/-1.0	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104552
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104552-CAL1)			Lab File ID: 30NOV012.D		Analyzed: 11/30/20 12:35			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	210		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	103		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	134		10.5	10.49667	0.0033	+/-1.0	
Cal Standard (2104552-CAL2)			Lab File ID: 30NOV014.D		Analyzed: 11/30/20 13:17			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	210		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	104		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	139		10.5	10.49667	0.0033	+/-1.0	
Cal Standard (2104552-CAL3)			Lab File ID: 30NOV015.D		Analyzed: 11/30/20 13:38			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	204		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	106		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	133		10.49	10.49667	-0.0067	+/-1.0	
Cal Standard (2104552-CAL4)			Lab File ID: 30NOV016.D		Analyzed: 11/30/20 13:59			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	197		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	104		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	139		10.49	10.49667	-0.0067	+/-1.0	
Cal Standard (2104552-CAL5)			Lab File ID: 30NOV017.D		Analyzed: 11/30/20 14:20			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	179		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	105		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	132		10.5	10.49667	0.0033	+/-1.0	
Cal Standard (2104552-CAL6)			Lab File ID: 30NOV018.D		Analyzed: 11/30/20 14:41			
1,2-Dichloroethane-d4 (Surrogate)	0.050000	174		7.13	7.13	0.0000	+/-1.0	
Toluene-d8 (Surrogate)	0.050000	105		8.77	8.77	0.0000	+/-1.0	
4-Bromofluorobenzene (Surrogate)	0.050000	124		10.5	10.49667	0.0033	+/-1.0	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021261
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (2021261-ICV2)			Lab File ID: 12NOV046.D			Analyzed: 11/12/20 22:12			
Pentafluorobenzene (IS)	150896	6.81	143582	6.8	105	50 - 200	0.0100	+/-0.50	
Initial Cal Blank (2021261-ICB2)			Lab File ID: 12NOV048.D			Analyzed: 11/12/20 22:54			
Pentafluorobenzene (IS)	148235	6.81	143582	6.8	103	50 - 200	0.0100	+/-0.50	
Initial Cal Check (2021261-ICV1)			Lab File ID: 30NOV022.D			Analyzed: 11/30/20 16:04			
Pentafluorobenzene (IS)	175790	6.81	143582	6.8	122	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	61213	9.77	51106	9.77	120	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	208227	7.57	164056	7.58	127	50 - 200	-0.0100	+/-0.50	
Initial Cal Blank (2021261-ICB1)			Lab File ID: 30NOV024.D			Analyzed: 11/30/20 16:46			
Pentafluorobenzene (IS)	182114	6.81	143582	6.8	127	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	63642	9.77	51106	9.77	125	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	220676	7.58	164056	7.58	135	50 - 200	0.0000	+/-0.50	
Calibration Check (2021261-CCV1)			Lab File ID: 01DEC003.D			Analyzed: 12/01/20 09:06			
Pentafluorobenzene (IS)	193547	6.81	143582	6.8	135	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	68266	9.77	51106	9.77	134	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	223485	7.58	164056	7.58	136	50 - 200	0.0000	+/-0.50	
Calibration Check (2021261-CCV3)			Lab File ID: 01DEC007.D			Analyzed: 12/01/20 10:41			
Pentafluorobenzene (IS)	184549	6.81	143582	6.8	129	50 - 200	0.0100	+/-0.50	
Calibration Blank (2021261-CCB1)			Lab File ID: 01DEC008.D			Analyzed: 12/01/20 11:16			
Pentafluorobenzene (IS)	188412	6.81	143582	6.8	131	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	68637	9.77	51106	9.77	134	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	229326	7.57	164056	7.58	140	50 - 200	-0.0100	+/-0.50	
Blank (B093879-BLK1)			Lab File ID: 01DEC009.D			Analyzed: 12/01/20 11:37			
Pentafluorobenzene (IS)	185209	6.81	143582	6.8	129	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	65767	9.77	51106	9.77	129	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	220645	7.58	164056	7.58	134	50 - 200	0.0000	+/-0.50	
LCS (B093879-BS1)			Lab File ID: 01DEC011.D			Analyzed: 12/01/20 12:19			
Pentafluorobenzene (IS)	177279	6.81	143582	6.8	123	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	63970	9.77	51106	9.77	125	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	210057	7.57	164056	7.58	128	50 - 200	-0.0100	+/-0.50	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2021261
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B093879-MS1)			Lab File ID: 01DEC012.D			Analyzed: 12/01/20 12:39			
Pentafluorobenzene (IS)	183683	6.81	143582	6.8	128	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	67301	9.77	51106	9.77	132	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	222005	7.57	164056	7.58	135	50 - 200	-0.0100	+/-0.50	
Matrix Spike Dup (B093879-MSD1)			Lab File ID: 01DEC013.D			Analyzed: 12/01/20 13:00			
Pentafluorobenzene (IS)	188289	6.81	143582	6.8	131	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	68312	9.77	51106	9.77	134	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	228907	7.58	164056	7.58	140	50 - 200	0.0000	+/-0.50	
VW-35-2 (2034585-01)			Lab File ID: 01DEC019.D			Analyzed: 12/01/20 15:06			
Pentafluorobenzene (IS)	144091	6.81	143582	6.8	100	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	50601	9.77	51106	9.77	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	178303	7.58	164056	7.58	109	50 - 200	0.0000	+/-0.50	
VW-31-2 (2034585-02)			Lab File ID: 01DEC020.D			Analyzed: 12/01/20 15:27			
Pentafluorobenzene (IS)	146289	6.81	143582	6.8	102	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	53687	9.77	51106	9.77	105	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	178879	7.58	164056	7.58	109	50 - 200	0.0000	+/-0.50	
Calibration Check (2021261-CCV4)			Lab File ID: 01DEC037.D			Analyzed: 12/01/20 21:22			
Pentafluorobenzene (IS)	187527	6.81	143582	6.8	131	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	65446	9.77	51106	9.77	128	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	221094	7.58	164056	7.58	135	50 - 200	0.0000	+/-0.50	
Calibration Check (2021261-CCV6)			Lab File ID: 01DEC039.D			Analyzed: 12/01/20 22:04			
Pentafluorobenzene (IS)	191991	6.81	143582	6.8	134	50 - 200	0.0100	+/-0.50	
Calibration Blank (2021261-CCB2)			Lab File ID: 01DEC040.D			Analyzed: 12/01/20 22:25			
Pentafluorobenzene (IS)	184199	6.81	143582	6.8	128	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	64730	9.77	51106	9.77	127	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	218010	7.58	164056	7.58	133	50 - 200	0.0000	+/-0.50	

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104552
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration: 2103021

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104552-CALD)			Lab File ID: 12NOV038.D			Analyzed: 11/12/20 19:24			
Pentafluorobenzene (IS)	144401	6.81	143582	6.8	101	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CALE)			Lab File ID: 12NOV039.D			Analyzed: 11/12/20 19:45			
Pentafluorobenzene (IS)	141389	6.81	143582	6.8	98	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CALF)			Lab File ID: 12NOV040.D			Analyzed: 11/12/20 20:06			
Pentafluorobenzene (IS)	148272	6.81	143582	6.8	103	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CALG)			Lab File ID: 12NOV041.D			Analyzed: 11/12/20 20:27			
Pentafluorobenzene (IS)	152666	6.81	143582	6.8	106	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CALH)			Lab File ID: 12NOV042.D			Analyzed: 11/12/20 20:48			
Pentafluorobenzene (IS)	150295	6.81	143582	6.8	105	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CALI)			Lab File ID: 12NOV043.D			Analyzed: 11/12/20 21:09			
Pentafluorobenzene (IS)	147134	6.81	143582	6.8	102	50 - 200	0.0100	+/-0.50	
Cal Standard (2104552-CAL1)			Lab File ID: 30NOV012.D			Analyzed: 11/30/20 12:35			
Pentafluorobenzene (IS)	136944	6.81	143582	6.8	95	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	46981	9.77	51106	9.77	92	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	161365	7.57	164056	7.58	98	50 - 200	-0.0100	+/-0.50	
Cal Standard (2104552-CAL2)			Lab File ID: 30NOV014.D			Analyzed: 11/30/20 13:17			
Pentafluorobenzene (IS)	142852	6.81	143582	6.8	99	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	50415	9.77	51106	9.77	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	167840	7.57	164056	7.58	102	50 - 200	-0.0100	+/-0.50	
Cal Standard (2104552-CAL3)			Lab File ID: 30NOV015.D			Analyzed: 11/30/20 13:38			
Pentafluorobenzene (IS)	143582	6.8	143582	6.8	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (IS)	51106	9.77	51106	9.77	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	164056	7.58	164056	7.58	100	50 - 200	0.0000	+/-0.50	
Cal Standard (2104552-CAL4)			Lab File ID: 30NOV016.D			Analyzed: 11/30/20 13:59			
Pentafluorobenzene (IS)	154717	6.81	143582	6.8	108	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	53363	9.78	51106	9.77	104	50 - 200	0.0100	+/-0.50	
1,4-Difluorobenzene (IS)	179495	7.57	164056	7.58	109	50 - 200	-0.0100	+/-0.50	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INTERNAL STANDARD AREA AND RT SUMMARY
EPA-8260B

Laboratory:	BC Laboratories	SDG:	2034585
Client:	SMUD - Kleinfelder	Project:	SMUD Soil Samples-CLP
Sequence:	2104552	Instrument:	MS-V17
Matrix:	Solids	Calibration:	2103021

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (2104552-CAL5)			Lab File ID: 30NOV017.D			Analyzed: 11/30/20 14:20			
Pentafluorobenzene (IS)	174552	6.81	143582	6.8	122	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	59973	9.77	51106	9.77	117	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	198724	7.57	164056	7.58	121	50 - 200	-0.0100	+/-0.50	
Cal Standard (2104552-CAL6)			Lab File ID: 30NOV018.D			Analyzed: 11/30/20 14:41			
Pentafluorobenzene (IS)	202466	6.81	143582	6.8	141	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5 (IS)	72813	9.77	51106	9.77	142	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene (IS)	234262	7.58	164056	7.58	143	50 - 200	0.0000	+/-0.50	

SMUD - Kleinfelder
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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION STANDARDS

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Sequence: 2104552
Calibration: 2103021

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
0J21008	8260 V14/17 BFB WORKING STD	2104552-TUN1	12NOV036.D	11/12/20 18:42
1C08016	8260 V17 TPPH CALD	2104552-CALD	12NOV038.D	11/12/20 19:24
1C08017	8260 V17 TPPH CALE	2104552-CALE	12NOV039.D	11/12/20 19:45
1C08018	8260 V17 TPPH CALF	2104552-CALF	12NOV040.D	11/12/20 20:06
1C08019	8260 V17 TPPH CALG	2104552-CALG	12NOV041.D	11/12/20 20:27
1C08020	8260 V17 TPPH CALH	2104552-CALH	12NOV042.D	11/12/20 20:48
1C08021	8260 V17 TPPH CALI	2104552-CALI	12NOV043.D	11/12/20 21:09
0J21008	8260 V14/17 BFB WORKING STD	2104552-TUN2	30NOV003.D	11/30/20 09:08
0L05001	8260 V17 REG CAL1	2104552-CAL1	30NOV012.D	11/30/20 12:35
0L05002	8260 V17 REG CAL2	2104552-CAL2	30NOV014.D	11/30/20 13:17
0L05003	8260 V17 REG CAL3	2104552-CAL3	30NOV015.D	11/30/20 13:38
0L05004	8260 V17 REG CAL4	2104552-CAL4	30NOV016.D	11/30/20 13:59
0L05005	8260 V17 REG CAL5	2104552-CAL5	30NOV017.D	11/30/20 14:20
0L05006	8260 V17 REG CAL6	2104552-CAL6	30NOV018.D	11/30/20 14:41

SMUD - Kleinfelder
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Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA
EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
Benzene	0.005	0.7508909	0.05	0.8469045	0.125	0.8139042	0.25	0.8791458	0.375	0.8986174	0.5	0.8681991
Bromobenzene	0.005	0.8328899	0.05	0.8996727	0.125	0.8355496	0.25	0.9458014	0.375	0.9587892	0.5	0.8866288
Bromochloromethane	0.005	8.755404E-02	0.05	0.1039187	0.125	0.1061442	0.25	0.1130723	0.375	0.1177162	0.5	0.1139999
Bromodichloromethane	0.005	0.3667462	0.05	0.47755	0.125	0.4625762	0.25	0.4923959	0.375	0.4916829	0.5	0.4505934
Bromoform	0.005	0.3592942	0.05	0.44217	0.125	0.4753414	0.25	0.5720668	0.375	0.592082	0.5	0.5220167
Bromomethane	0.005	0.1210714	0.05	0.1431342	0.125	0.1662715	0.25	0.1903954	0.375	0.2096185	0.5	0.1926837
n-Butylbenzene	0.005	2.58381	0.05	3.574333	0.125	3.438978	0.25	4.032427	0.375	3.872409	0.5	3.326021
sec-Butylbenzene	0.005	3.581022	0.05	4.610374	0.125	4.379775	0.25	4.925743	0.375	4.726525	0.5	4.007609
tert-Butylbenzene	0.005	2.789638	0.05	3.634533	0.125	3.462396	0.25	3.586388	0.375	3.546969	0.5	3.118214
Carbon tetrachloride	0.005	0.5856408	0.05	0.7578123	0.125	0.7345015	0.25	0.7848847	0.375	0.7587554	0.5	0.6852553
Chlorobenzene	0.005	1.70537	0.05	1.884876	0.125	1.733159	0.25	1.947698	0.375	1.978657	0.5	1.827887
Chloroethane	0.005	0.126256	0.05	0.1498404	0.125	0.1386385	0.25	0.164322	0.375	0.1854385	0.5	0.1895187
Chloroform	0.005	0.6845864	0.05	0.7402556	0.125	0.6873313	0.25	0.7273461	0.375	0.7171502	0.5	0.6647531
Chloromethane	0.005	0.2176072	0.05	0.2598144	0.125	0.2474266	0.25	0.2777381	0.375	0.2932658	0.5	0.3019391
2-Chlorotoluene	0.005	3.296013	0.05	3.956442	0.125	3.6179	0.25	4.058228	0.375	3.917303	0.5	3.442757
4-Chlorotoluene	0.005	3.172772	0.05	3.592621	0.125	3.260204	0.25	3.626457	0.375	3.495813	0.5	3.046849
Dibromochloromethane	0.005	0.1623029	0.05	0.2382328	0.125	0.249388	0.25	0.2795543	0.375	0.2849694	0.5	0.2636104
1,2-Dibromo-3-chloropropane	0.005	0.1662374	0.05	0.2070019	0.125	0.2044065	0.25	0.243236	0.375	0.240426	0.5	0.2125939
1,2-Dibromoethane	0.005	0.1529452	0.05	0.1818398	0.125	0.1761106	0.25	0.1887897	0.375	0.1948766	0.5	0.183285
Dibromomethane	0.005	0.1114244	0.05	0.1430052	0.125	0.1391525	0.25	0.145711	0.375	0.1444986	0.5	0.1336871
1,2-Dichlorobenzene	0.005	1.451651	0.05	1.5831	0.125	1.505694	0.25	1.709372	0.375	1.717606	0.5	1.568572
1,3-Dichlorobenzene	0.005	1.528065	0.05	1.80119	0.125	1.667859	0.25	1.911605	0.375	1.962167	0.5	1.826911
1,4-Dichlorobenzene	0.005	1.480173	0.05	1.838619	0.125	1.638563	0.25	1.876885	0.375	1.882945	0.5	1.732071
Dichlorodifluoromethane	0.005	0.5170727	0.05	0.6543346	0.125	0.6065886	0.25	0.634512	0.375	0.5817873	0.5	0.4994281
1,1-Dichloroethane	0.005	0.4938515	0.05	0.5535589	0.125	0.5254865	0.25	0.5617262	0.375	0.5593008	0.5	0.5294657

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
1,2-Dichloroethane	0.005	0.7884975	0.05	0.7957466	0.125	0.7216531	0.25	0.7419159	0.375	0.705968	0.5	0.6332792
1,1-Dichloroethene	0.005	0.4975026	0.05	0.6212164	0.125	0.5866418	0.25	0.6210785	0.375	0.605056	0.5	0.5545247
cis-1,2-Dichloroethene	0.005	0.2279034	0.05	0.2441338	0.125	0.2293574	0.25	0.2472657	0.375	0.2574247	0.5	0.2526676
trans-1,2-Dichloroethene	0.005	0.1885442	0.05	0.2287612	0.125	0.2217938	0.25	0.2382815	0.375	0.2482179	0.5	0.2389744
Total 1,2-Dichloroethene	0.01	0.2082238	0.1	0.2364475	0.25	0.2255756	0.5	0.2427736	0.75	0.2528213	1	0.245821
1,2-Dichloropropane	0.005	0.1459424	0.05	0.1724678	0.125	0.1635222	0.25	0.1765208	0.375	0.1845769	0.5	0.1775888
1,3-Dichloropropane	0.005	0.2991975	0.05	0.3071139	0.125	0.2964744	0.25	0.30692	0.375	0.3153882	0.5	0.294676
2,2-Dichloropropane	0.005	0.6599778	0.05	0.8559558	0.125	0.8114945	0.25	0.8643084	0.375	0.8442367	0.5	0.7611584
1,1-Dichloropropene	0.005	0.4021352	0.05	0.4967519	0.125	0.4693987	0.25	0.5056005	0.375	0.498195	0.5	0.4707803
cis-1,3-Dichloropropene	0.005	0.2758343	0.05	0.3659974	0.125	0.3668552	0.25	0.3914616	0.375	0.4037741	0.5	0.3803071
trans-1,3-Dichloropropene	0.005	0.323986	0.05	0.4314347	0.125	0.4198249	0.25	0.4524772	0.375	0.4536858	0.5	0.4181259
Total 1,3-Dichloropropene	0.01	0.2999101	0.1	0.398716	0.25	0.3933401	0.5	0.4219694	0.75	0.42873	1	0.3992165
Ethylbenzene	0.005	1.028927	0.05	1.189646	0.125	1.105115	0.25	1.290763	0.375	1.336755	0.5	1.260195
Hexachlorobutadiene	0.005	1.149188	0.05	1.517287	0.125	1.39276	0.25	1.611641	0.375	1.551407	0.5	1.357148
Isopropylbenzene	0.005	3.706392	0.05	4.703977	0.125	4.3226	0.25	4.766385	0.375	4.581891	0.5	3.894012
p-Isopropyltoluene	0.005	3.077201	0.05	4.067877	0.125	3.925073	0.25	4.500988	0.375	4.398166	0.5	3.796896
Methylene chloride	0.005	0.2484957	0.05	0.2031333	0.125	0.1996657	0.25	0.2108482	0.375	0.214107	0.5	0.2093912
Methyl t-butyl ether	0.005	0.8137633	0.05	0.8950172	0.125	0.8365895	0.25	0.8920119	0.375	0.8964259	0.5	0.8374226
Naphthalene	0.005	1.681957	0.05	1.986353	0.125	1.918632	0.25	2.200787	0.375	2.203936	0.5	1.958914
n-Propylbenzene	0.005	3.967349	0.05	4.970644	0.125	4.658075	0.25	5.130143	0.375	4.898015	0.5	4.122996
Styrene	0.005	1.822439	0.05	2.184469	0.125	2.090972	0.25	2.436171	0.375	2.497268	0.5	2.323537
1,1,1,2-Tetrachloroethane	0.005	0.8454482	0.05	1.044312	0.125	0.9169334	0.25	1.059828	0.375	1.067374	0.5	0.9677104
1,1,2,2-Tetrachloroethane	0.005	0.5259573	0.05	0.5441238	0.125	0.5031503	0.25	0.5771077	0.375	0.5677555	0.5	0.5318089
Tetrachloroethene	0.005	0.2735414	0.05	0.3112846	0.125	0.2992515	0.25	0.3252859	0.375	0.3327744	0.5	0.3153371
Toluene	0.005	0.4504075	0.05	0.5228432	0.125	0.4911299	0.25	0.5294342	0.375	0.5546601	0.5	0.5323305
1,2,3-Trichlorobenzene	0.005	0.9910389	0.05	1.175722	0.125	1.083231	0.25	1.274276	0.375	1.261743	0.5	1.145979

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
1,2,4-Trichlorobenzene	0.005	1.123433	0.05	1.280571	0.125	1.200798	0.25	1.403497	0.375	1.397487	0.5	1.270082
1,1,1-Trichloroethane	0.005	0.7464365	0.05	0.94397	0.125	0.8885459	0.25	0.9425739	0.375	0.9010793	0.5	0.8178756
1,1,2-Trichloroethane	0.005	0.1591423	0.05	0.1508043	0.125	0.1472546	0.25	0.1567219	0.375	0.1648813	0.5	0.1563514
Trichloroethene	0.005	0.2132433	0.05	0.244602	0.125	0.2266958	0.25	0.2493964	0.375	0.2556249	0.5	0.241924
Trichlorofluoromethane	0.005	0.948782	0.05	1.117121	0.125	1.06339	0.25	1.085026	0.375	1.023554	0.5	0.9123759
1,2,3-Trichloropropane	0.005	0.3326877	0.05	0.3119508	0.125	0.3058349	0.25	0.3204617	0.375	0.3240947	0.5	0.2869913
1,1,2-Trichloro-1,2,2-trifluoroethan	0.005	0.2726662	0.05	0.3674152	0.125	0.3346464	0.25	0.358492	0.375	0.3557977	0.5	0.3340546
1,2,4-Trimethylbenzene	0.005	3.284732	0.05	4.168025	0.125	3.869964	0.25	4.418181	0.375	4.227931	0.5	3.633078
1,3,5-Trimethylbenzene	0.005	3.559311	0.05	4.345453	0.125	4.025398	0.25	4.511152	0.375	4.319588	0.5	3.677258
Vinyl chloride	0.005	0.2206011	0.05	0.2521421	0.125	0.2515831	0.25	0.2852576	0.375	0.2901905	0.5	0.2738741
Total Xylenes	0.015	1.226879	0.15	1.418652	0.375	1.319156	0.75	1.530397	1.125	1.568415	1.5	1.465182
Total Purgeable Petroleum Hydroca												
Total Purgeable Petroleum Hydroca												
1,2-Dichloroethane-d4 (Surrogate)	0.05	0.9766693	0.05	0.9779702	0.05	0.9495898	0.05	0.9184059	0.05	0.8322105	0.05	0.8099434
Toluene-d8 (Surrogate)	0.05	1.216844	0.05	1.236731	0.05	1.260588	0.05	1.228786	0.05	1.248727	0.05	1.248359
4-Bromofluorobenzene (Surrogate)	0.05	2.201869	0.05	2.283269	0.05	2.178707	0.05	2.275416	0.05	2.15492	0.05	2.025325

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
Benzene												
Bromobenzene												
Bromochloromethane												
Bromodichloromethane												
Bromoform												
Bromomethane												
n-Butylbenzene												
sec-Butylbenzene												
tert-Butylbenzene												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
Chloromethane												
2-Chlorotoluene												
4-Chlorotoluene												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane												
Dibromomethane												
1,2-Dichlorobenzene												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
Dichlorodifluoromethane												
1,1-Dichloroethane												

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Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
Total 1,2-Dichloroethene												
1,2-Dichloropropane												
1,3-Dichloropropane												
2,2-Dichloropropane												
1,1-Dichloropropene												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
Total 1,3-Dichloropropene												
Ethylbenzene												
Hexachlorobutadiene												
Isopropylbenzene												
p-Isopropyltoluene												
Methylene chloride												
Methyl t-butyl ether												
Naphthalene												
n-Propylbenzene												
Styrene												
1,1,1,2-Tetrachloroethane												
1,1,2,2-Tetrachloroethane												
Tetrachloroethene												
Toluene												

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
1,2,3-Trichlorobenzene												
1,2,4-Trichlorobenzene												
1,1,1-Trichloroethane												
1,1,2-Trichloroethane												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,1,2-Trichloro-1,2,2-trifluoroethan												
1,2,4-Trimethylbenzene												
1,3,5-Trimethylbenzene												
Vinyl chloride												
Total Xylenes												
Total Purgeable Petroleum Hydroca	0.2	2.424699	0.5	2.396063	1	2.305382	1.5	2.354482	2	2.580206	2.5	2.610967
Total Purgeable Petroleum Hydroca	0.2	~~2.040597~~	0.5	~~2.044591~~	1	~~1.973063~~	1.5	~~2.013422~~	2	~~2.234294~~	2.5	~~2.248875~~
1,2-Dichloroethane-d4 (Surrogate)	0.05		0.05		0.05		0.05		0.05		0.05	
Toluene-d8 (Surrogate)	0.05		0.05		0.05		0.05		0.05		0.05	
4-Bromofluorobenzene (Surrogate)	0.05		0.05		0.05		0.05		0.05		0.05	

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INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
Benzene	0.8429437	6.362189	7.15	1.496182E-03			15	
Bromobenzene	0.8932219	5.9483	10.59	0.0123489			15	
Bromochloromethane	0.1070676	10.13758	6.443333	8.173592E-02			15	
Bromodichloromethane	0.4569241	10.30986	8.231666	5.365521E-02			15	
Bromoform	0.4938285	17.57886	10.30333	5.141369E-02	0.990037		SPCC (0.10)	
Bromomethane	0.1705291	19.6743	2.611667	0.1563683	0.9946852		0.99	
n-Butylbenzene	3.47133	14.66722	11.345	4.526959E-02			15	
sec-Butylbenzene	4.371841	11.42598	11.03667	4.773839E-02			15	
tert-Butylbenzene	3.356356	9.9332	10.91	1.552107E-02			15	
Carbon tetrachloride	0.7178083	10.15798	6.93	1.506493E-02			15	
Chlorobenzene	1.846274	6.045405	9.79	1.458522E-02			SPCC (0.30)	
Chloroethane	0.1590024	15.98343	2.745	0.1990917	0.9943227		0.99	
Chloroform	0.7035705	4.132283	6.58	1.519571E-02			CCC (20)	
Chloromethane	0.2662985	11.75245	2.09	1.151382E-02			SPCC (0.10)	
2-Chlorotoluene	3.714774	8.306953	10.69167	4.029128E-02			15	
4-Chlorotoluene	3.365786	7.111156	10.76	1.356797E-02			15	
Dibromochloromethane	0.246343	18.18216	9.391667	4.002331E-02	0.9961369		0.99	
1,2-Dibromo-3-chloropropane	0.212317	13.25549	11.82167	0.0280438			15	
1,2-Dibromoethane	0.1796411	8.101581	9.476666	5.617612E-02			15	
Dibromomethane	0.1362465	9.481981	8.081667	5.281629E-02			15	
1,2-Dichlorobenzene	1.589333	6.73473	11.39	2.429366E-02			15	
1,3-Dichlorobenzene	1.782966	9.013987	11.12833	3.308983E-02			15	
1,4-Dichlorobenzene	1.741543	9.142089	11.18	1.360763E-02			15	
Dichlorodifluoromethane	0.5822872	10.75998	1.883333	0.2741656			15	
1,1-Dichloroethane	0.5372316	4.877948	5.308333	7.884261E-02			SPCC (0.10)	
1,2-Dichloroethane	0.7311767	8.178631	7.21	6.933966E-03			15	

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Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids

SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1-Dichloroethene	0.5810033	8.256867	3.736667	0.1385484			CCC (20)	
cis-1,2-Dichloroethene	0.2431254	4.986696	6.13	0.1028341			15	
trans-1,2-Dichloroethene	0.2274288	9.283375	4.733333	0.1089224			15	
Total 1,2-Dichloroethene	0.2352771	6.860108	6.13	0.1028341			15	
1,2-Dichloropropane	0.1701032	8.057804	8.011667	4.864222E-02			CCC (20)	
1,3-Dichloropropane	0.303295	2.602736	9.241666	4.175574E-02			15	
2,2-Dichloropropane	0.7995219	9.763705	6.128333	6.496083E-02			15	
1,1-Dichloropropene	0.4738103	8.063021	6.941667	5.921495E-02			15	
cis-1,3-Dichloropropene	0.3640383	12.52046	8.57	1.755412E-02			15	
trans-1,3-Dichloropropene	0.4165891	11.49845	8.99	2.107802E-02			15	
Total 1,3-Dichloropropene	0.3903137	11.91267	8.99	2.107802E-02			15	
Ethylbenzene	1.2019	9.768152	9.845	0.0532866			CCC (20)	
Hexachlorobutadiene	1.429905	11.73994	12.34333	4.128628E-02			15	
Isopropylbenzene	4.32921	10.1885	10.38	1.618284E-02			15	
p-Isopropyltoluene	3.961033	12.89001	11.11833	3.477298E-02			15	
Methylene chloride	0.2142735	8.201719	4.39	1.335599E-02			15	
Methyl t-butyl ether	0.8618717	4.263838	4.721666	8.765011E-02			15	
Naphthalene	1.991763	9.816532	12.44167	3.045893E-02			15	
n-Propylbenzene	4.624537	10.30155	10.62167	4.215087E-02			15	
Styrene	2.225809	11.18849	10.17833	4.239515E-02			15	
1,1,1,2-Tetrachloroethane	0.983601	9.127148	9.845	0.0532866			15	
1,1,2,2-Tetrachloroethane	0.5416506	5.069657	10.56	1.458778E-02			SPCC (0.30)	
Tetrachloroethene	0.3095791	6.815874	9.19	8.816164E-03			15	
Toluene	0.5134676	7.219585	8.821666	4.790242E-02			CCC (20)	
1,2,3-Trichlorobenzene	1.155332	9.335523	12.56333	0.0461345			15	
1,2,4-Trichlorobenzene	1.279311	8.558255	12.28	2.432736E-02			15	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

INITIAL CALIBRATION DATA (Continued)

EPA-8260B

Laboratory: BC Laboratories
Client: SMUD - Kleinfelder
Calibration: 2103021
Matrix: Solids
SDG: 2034585
Project: SMUD Soil Samples-CLP
Instrument: MS-V17
Calibration Date: 11/12/20 19:24

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
1,1,1-Trichloroethane	0.8734135	8.863197	6.763333	7.502606E-02			15	
1,1,2-Trichloroethane	0.1558593	3.9837	9.128333	4.665465E-02			15	
Trichloroethene	0.2385811	6.595787	7.786667	6.845538E-02			15	
Trichlorofluoromethane	1.025041	7.811712	3.066667	0.1697201			15	
1,2,3-Trichloropropane	0.3136702	5.125884	10.6	4.036868E-03			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3371787	10.18195	3.755	0.1458892			15	
1,2,4-Trimethylbenzene	3.933652	10.73624	10.94	0.0171434			15	
1,3,5-Trimethylbenzene	4.073027	9.507378	10.72	1.480693E-02			15	
Vinyl chloride	0.2622747	9.936297	2.22	1.458429E-02			CCC (20)	
Total Xylenes	1.421447	9.10278	10.16667	4.960274E-02			15	
Total Purgeable Petroleum Hydrocarbons	2.4453	5.052425	9.536667	6.227111			15	
Total Purgeable Petroleum Hydrocarbons (C6-C							15	
1,2-Dichloroethane-d4 (Surrogate)	0.9107982	8.032443	7.13	1.525968E-02			15	
Toluene-d8 (Surrogate)	1.240006	1.271297	8.77	1.948028E-02			15	
4-Bromofluorobenzene (Surrogate)	2.186584	4.316493	10.49667	4.817975E-02			15	

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

HOLDING TIME SUMMARY

EPA-8260B

Laboratory: BC Laboratories
SDG: 2034585
Client: SMUD - Kleinfelder
Project: SMUD Soil Samples-CLP

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-2	11/23/20 14:25	11/24/20 09:50	12/01/20 09:27	8.00	14.00	12/01/20 15:06	8.00	14.00	
VW-31-2	11/23/20 14:48	11/24/20 09:50	12/01/20 09:27	8.00	14.00	12/01/20 15:27	8.00	14.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

Raw Data From Instrument MS-V17

Raw Data - Samples

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC019.D Vial: 19
Acq On : 1 Dec 2020 3:06 pm Operator: RCC
Sample : 2034585-01 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:21 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

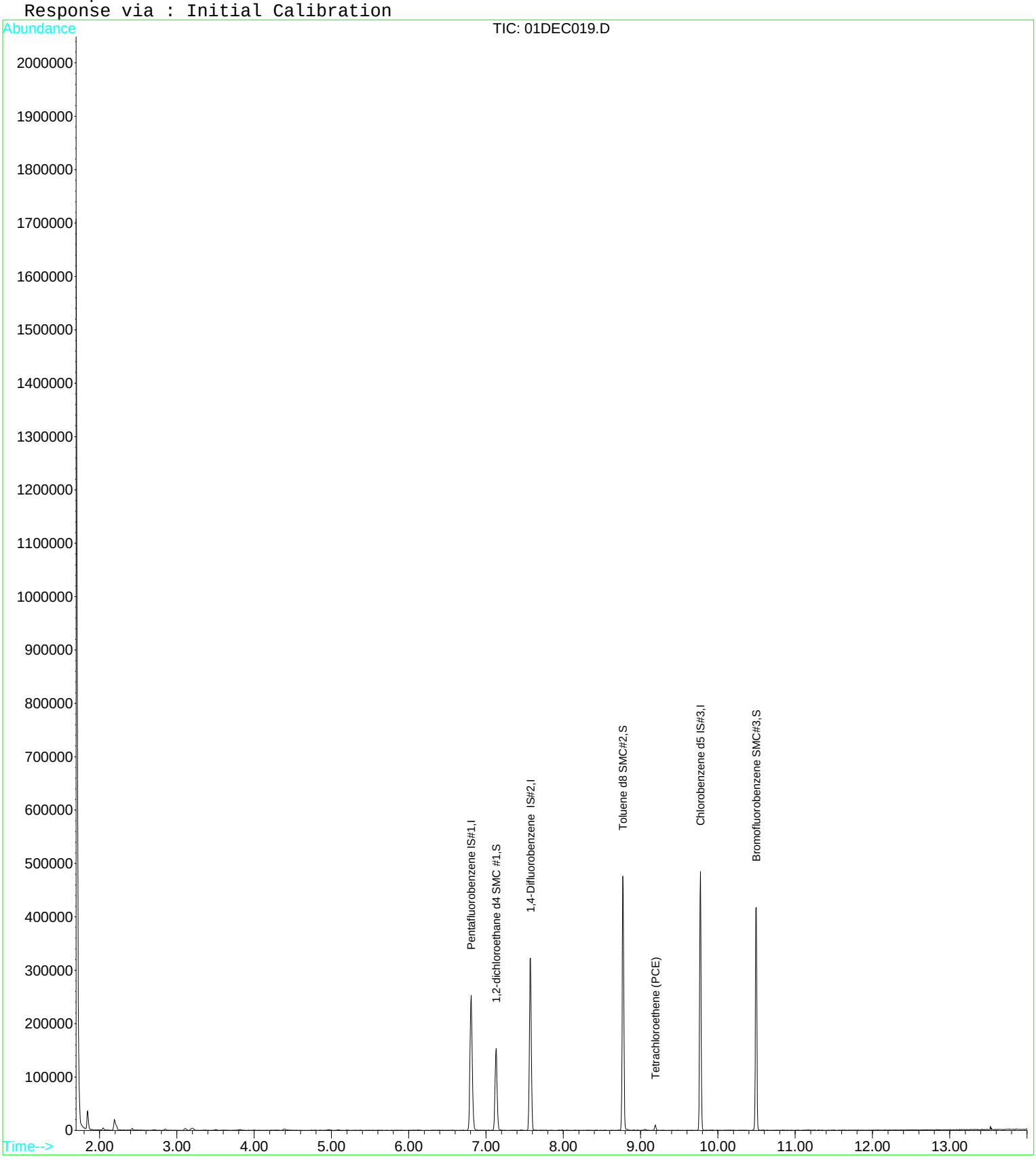
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	144091	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	178303	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	50601	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	138280	52.68	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.36%			
30) Toluene d8 SMC#2	8.77	98	211940	47.93	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.86%			
48) Bromofluorobenzene SMC#3	10.49	95	100804	45.55	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.10%			
Target Compounds						Qvalue
34) Tetrachloroethene (PCE)	9.19	166	1863	1.69	ug/kg#	83

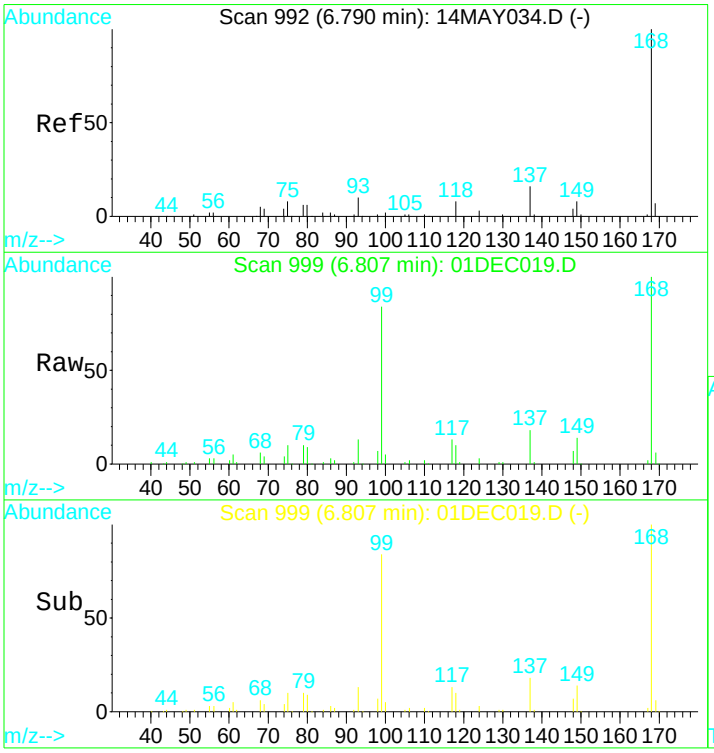
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC019.D Vial: 19
Acq On : 1 Dec 2020 3:06 pm Operator: RCC
Sample : 2034585-01 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:21 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration

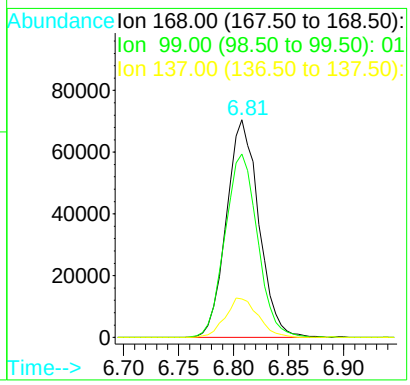


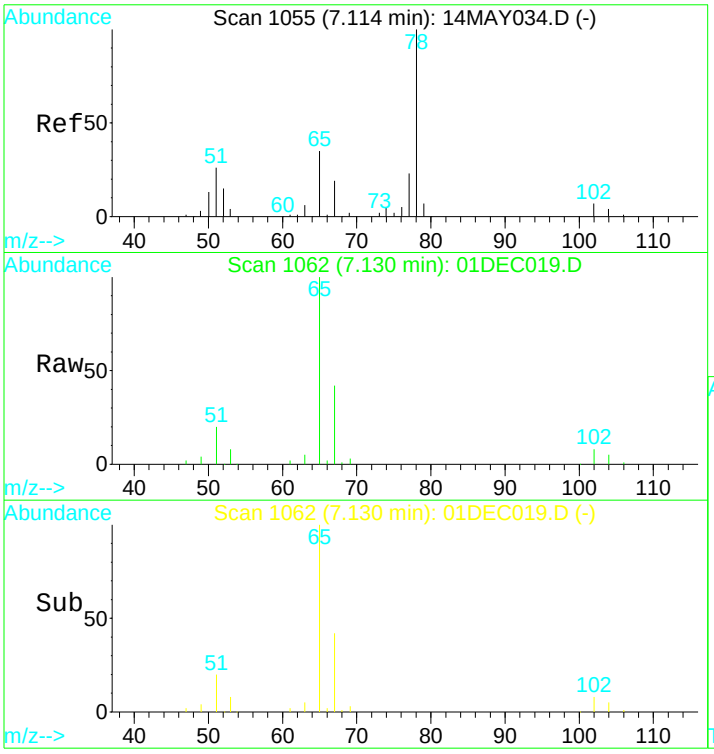


#1
Pentafluorobenzene IS#1
Concen: 50.00 ug/kg
RT: 6.81 min Scan# 999
Delta R.T. 0.01 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:168 Resp: 144091

Ion	Ratio	Lower	Upper
168	100		
99	84.8	0.0	0.0#
137	18.4	12.8	19.2

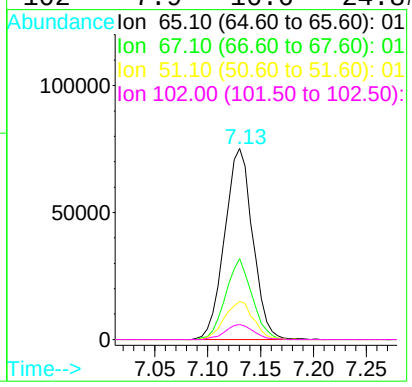


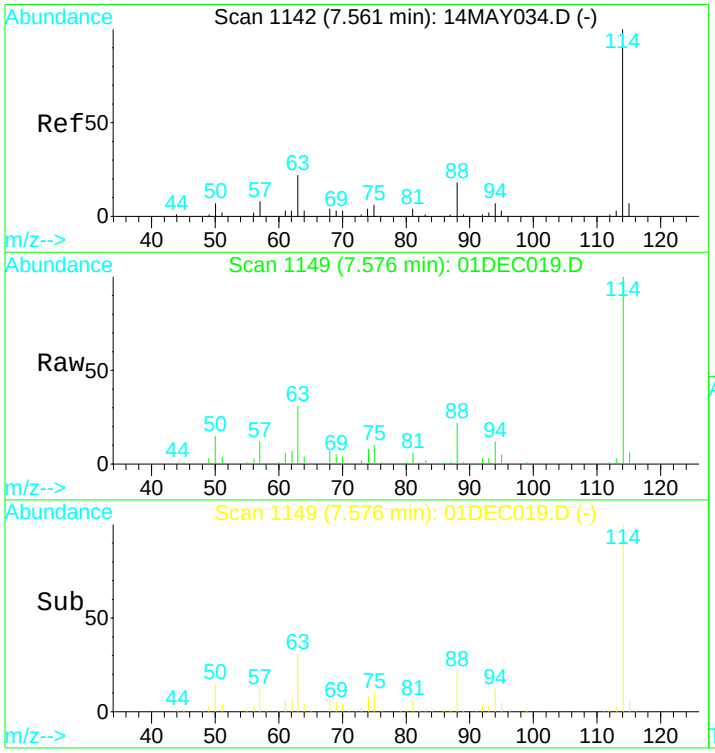


#21
1,2-dichloroethane d4 SMC #1
Concen: N.D. ug/kg
RT: 7.13 min Scan# 1062
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion: 65 Resp: 138280

Ion	Ratio	Lower	Upper
65	100		
67	39.8	42.0	63.0#
51	20.4	58.0	87.0#
102	7.9	16.6	24.8#

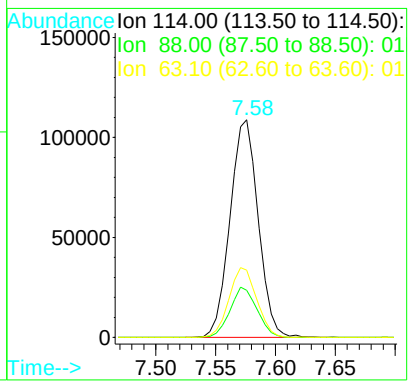


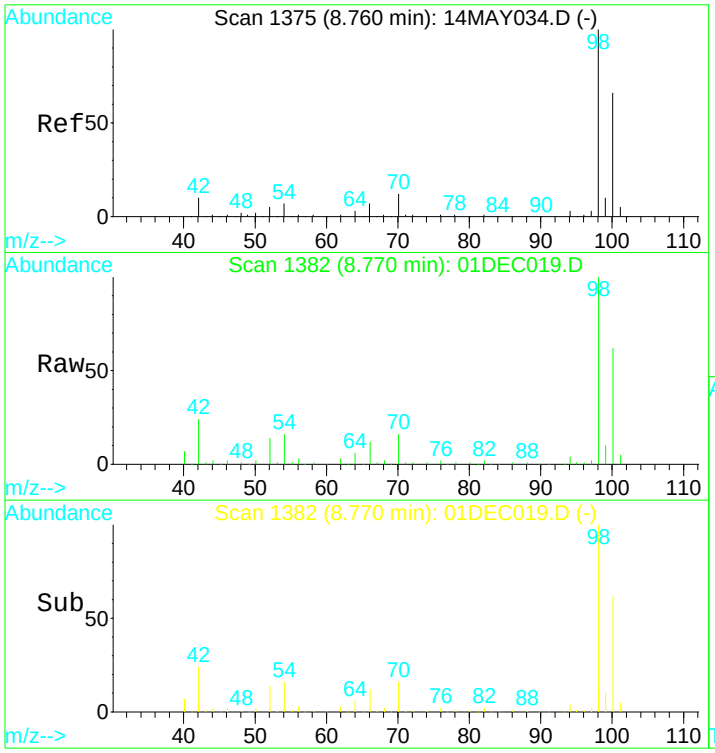


#24
1,4-Difluorobenzene IS#2
Concen: 50.00 ug/kg
RT: 7.58 min Scan# 1149
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:114 Resp: 178303

Ion	Ratio	Lower	Upper
114	100		
88	22.2	14.5	21.7#
63	31.5	17.2	25.8#

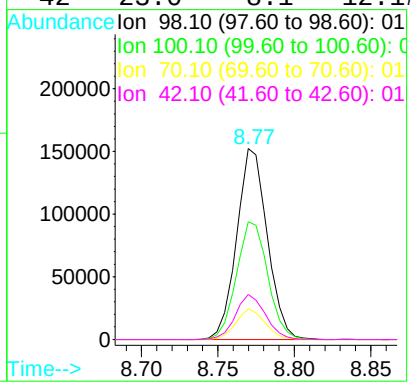


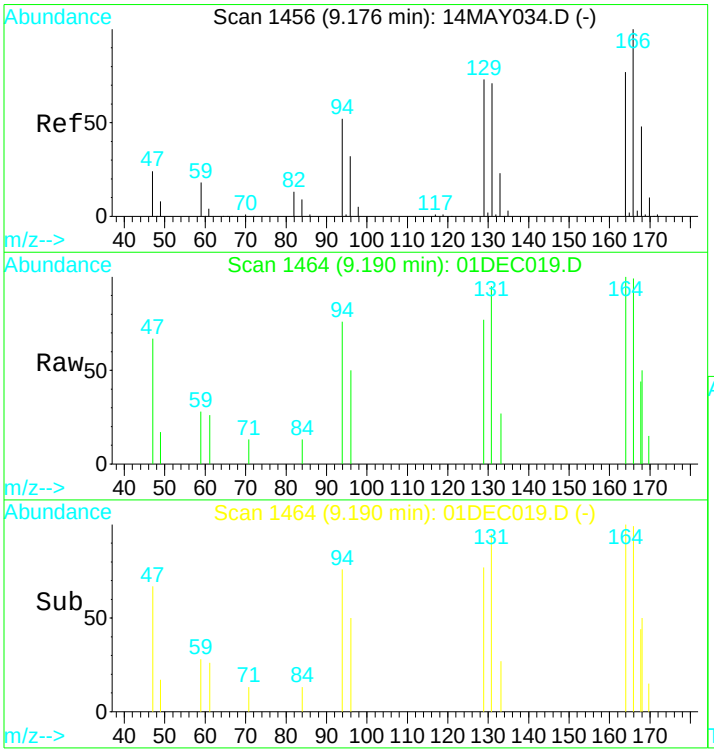


#30
Toluene d8 SMC#2
Concen: N.D. ug/kg
RT: 8.77 min Scan# 1382
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion: 98 Resp: 211940

Ion	Ratio	Lower	Upper
98	100		
100	63.0	52.9	79.3
70	15.2	9.3	13.9#
42	23.0	8.1	12.1#

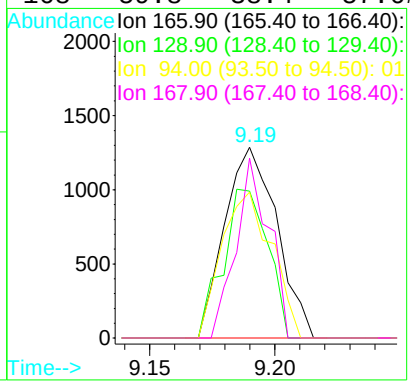


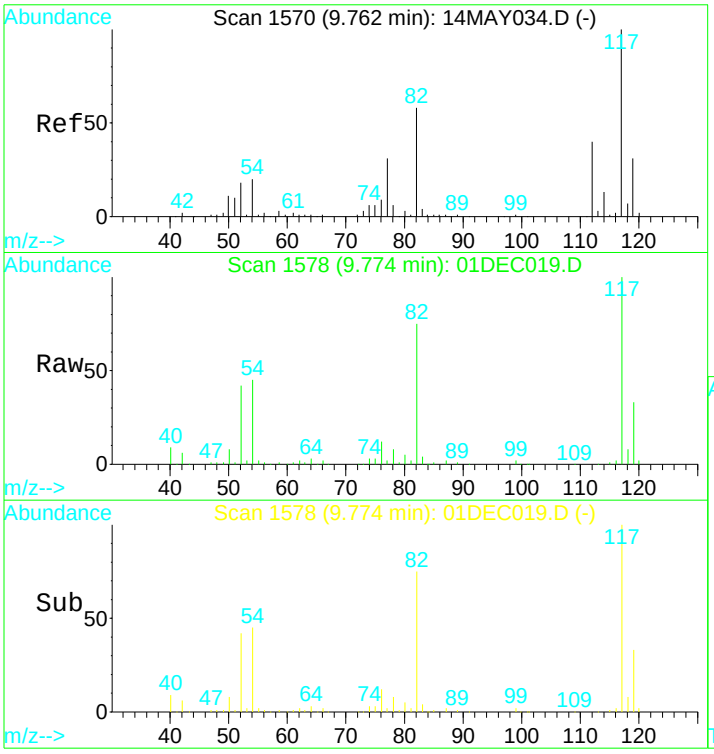


#34
Tetrachloroethene (PCE)
Concen: 1.69 ug/kg
RT: 9.19 min Scan# 1464
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:166 Resp: 1863

Ion	Ratio	Lower	Upper
166	100		
129	67.0	58.5	87.7
94	73.6	41.3	61.9#
168	59.8	38.4	57.6#

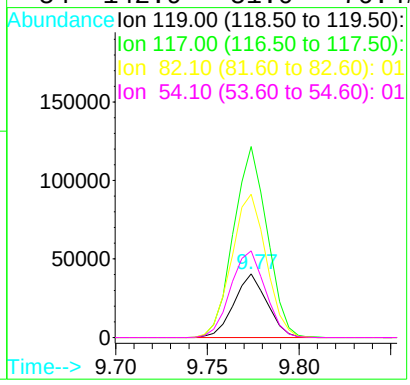


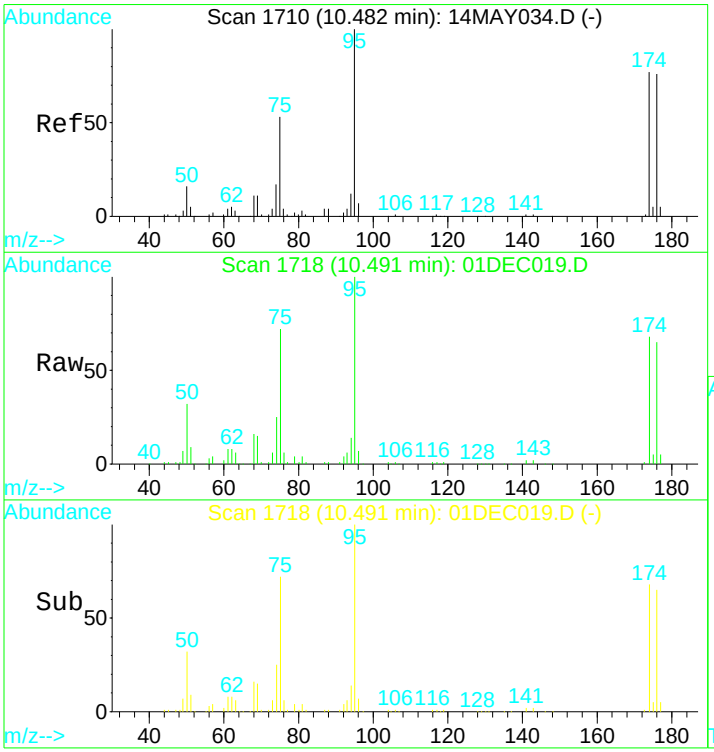


#38
Chlorobenzene d5 IS#3
Concen: 50.00 ug/kg
RT: 9.77 min Scan# 1578
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:119 Resp: 50601

Ion	Ratio	Lower	Upper
119	100		
117	305.7	260.2	390.2
82	237.2	151.6	227.4#
54	142.9	51.0	76.4#

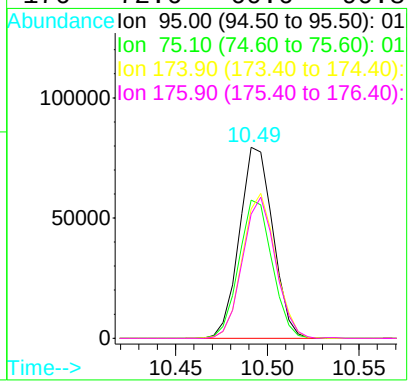




#48
Bromofluorobenzene SMC#3
Concen: N.D. ug/kg
RT: 10.49 min Scan# 1718
Delta R.T. 0.00 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion: 95 Resp: 100804

Ion	Ratio	Lower	Upper
95	100		
75	71.9	42.2	63.2#
174	75.2	61.6	92.4
176	72.6	60.6	90.8



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC019.D Vial: 19
Acq On : 1 Dec 2020 3:06 pm Operator: RCC
Sample : 2034585-01 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:42 2021 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

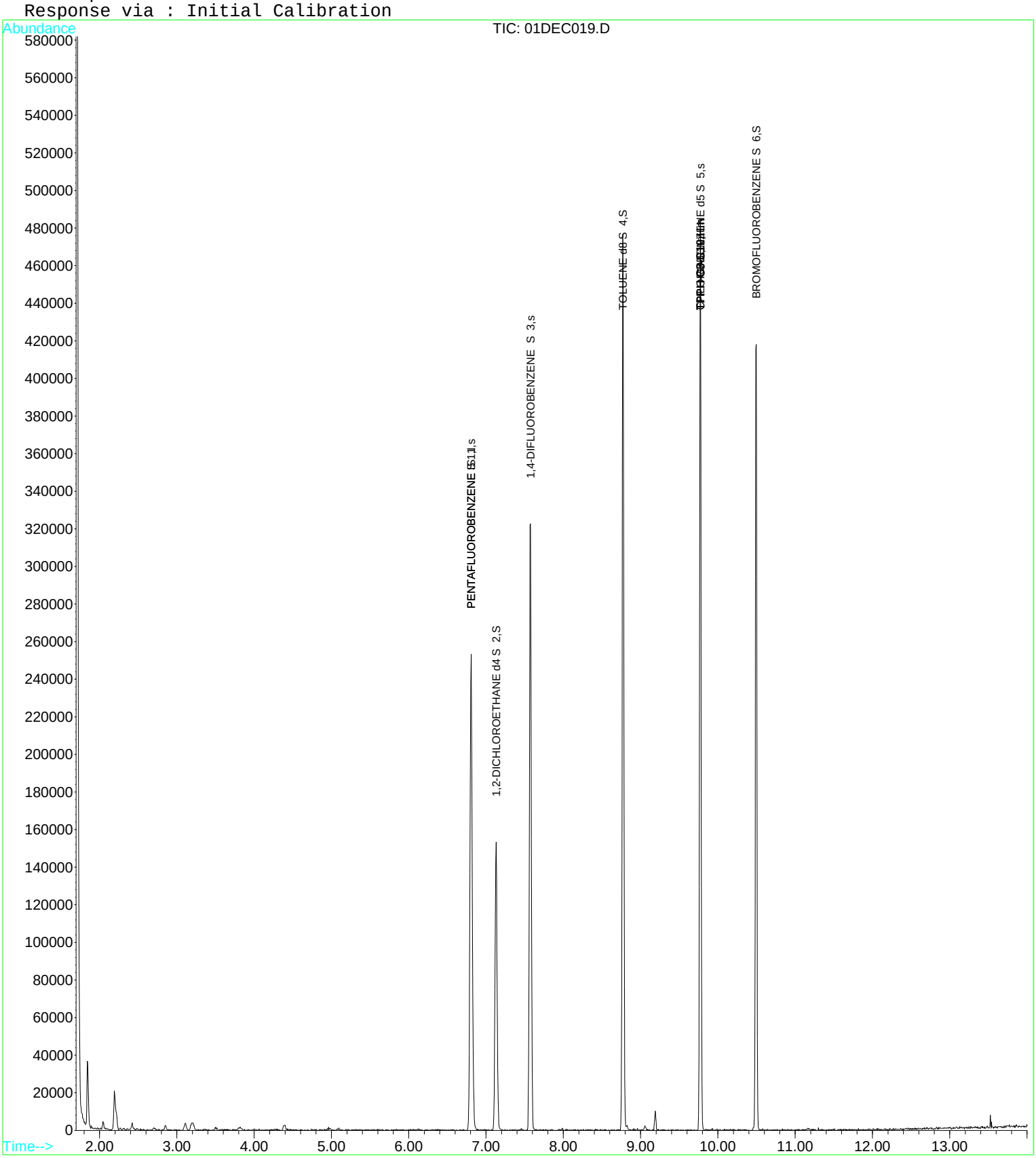
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	144091	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	517171m	53.47	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	281249m	63.22	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	538056m	50.27	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	663981m	50.25	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	633353m	57.51	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	544570m	59.47	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.77	TIC	228127m	32.37	ug/kg	
9) TPPH C6-C12	9.77	TIC	101858m	16.89	ug/kg	
10) TPPH C6-C10	9.77	TIC	78884m	17.45	ug/kg	

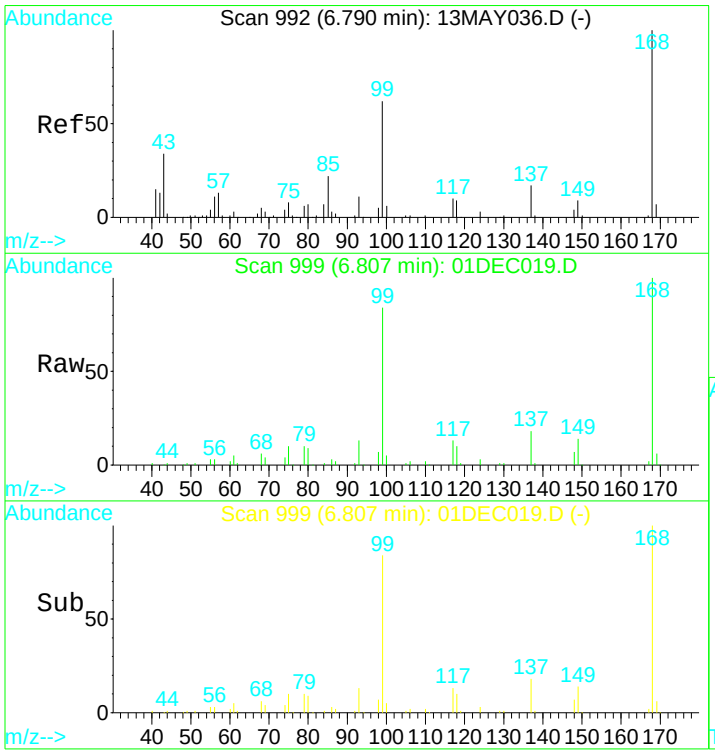
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC019.D Vial: 19
Acq On : 1 Dec 2020 3:06 pm Operator: RCC
Sample : 2034585-01 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:42 2021 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration

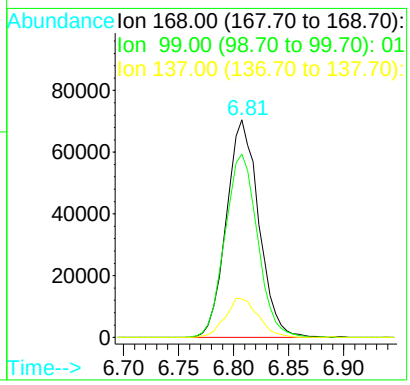


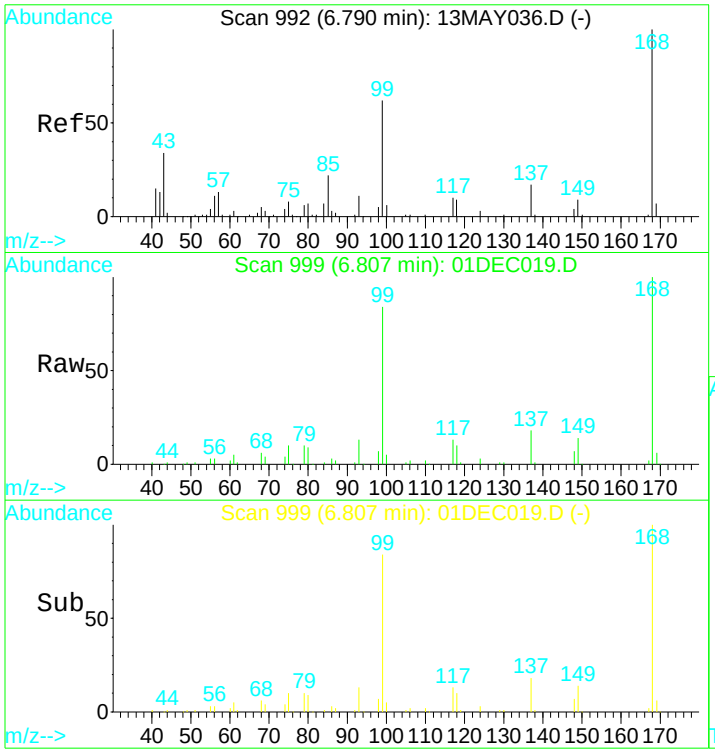


#1
PENTAFLUOROBENZENE IS1
Concen: 50.00 ug/kg
RT: 6.81 min Scan# 999
Delta R.T. 0.11 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:168 Resp: 144091

Ion	Ratio	Lower	Upper
168	100		
99	84.8	49.7	74.5#
137	18.4	13.9	20.9

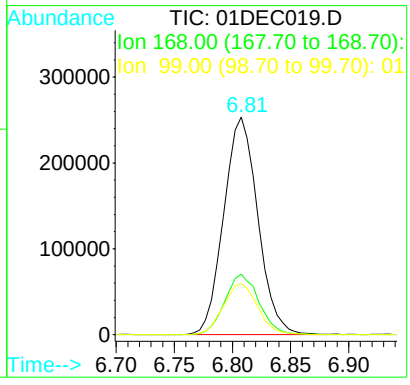


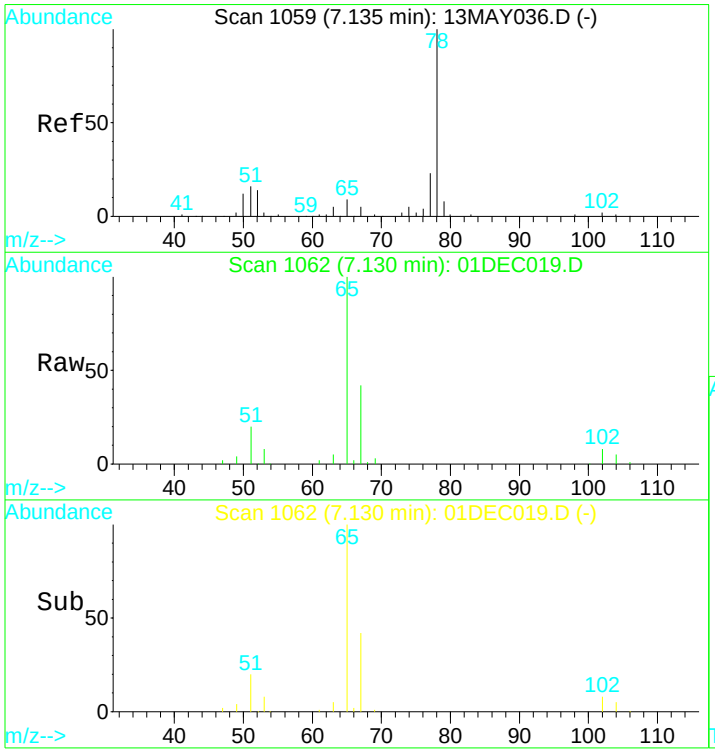


#2
PENTAFLUOROBENZENE S 1
Concen: 50.00 ug/kg m
RT: 6.81 min Scan# 999
Delta R.T. 0.11 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 517171

Ion	Ratio	Lower	Upper
TIC	100		
168	27.9	323.8	485.8#
99	23.6	201.2	301.8#

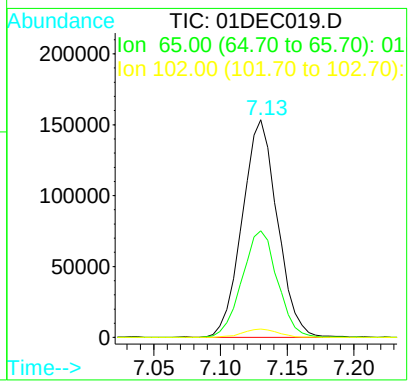


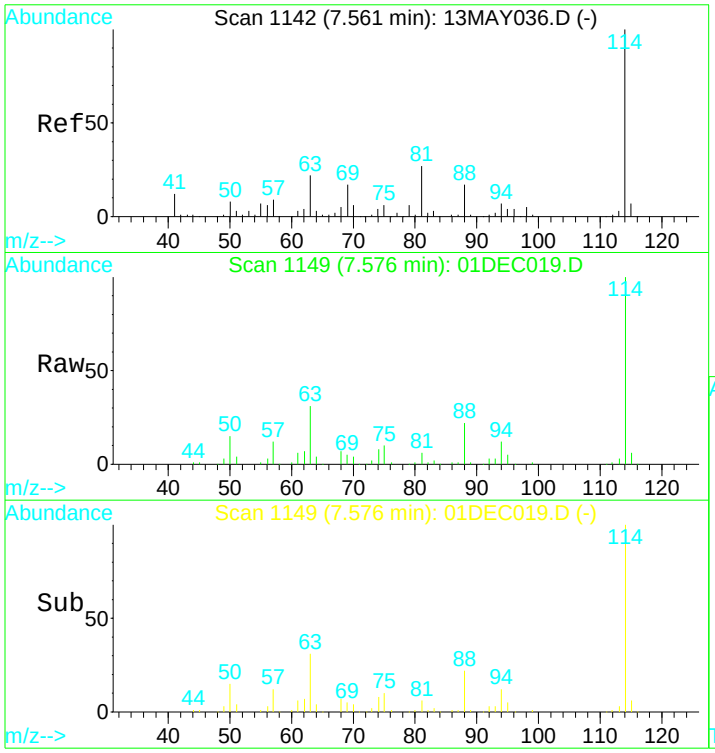


#3
1,2-DICHLOROETHANE d4 S 2
Concen: 50.00 ug/kg m
RT: 7.13 min Scan# 1062
Delta R.T. 0.10 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 281249

Ion	Ratio	Lower	Upper
TIC	100		
65	49.2	65.6	98.4#
102	3.9	14.3	21.5#

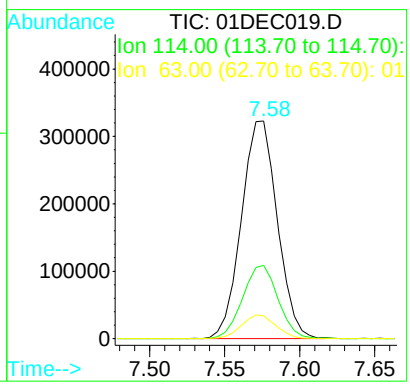


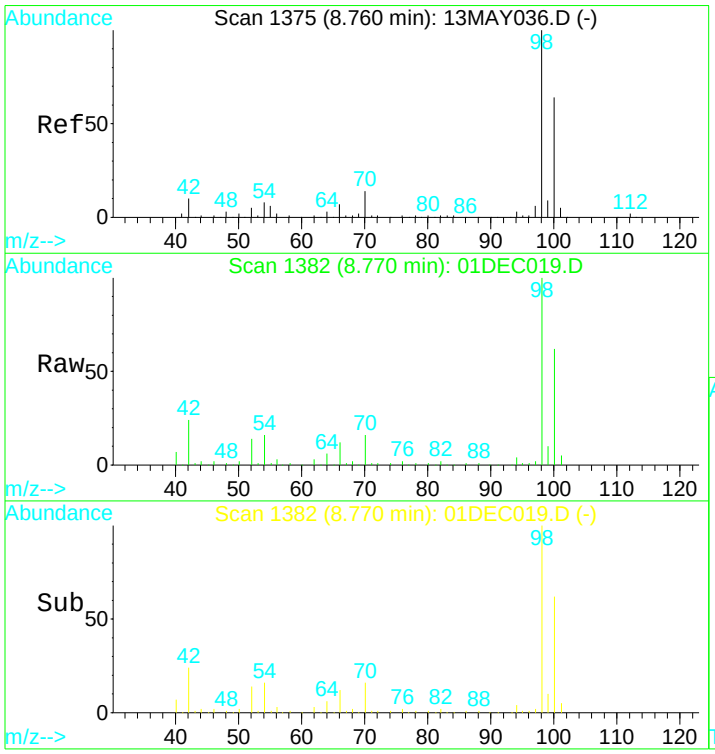


#4
1,4-DIFLUOROBENZENE S 3
Concen: 50.00 ug/kg m
RT: 7.58 min Scan# 1149
Delta R.T. 0.09 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 538056

Ion	Ratio	Lower	Upper
TIC	100		
114	33.1	221.1	331.7#
63	10.4	48.8	73.2#

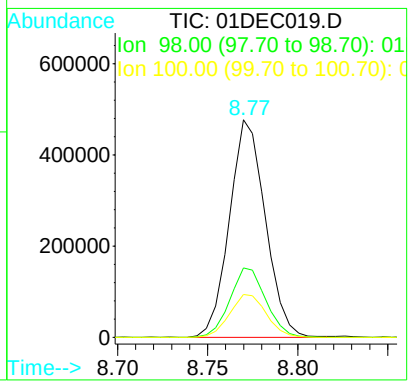


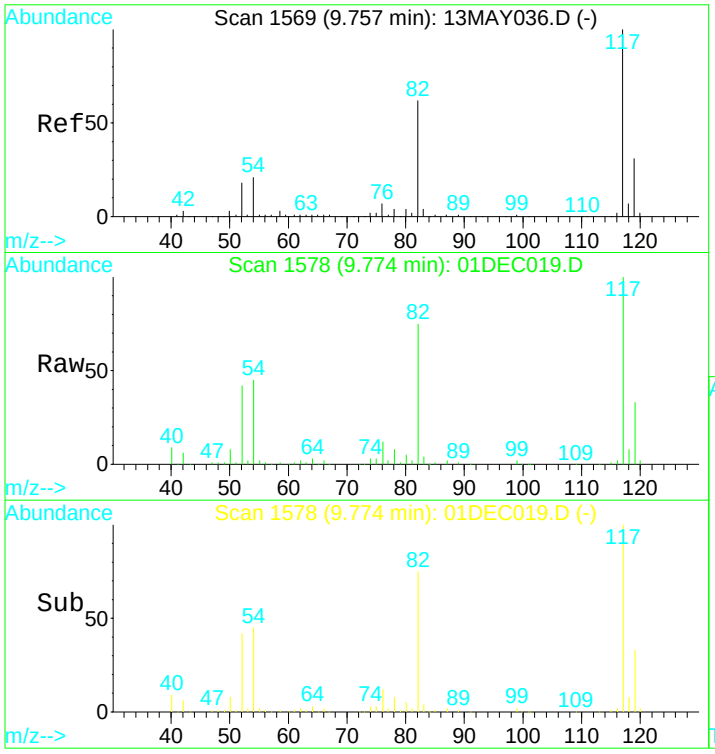


#5
TOLUENE d8 S 4
Concen: 50.00 ug/kg m
RT: 8.77 min Scan# 1382
Delta R.T. 0.08 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 663981

Ion	Ratio	Lower	Upper
TIC	100		
98	31.9	133.0	199.6#
100	20.1	85.6	128.4#

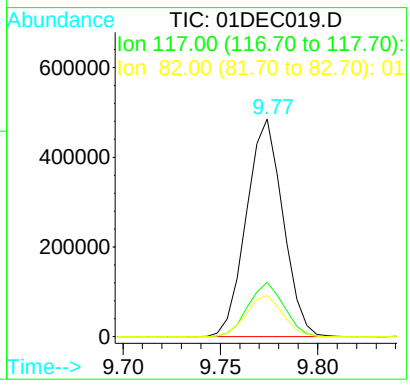


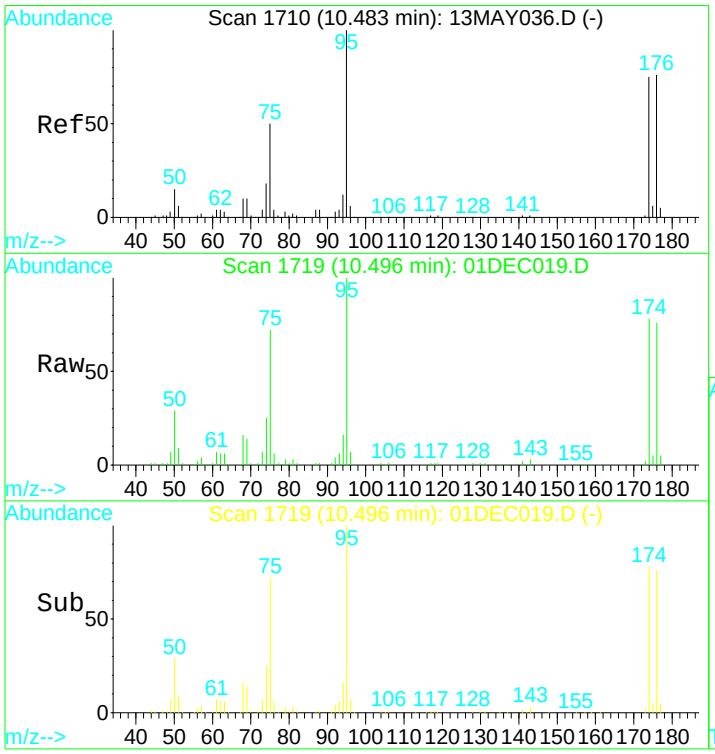


#6
CHLOROBENZENE d5 S 5
Concen: 50.00 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 0.08 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 633353

Ion	Ratio	Lower	Upper
TIC	100		
117	24.4	147.6	221.4#
82	19.0	91.1	136.7#

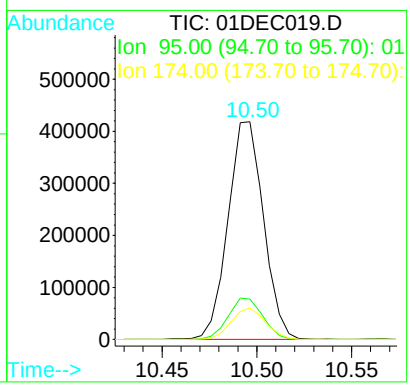


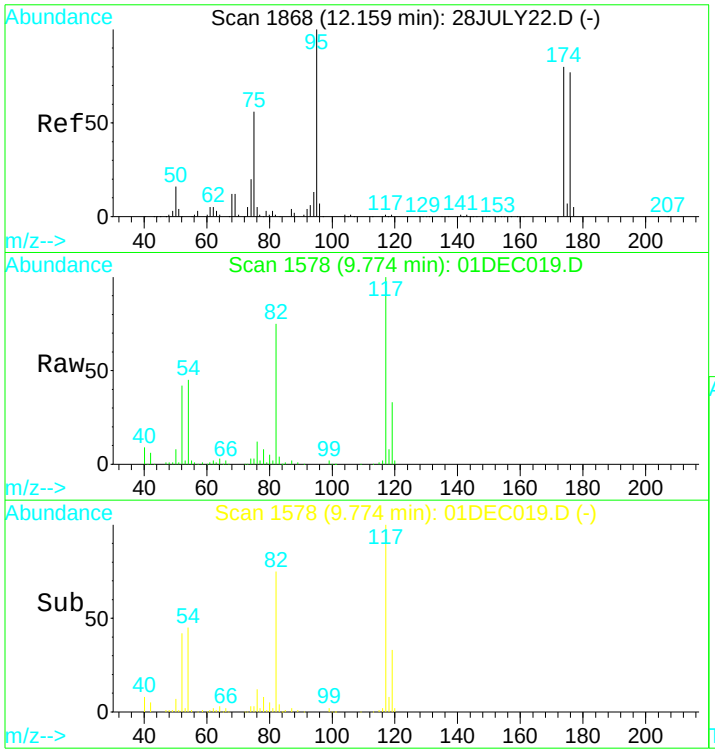


#7
BROMOFLUOROBENZENE S 6
Concen: 50.00 ug/kg m
RT: 10.50 min Scan# 1719
Delta R.T. 0.08 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 544570

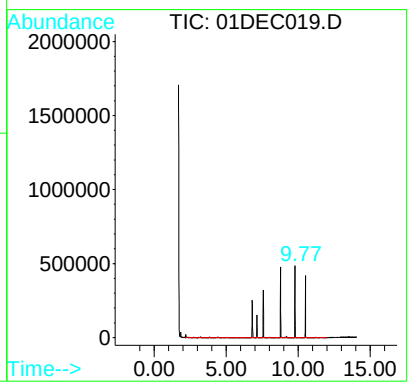
Ion	Ratio	Lower	Upper
TIC	100		
95	18.5	171.7	257.5#
174	13.9	129.3	193.9#

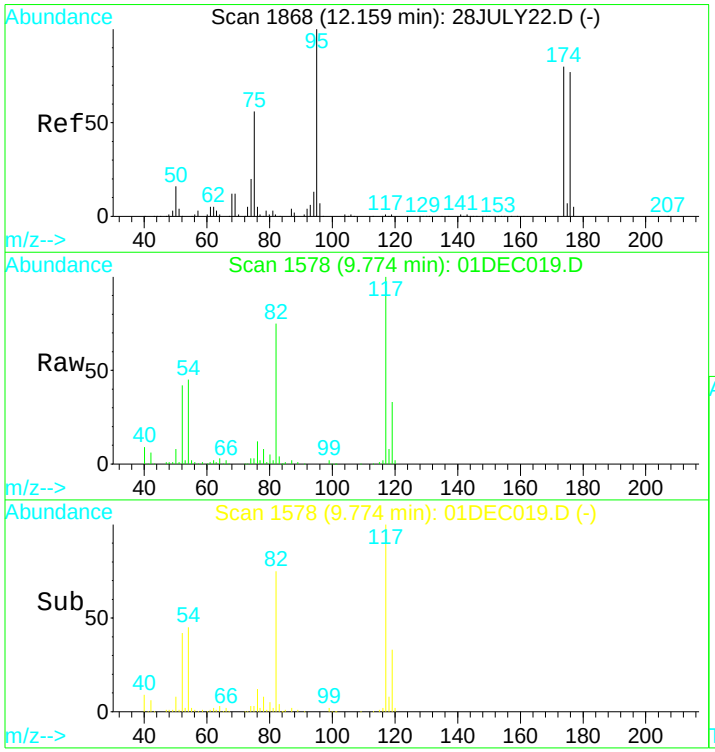




#8
TPPH-GAS
Concen: 32.37 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 2.69 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

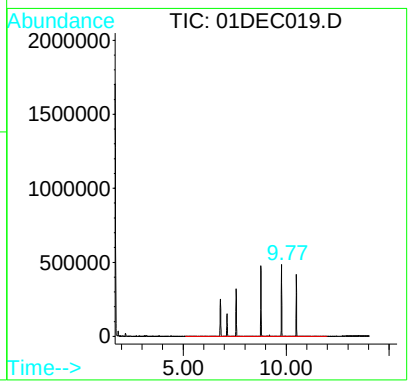
Tgt Ion:TIC Resp: 228127

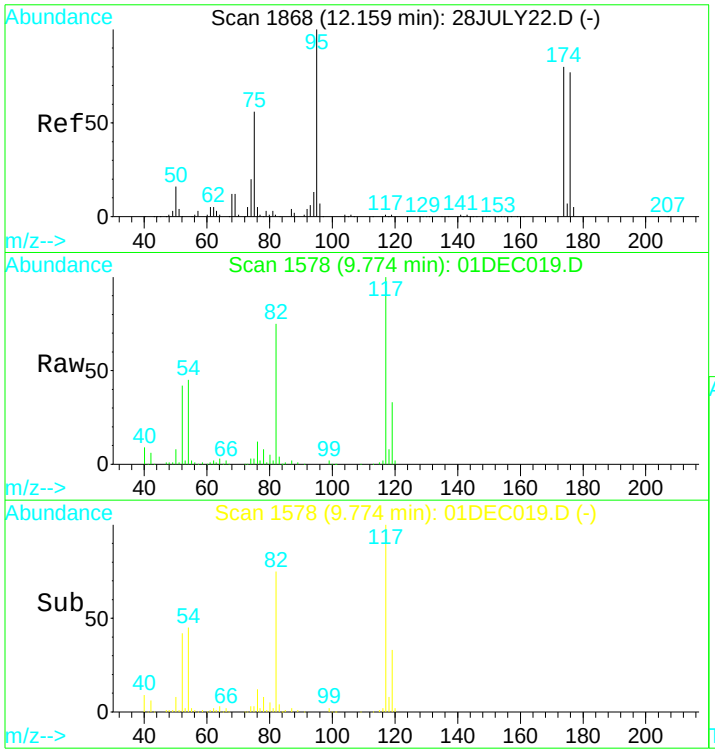




#9
TPPH C6-C12
Concen: 16.89 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 1.22 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

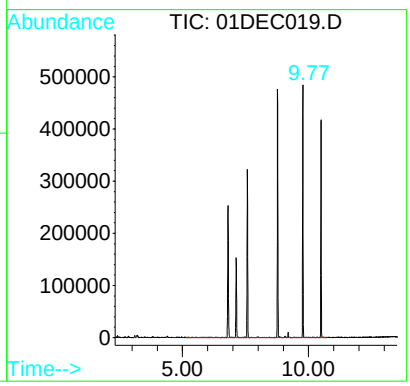
Tgt Ion:TIC Resp: 101858





#10
TPPH C6-C10
Concen: 17.45 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 1.85 min
Lab File: 01DEC019.D
Acq: 1 Dec 2020 3:06 pm

Tgt Ion:TIC Resp: 78884



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC020.D Vial: 20
Acq On : 1 Dec 2020 3:27 pm Operator: RCC
Sample : 2034585-02 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:21 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	146289	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	178879	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	53687	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	142675	53.54	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.08%			
30) Toluene d8 SMC#2	8.77	98	219026	49.37	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.74%			
48) Bromofluorobenzene SMC#3	10.50	95	110997	47.28	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.56%			

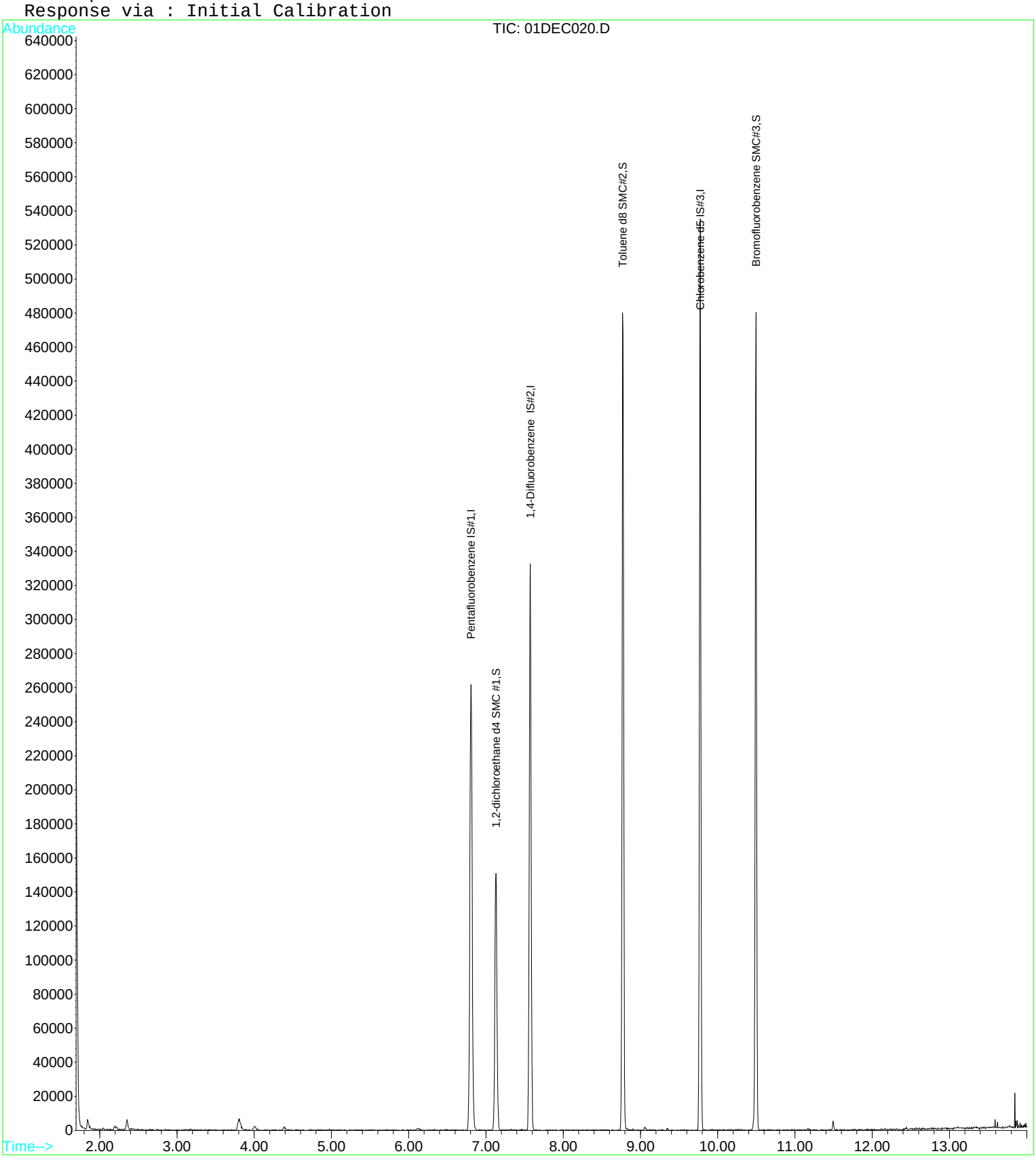
Target Compounds Qvalue

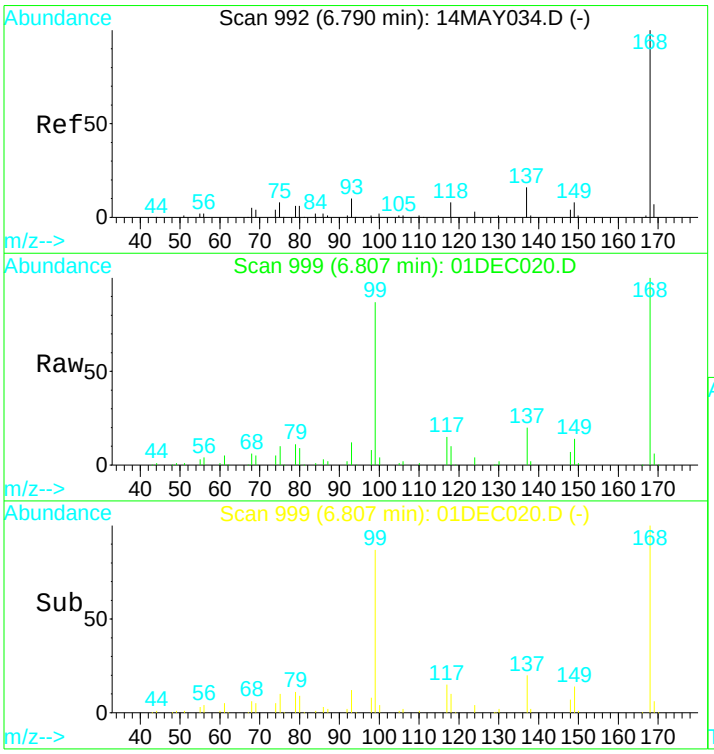
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC020.D Vial: 20
Acq On : 1 Dec 2020 3:27 pm Operator: RCC
Sample : 2034585-02 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:21 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration

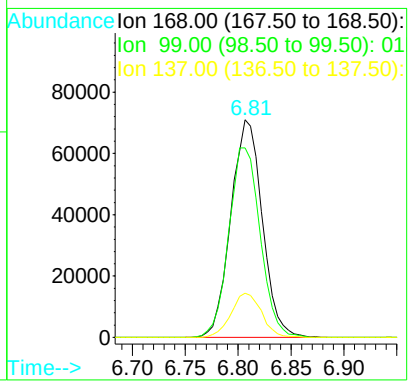


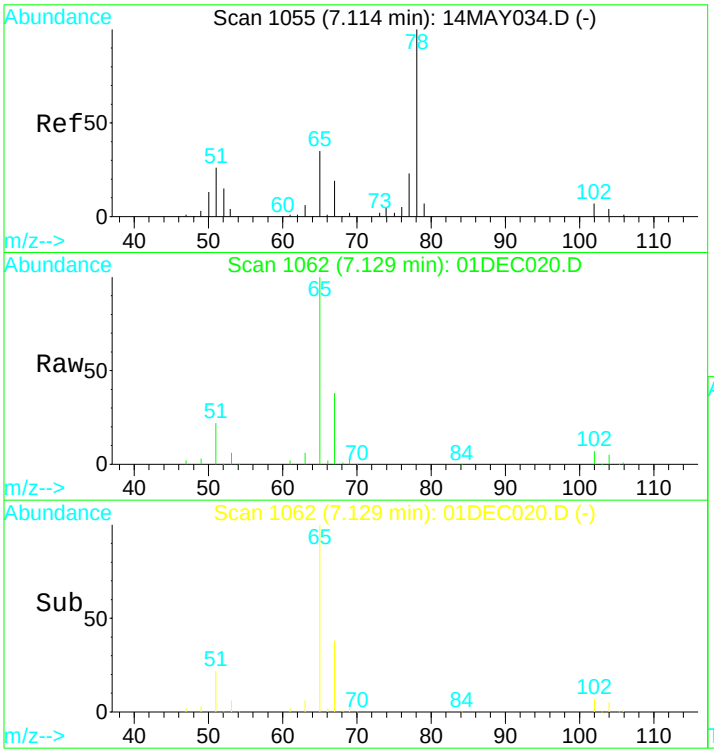


#1
Pentafluorobenzene IS#1
Concen: 50.00 ug/kg
RT: 6.81 min Scan# 999
Delta R.T. 0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:168 Resp: 146289

Ion	Ratio	Lower	Upper
168	100		
99	87.0	0.0	0.0#
137	19.7	12.8	19.2#

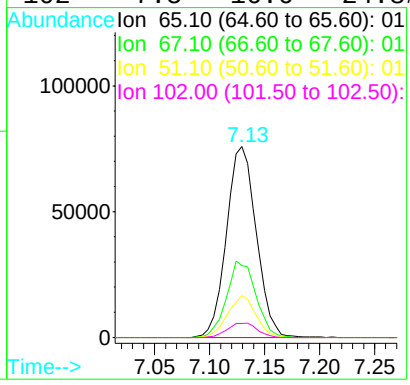


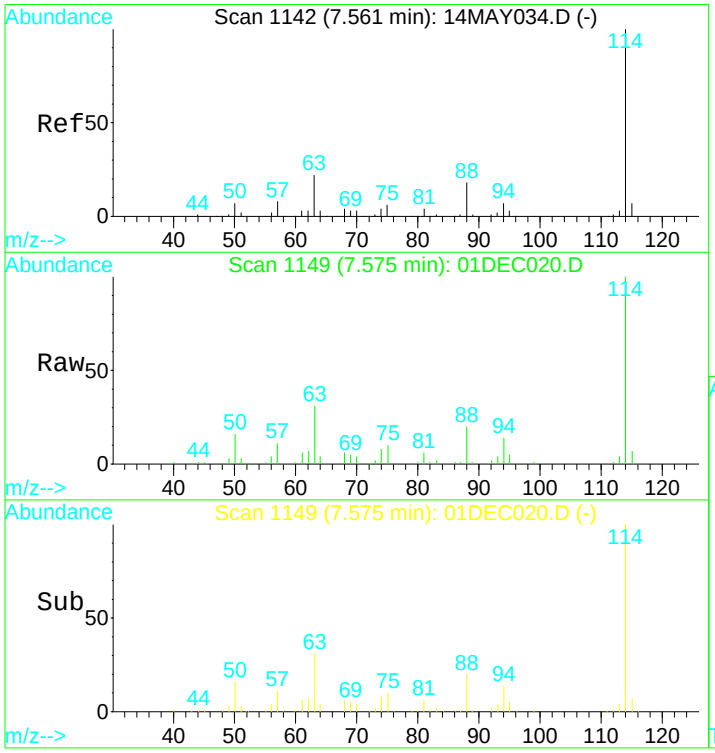


#21
1,2-dichloroethane d4 SMC #1
Concen: N.D. ug/kg
RT: 7.13 min Scan# 1062
Delta R.T. -0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion: 65 Resp: 142675

Ion	Ratio	Lower	Upper
65	100		
67	39.3	42.0	63.0#
51	20.7	58.0	87.0#
102	7.5	16.6	24.8#

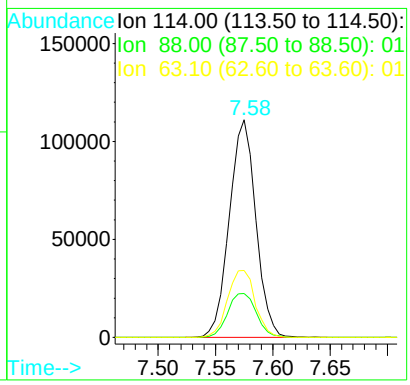


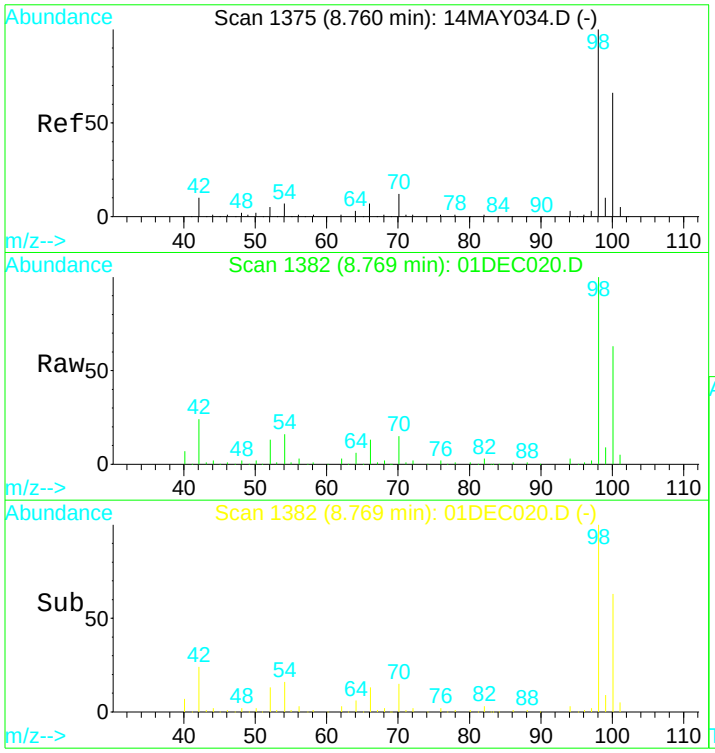


#24
1,4-Difluorobenzene IS#2
Concen: 50.00 ug/kg
RT: 7.58 min Scan# 1149
Delta R.T. -0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:114 Resp: 178879

Ion	Ratio	Lower	Upper
114	100		
88	21.8	14.5	21.7#
63	31.9	17.2	25.8#

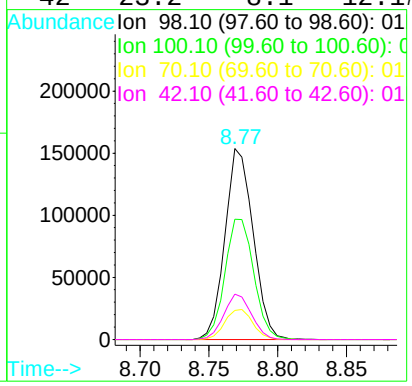


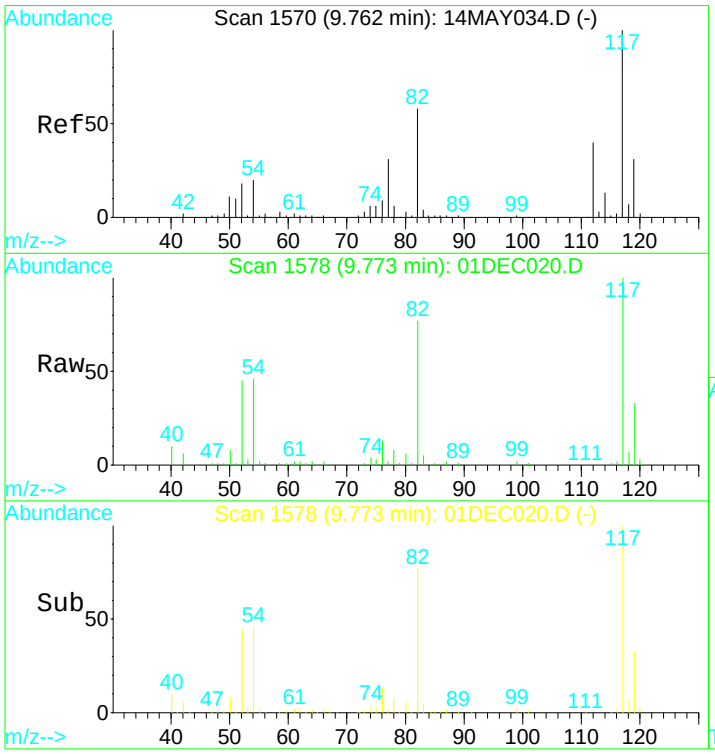


#30
Toluene d8 SMC#2
Concen: N.D. ug/kg
RT: 8.77 min Scan# 1382
Delta R.T. -0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion: 98 Resp: 219026

Ion	Ratio	Lower	Upper
98	100		
100	64.6	52.9	79.3
70	15.6	9.3	13.9#
42	23.2	8.1	12.1#

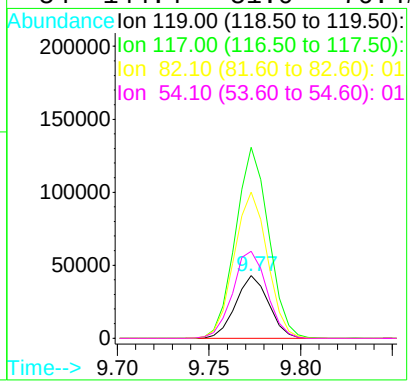


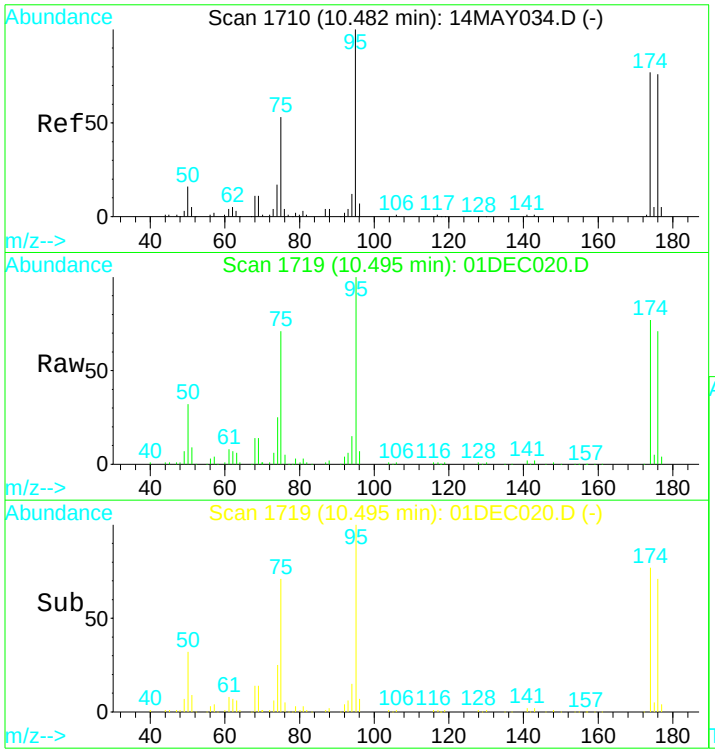


#38
Chlorobenzene d5 IS#3
Concen: 50.00 ug/kg
RT: 9.77 min Scan# 1578
Delta R.T. -0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:119 Resp: 53687

Ion	Ratio	Lower	Upper
119	100		
117	306.3	260.2	390.2
82	235.9	151.6	227.4#
54	144.4	51.0	76.4#

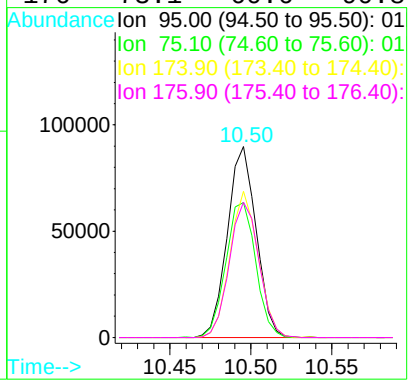




#48
Bromofluorobenzene SMC#3
Concen: N.D. ug/kg
RT: 10.50 min Scan# 1719
Delta R.T. 0.00 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion: 95 Resp: 110997

Ion	Ratio	Lower	Upper
95	100		
75	73.3	42.2	63.2#
174	75.4	61.6	92.4
176	73.1	60.6	90.8



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC020.D Vial: 20
Acq On : 1 Dec 2020 3:27 pm Operator: RCC
Sample : 2034585-02 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:42 2021 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

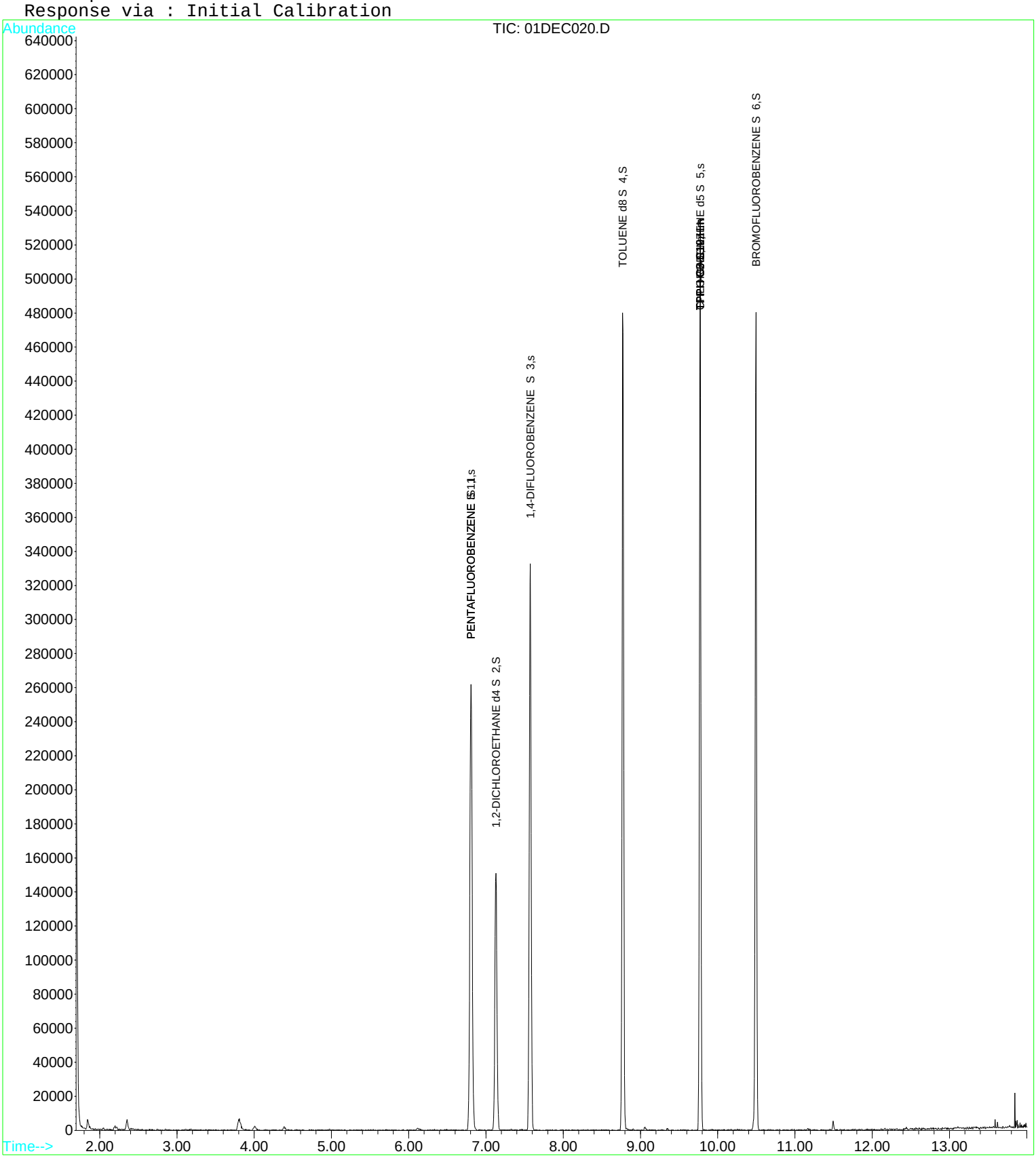
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	146289	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	533619m	54.35	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	286145m	63.36	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	550769m	50.69	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	695367m	51.83	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	675011m	60.37	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	612206m	65.85	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.77	TIC	167525m	23.42	ug/kg	
9) TPPH C6-C12	9.77	TIC	90284m	14.75	ug/kg	
10) TPPH C6-C10	9.77	TIC	63464m	13.83	ug/kg	

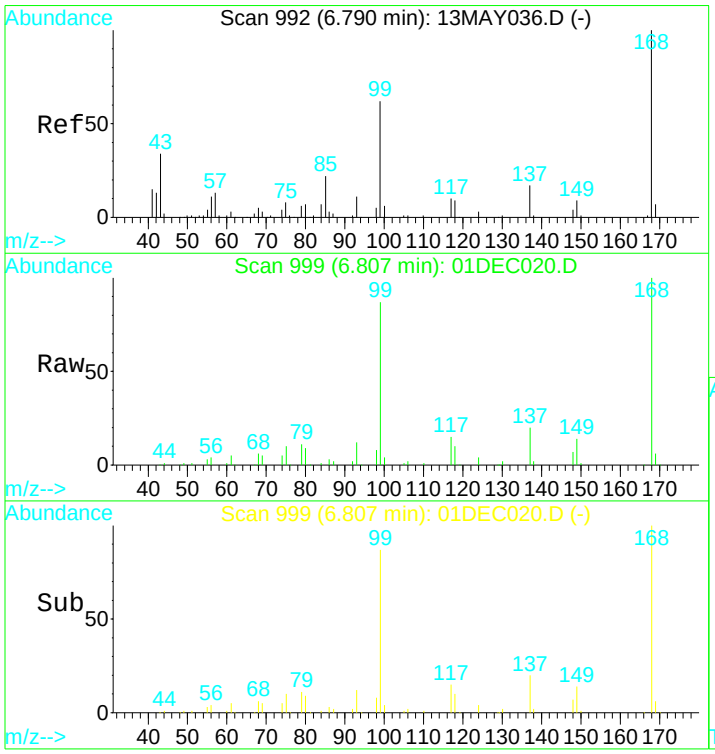
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC020.D Vial: 20
Acq On : 1 Dec 2020 3:27 pm Operator: RCC
Sample : 2034585-02 Inst : MS-V17
Misc : 1 RT; 5.01g\5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:42 2021 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration

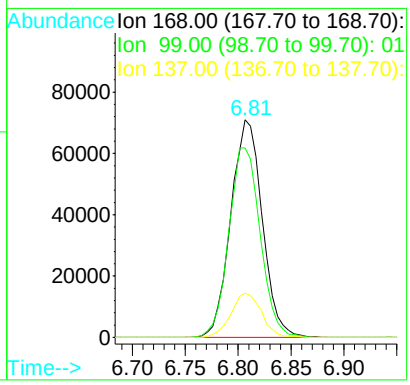


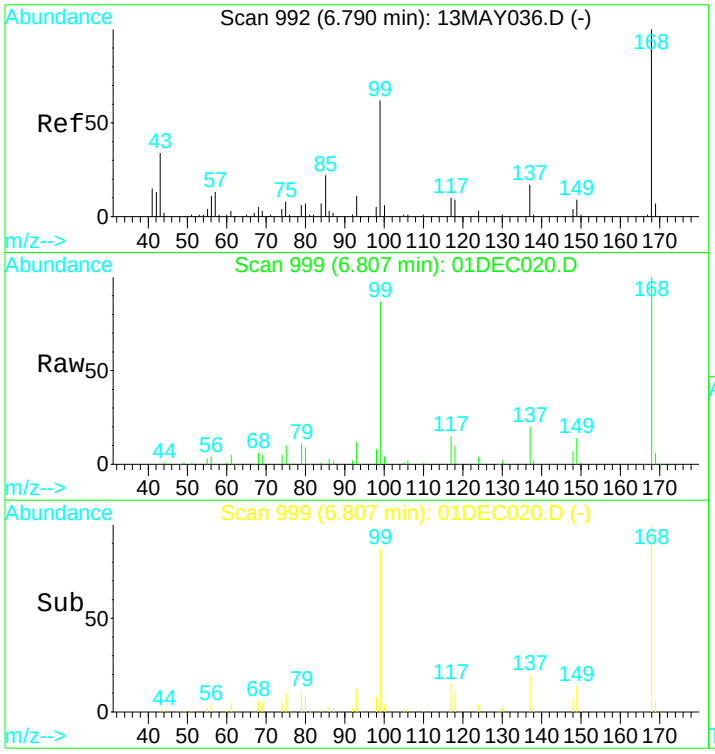


#1
PENTAFLUOROBENZENE IS1
Concen: 50.00 ug/kg
RT: 6.81 min Scan# 999
Delta R.T. 0.11 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:168 Resp: 146289

Ion	Ratio	Lower	Upper
168	100		
99	87.0	49.7	74.5#
137	19.7	13.9	20.9

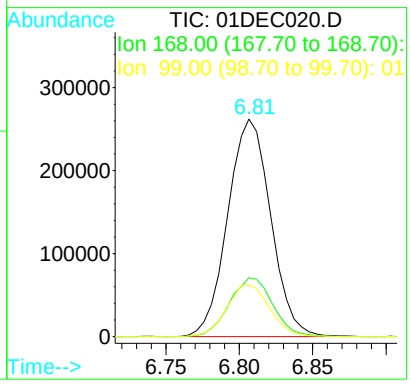


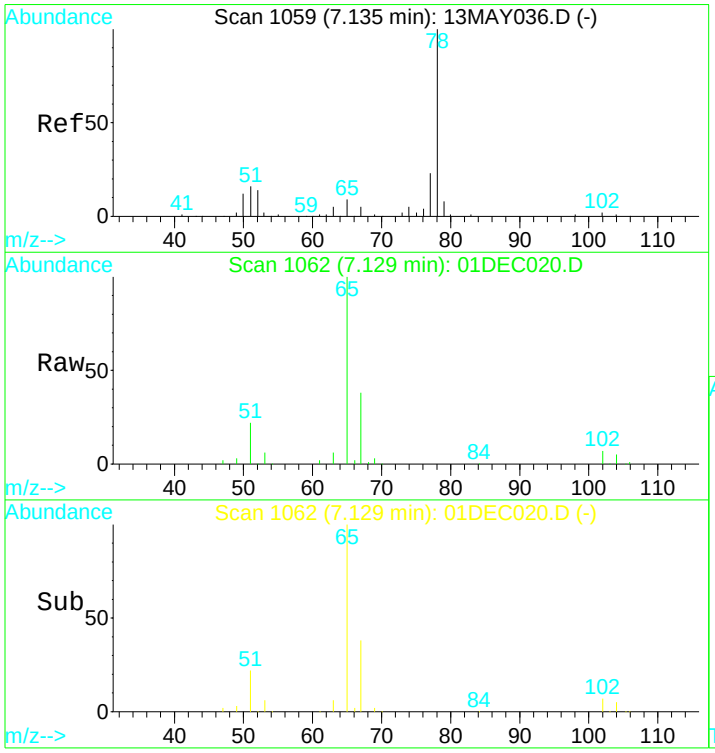


#2
PENTAFLUOROBENZENE S 1
Concen: 50.00 ug/kg m
RT: 6.81 min Scan# 999
Delta R.T. 0.11 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 533619

Ion	Ratio	Lower	Upper
TIC	100		
168	27.4	323.8	485.8#
99	23.9	201.2	301.8#

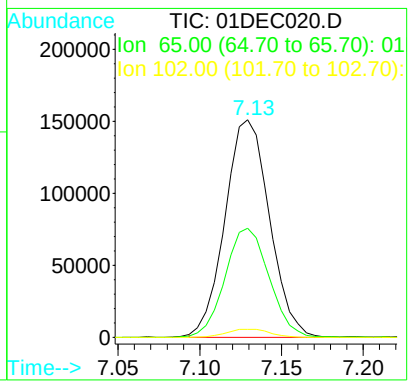


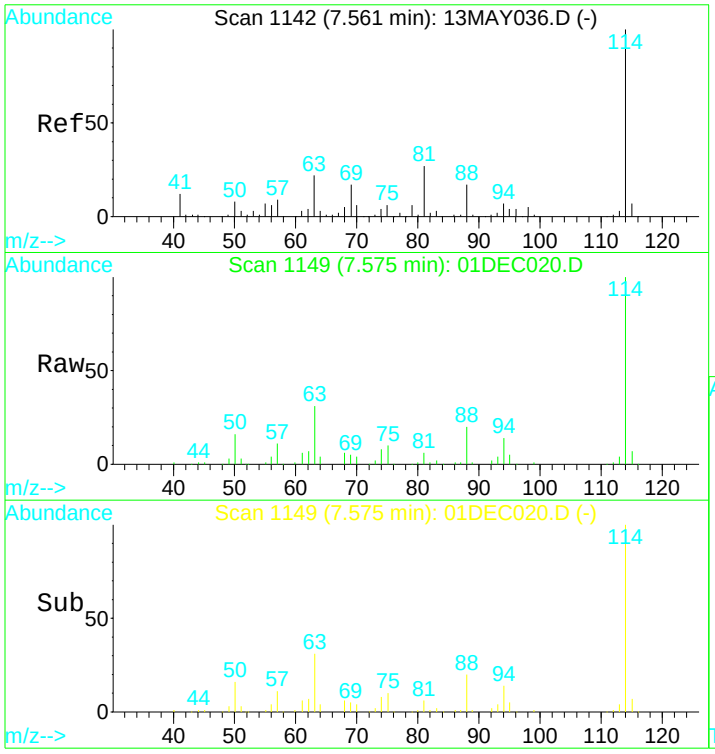


#3
1,2-DICHLOROETHANE d4 S 2
Concen: 50.00 ug/kg m
RT: 7.13 min Scan# 1062
Delta R.T. 0.10 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 286145

Ion	Ratio	Lower	Upper
TIC	100		
65	49.9	65.6	98.4#
102	3.8	14.3	21.5#

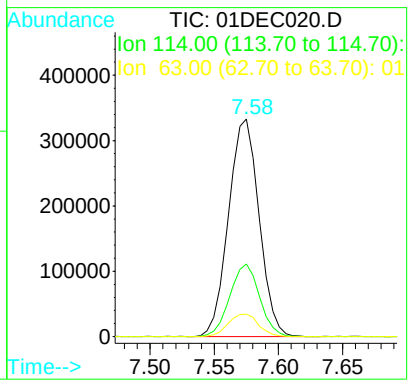


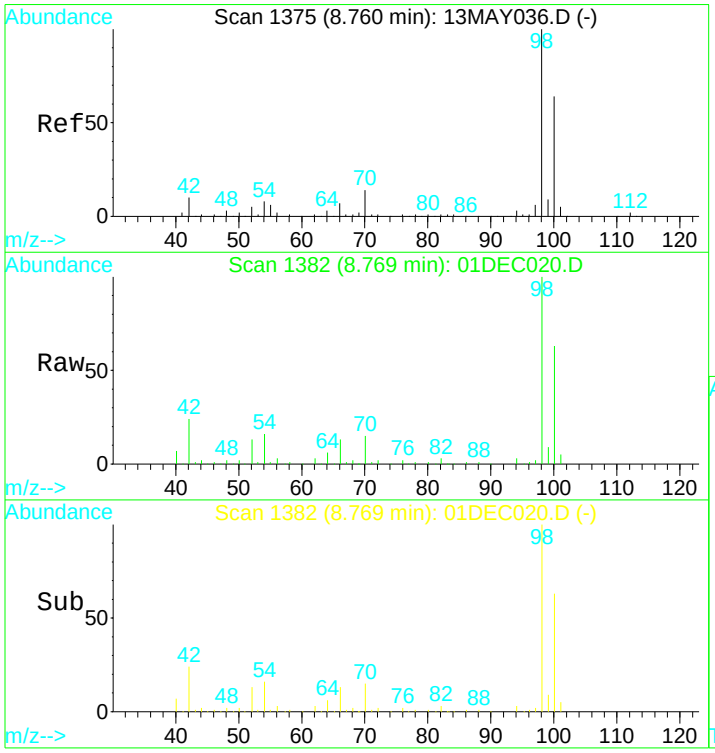


#4
1,4-DIFLUOROBENZENE S 3
Concen: 50.00 ug/kg m
RT: 7.58 min Scan# 1149
Delta R.T. 0.09 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 550769

Ion	Ratio	Lower	Upper
TIC	100		
114	32.5	221.1	331.7#
63	10.4	48.8	73.2#

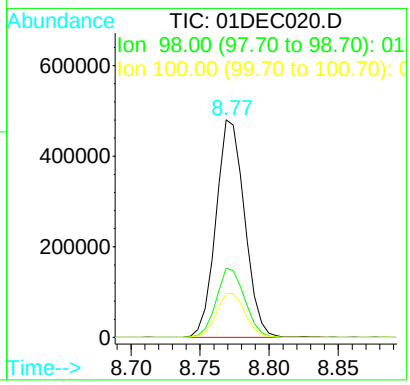


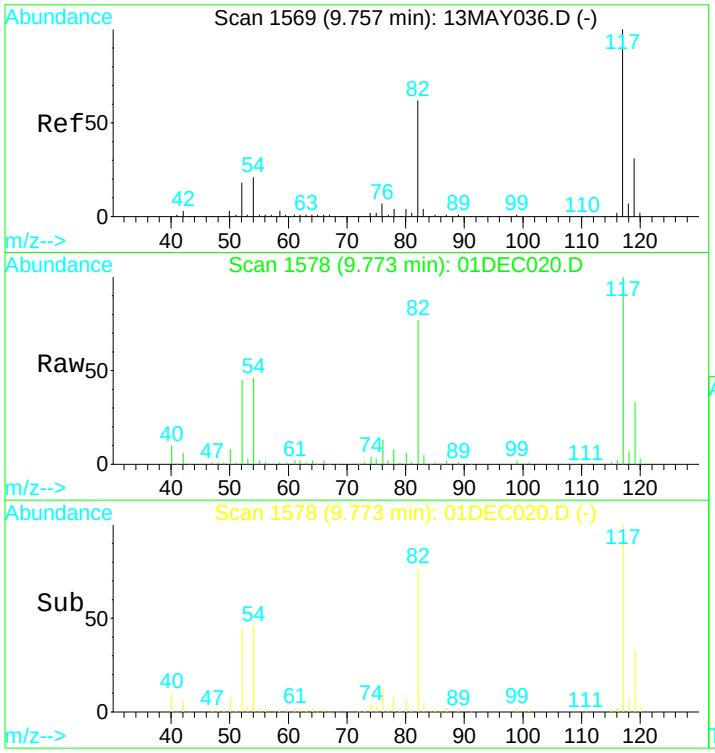


#5
TOLUENE d8 S 4
Concen: 50.00 ug/kg m
RT: 8.77 min Scan# 1382
Delta R.T. 0.08 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 695367

Ion	Ratio	Lower	Upper
TIC	100		
98	31.5	133.0	199.6#
100	20.3	85.6	128.4#

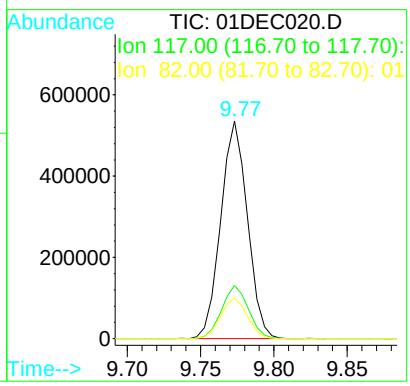


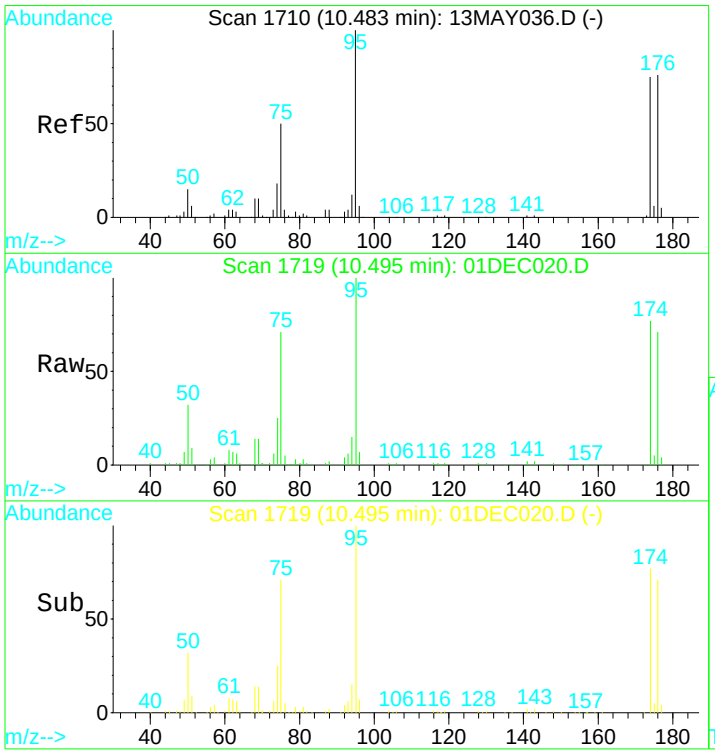


#6
CHLOROBENZENE d5 S 5
Concen: 50.00 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 0.08 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 675011

Ion	Ratio	Lower	Upper
TIC	100		
117	24.4	147.6	221.4#
82	18.8	91.1	136.7#

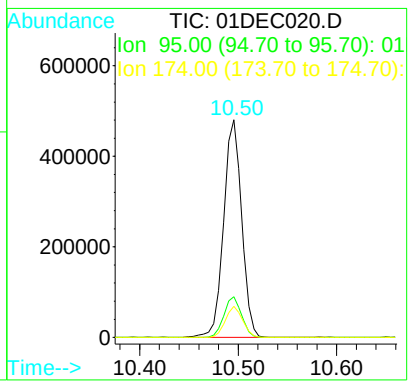


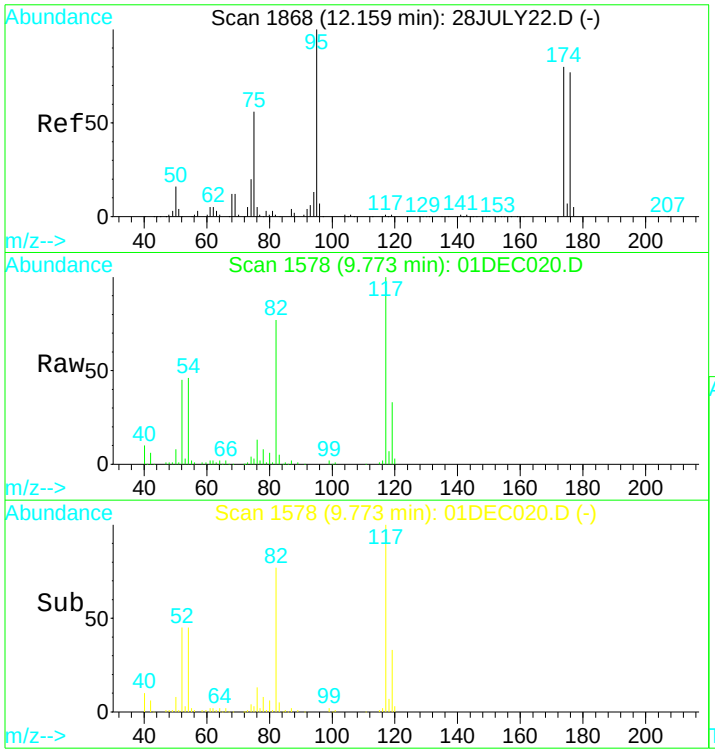


#7
BROMOFLUOROBENZENE S 6
Concen: 50.00 ug/kg m
RT: 10.50 min Scan# 1719
Delta R.T. 0.08 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 612206

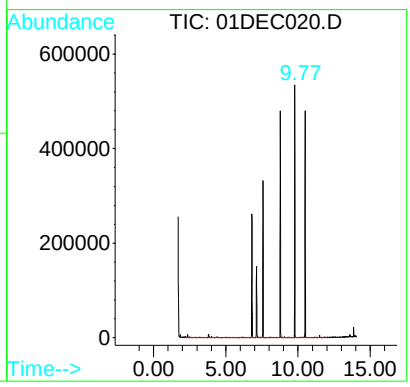
Ion	Ratio	Lower	Upper
TIC	100		
95	18.1	171.7	257.5#
174	13.7	129.3	193.9#

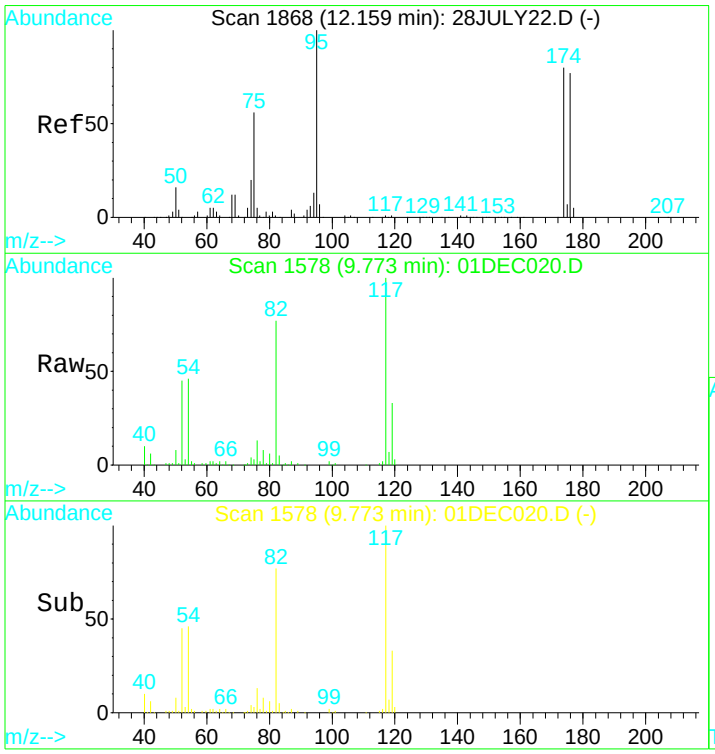




#8
TPPH-GAS
Concen: 23.42 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 2.69 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

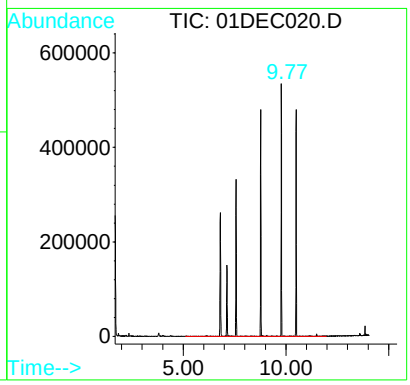
Tgt Ion:TIC Resp: 167525

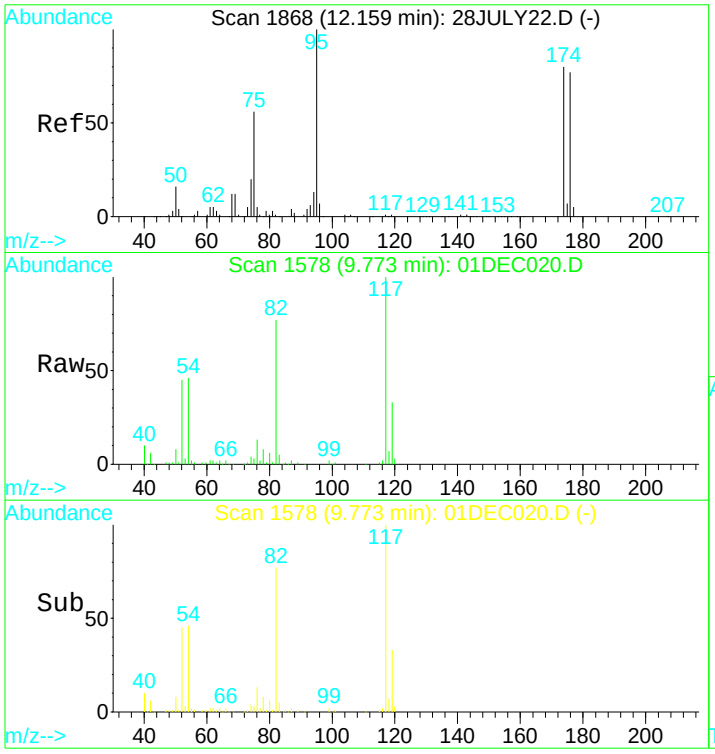




#9
TPPH C6-C12
Concen: 14.75 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 1.22 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

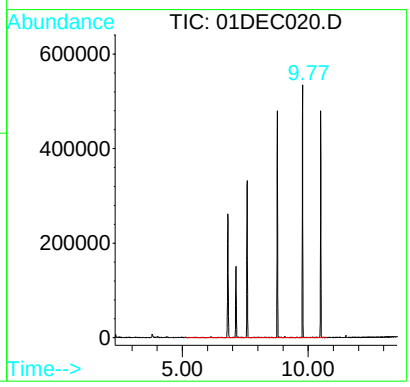
Tgt Ion:TIC Resp: 90284





#10
TPPH C6-C10
Concen: 13.83 ug/kg m
RT: 9.77 min Scan# 1578
Delta R.T. 1.85 min
Lab File: 01DEC020.D
Acq: 1 Dec 2020 3:27 pm

Tgt Ion:TIC Resp: 63464



Raw Data - Calibration Standards

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	136944	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	161365	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	46981	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	133749	104.84	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 209.68%#			
30) Toluene d8 SMC#2	8.77	98	196356	51.33	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.66%			
48) Bromofluorobenzene SMC#3	10.50	95	103446	67.23	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 134.46%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.89	85	7081	10.47	ug/kg	97
3) Chloromethane	2.09	50	2980	4.72	ug/kg#	91
4) Vinyl chloride	2.22	62	3021	4.35	ug/kg#	85
5) Bromomethane	2.61	94	1658	6.11	ug/kg#	70
6) Chloroethane	2.74	64	1729	4.16	ug/kg	95
7) Trichlorofluoromethane	3.07	101	12993	8.76	ug/kg	99
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	3734	4.38	ug/kg	90
9) 1,1-Dichloroethene	3.74	61	6813	5.64	ug/kg#	76
10) Methylene chloride	4.39	84	3403	3.89	ug/kg#	52
11) MTBE	4.72	73	11144	5.85	ug/kg#	80
12) T-1,2-dichloroethene	4.74	96	2582	3.35	ug/kg#	53
13) 1,1-Dichloroethane	5.31	63	6763	4.64	ug/kg#	96
14) 2,2-Dichloropropane	6.12	77	9038	6.84	ug/kg#	50
15) Cis-1,2-dichloroethene	6.14	96	3121	3.81	ug/kg#	51
16) Bromochloromethane	6.45	128	1199	3.41	ug/kg#	48
17) Chloroform	6.58	83	9375	6.71	ug/kg#	94
18) 1,1,1-Trichloroethane	6.77	97	10222	7.56	ug/kg#	50
19) 1,1-Dichloropropene	6.94	75	5507	4.89	ug/kg#	90
20) Carbon tetrachloride	6.93	119	8020	7.83	ug/kg	93
22) 1,2-Dichloroethane	7.21	62	10798	10.21	ug/kg#	89
23) Benzene	7.15	78	10283	3.30	ug/kg#	1
25) Trichloroethene	7.78	130	3441	4.70	ug/kg	95
26) 1,2-Dichloropropane	8.02	63	2355	3.62	ug/kg#	1
27) Dibromomethane	8.09	93	1798	5.43	ug/kg	84
28) Bromodichloromethane	8.24	83	5918	6.97	ug/kg#	97
29) Cis-1,3-dichloropropene	8.57	75	4451	4.44	ug/kg#	77
31) Toluene	8.83	92	7268	4.22	ug/kg#	87
32) Trans-1,3-dichloropropene	8.99	75	5228	5.76	ug/kg#	94
33) 1,1,2-Trichloroethane	9.12	97	2568	5.13	ug/kg#	75
34) Tetrachloroethene (PCE)	9.19	166	4414	5.12	ug/kg#	87
35) 1,3-Dichloropropane	9.24	76	4828	5.37	ug/kg	96
36) Dibromochloromethane	9.40	129	2619	5.06	ug/kg#	88
37) 1,2-Dibromoethane	9.48	107	2468	4.85	ug/kg	99
39) Chlorobenzene	9.79	112	8012	4.32	ug/kg#	48
40) 1,1,1,2-Tetrachloroethane	9.84	131	3972	6.42	ug/kg#	64
41) Ethylbenzene	9.84	106	4834	4.41	ug/kg	77
42) P+m-Xylene	9.92	106	11930	9.17	ug/kg#	68
43) O-Xylene	10.16	106	5362	4.25	ug/kg#	40
44) Styrene	10.18	104	8562	4.31	ug/kg#	62
45) Bromoform	10.30	173	1688	4.94	ug/kg#	87
46) Isopropylbenzene	10.38	105	17413	5.04	ug/kg	94
47) 1,1,2,2-Tetrachloroethane	10.56	83	2471	4.14	ug/kg#	90
49) 1,2,3-Trichloropropane	10.60	110	1563	7.78	ug/kg	85
50) n-propylbenzene	10.62	91	18639	4.82	ug/kg	99
51) bromobenzene	10.59	156	3913	4.95	ug/kg	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

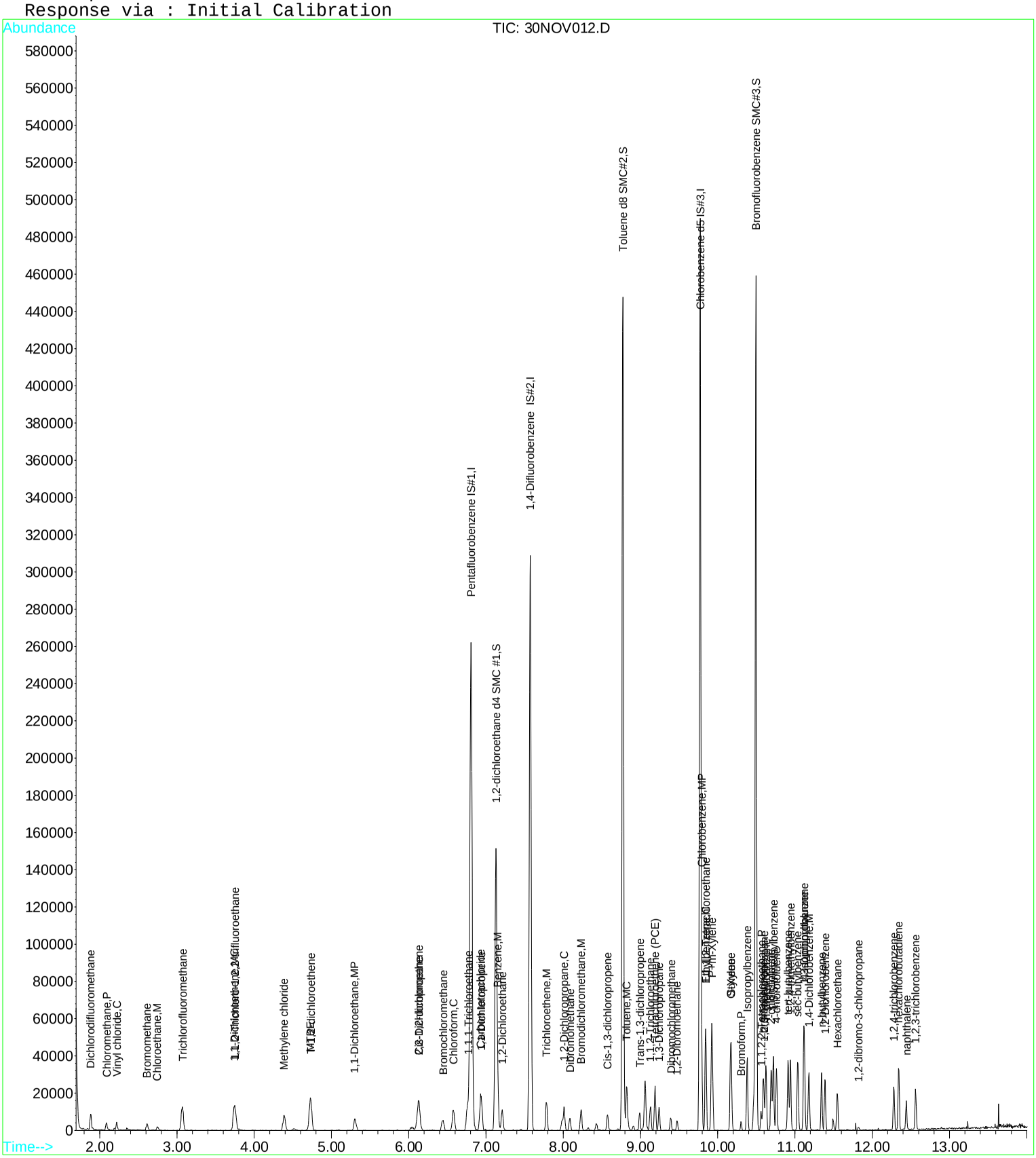
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	16722	5.61	ug/kg#	81
53)	2-chlorotoluene	10.70	91	15485m	5.69	ug/kg	
54)	4-chlorotoluene	10.76	91	14906m	6.03	ug/kg	
55)	tert-butylbenzene	10.91	119	13106	5.11	ug/kg	85
56)	1,2,4-trimethylbenzene	10.94	105	15432	5.33	ug/kg	87
57)	sec-butylbenzene	11.04	105	16824	4.62	ug/kg	100
58)	4-isopropyltoluene	11.12	119	14457	4.98	ug/kg#	88
59)	1,3-Dichlorobenzene	11.13	146	7179	4.87	ug/kg#	61
60)	1,4-Dichlorobenzene	11.18	146	6954	4.45	ug/kg#	71
61)	n-butylbenzene	11.35	91	12139	4.44	ug/kg	93
62)	1,2-Dichlorobenzene	11.39	146	6820	4.77	ug/kg#	69
63)	Hexachloroethane	11.55	117	2240	4.64	ug/kg#	74
64)	1,2-dibromo-3-chloropropan	11.82	75	781	6.85	ug/kg#	61
65)	1,2,4-trichlorobenzene	12.28	180	5278	4.94	ug/kg	87
66)	hexachlorobutadiene	12.34	225	5399	6.09	ug/kg#	89
67)	naphthalene	12.44	128	7902	4.16	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	4656	4.72	ug/kg	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: 8260REG.RES

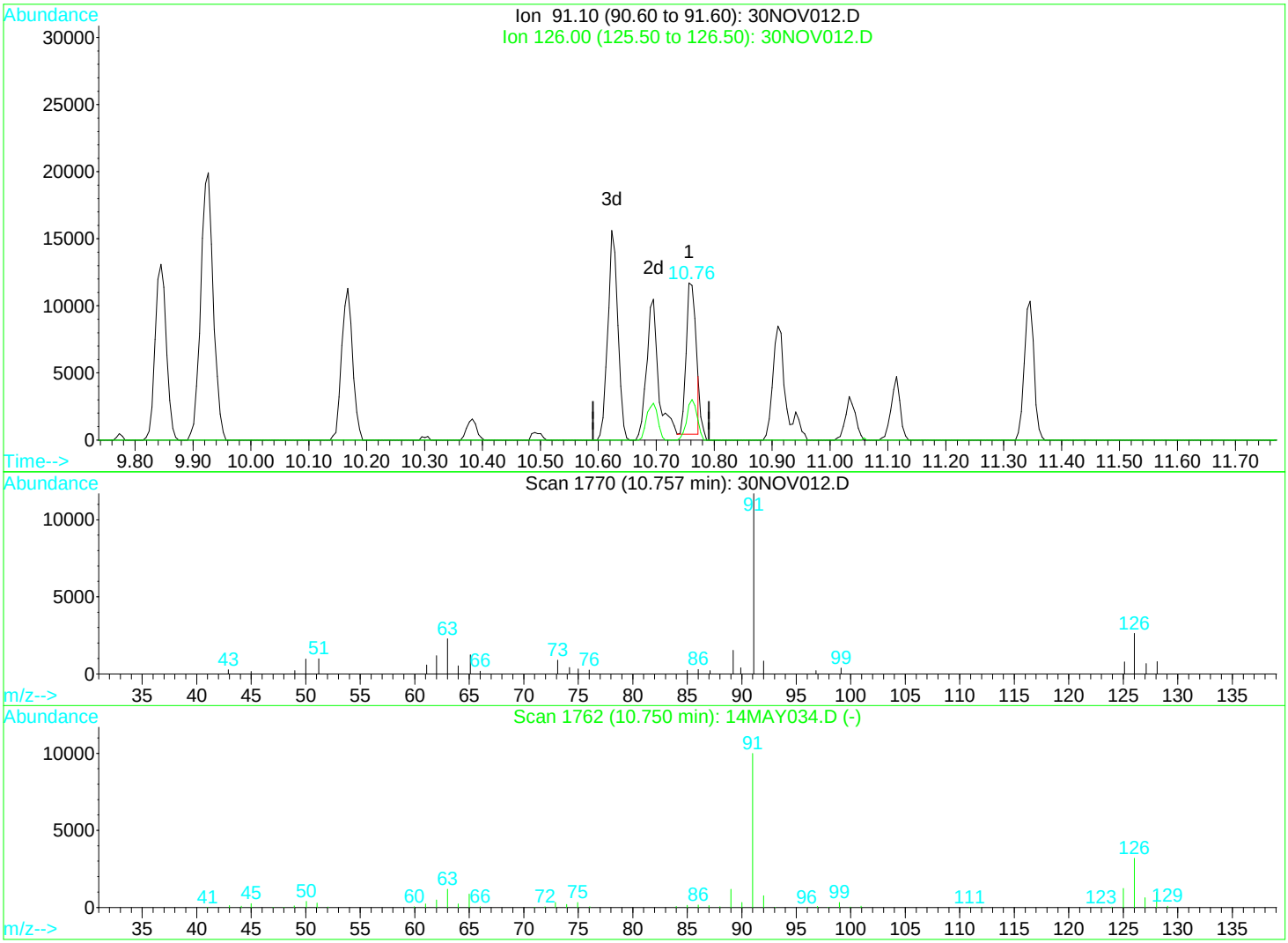
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV012.D

(53) 2-chlorotoluene

10.76min 4.87ug/kg

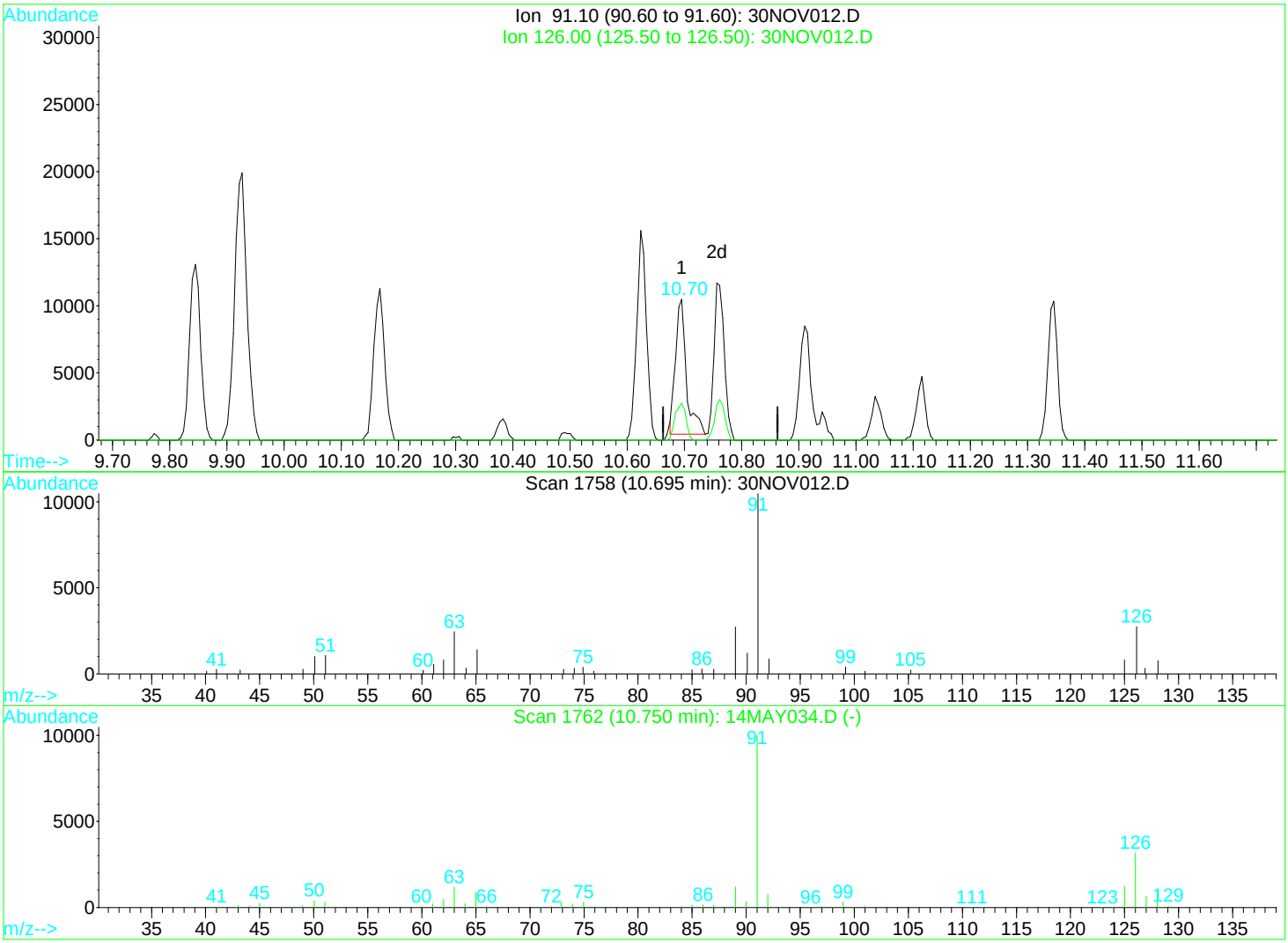
response 13240

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	26.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV012.D

(54) 4-chlorotoluene

10.70min 5.40ug/kg

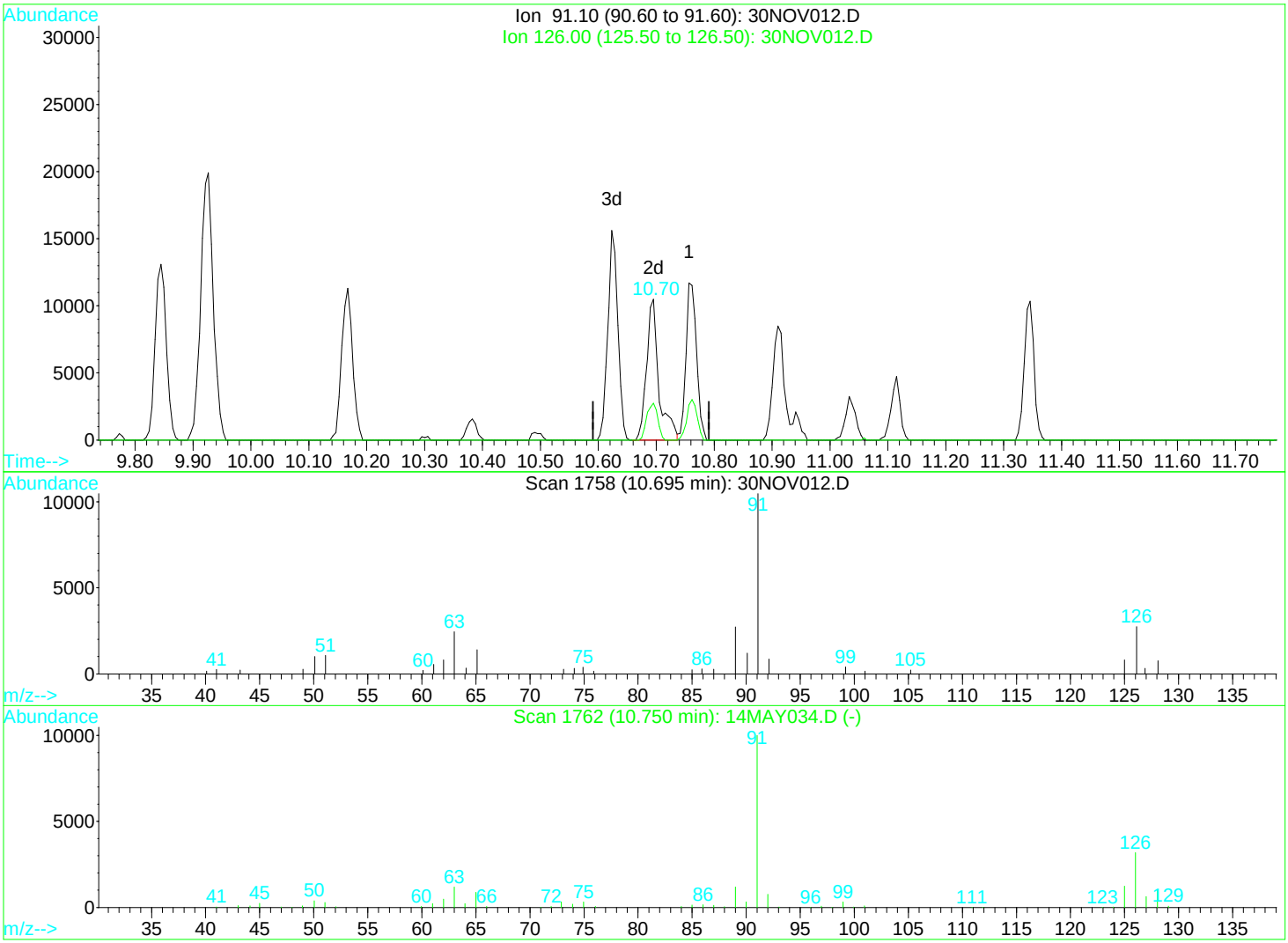
response 13354

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	26.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV012.D

(53) 2-chlorotoluene

10.70min 5.69ug/kg m

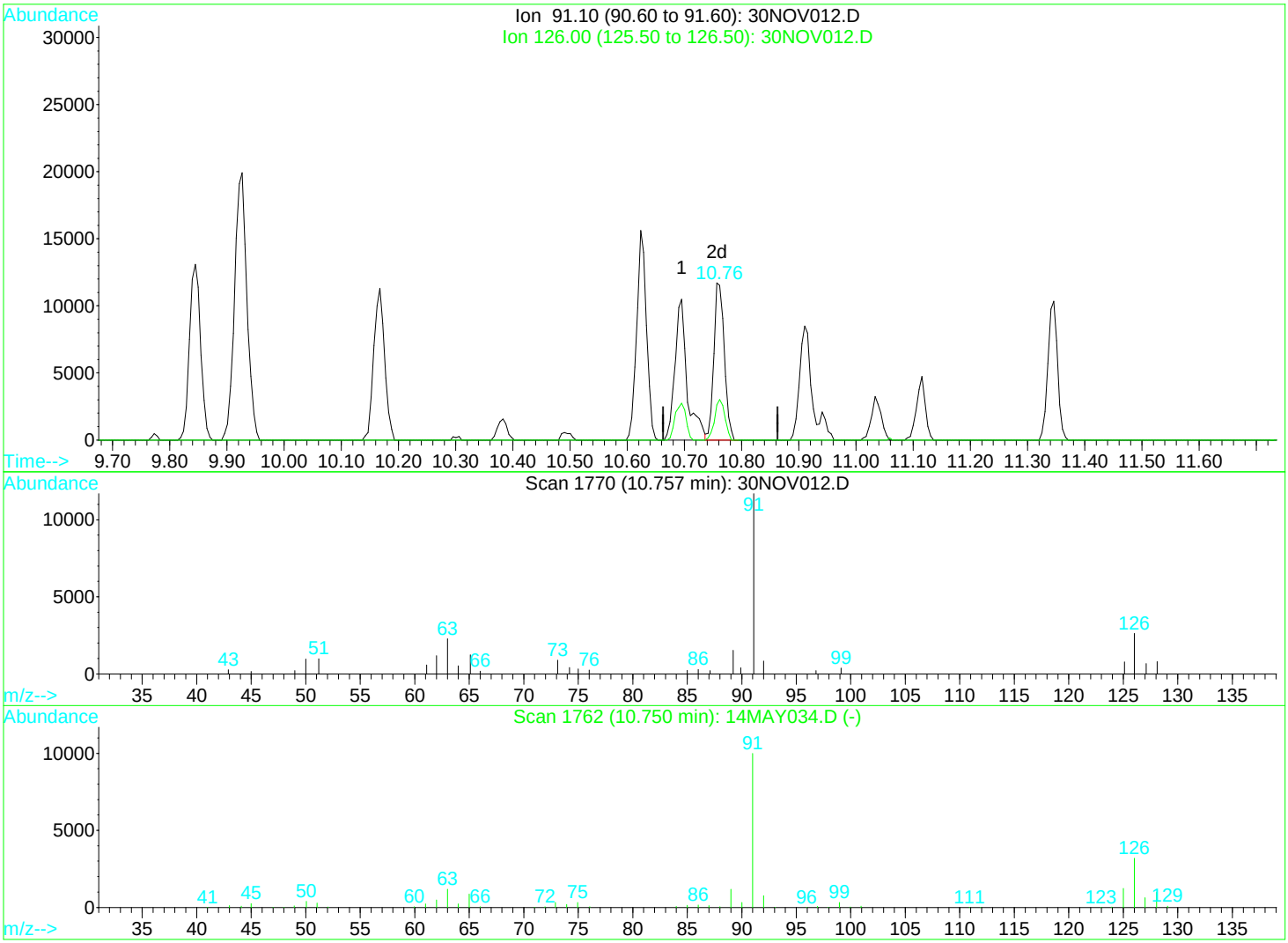
response 15485

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	23.08#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV012.D Vial: 12
Acq On : 30 Nov 2020 12:35 pm Operator: RCC
Sample : 2021163-CAL1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV012.D

(54) 4-chlorotoluene

10.76min 6.03ug/kg m

response 14906

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	23.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV014.D Vial: 14
Acq On : 30 Nov 2020 1:17 pm Operator: RCC
Sample : 2021163-CAL2 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:51 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	142852	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	167840	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	50415	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	139705	104.98	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 209.96%#			
30) Toluene d8 SMC#2	8.77	98	207573	52.17	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.34%			
48) Bromofluorobenzene SMC#3	10.50	95	115111	69.72	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 139.44%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	93473	132.46	ug/kg	99
3) Chloromethane	2.09	50	37115	56.32	ug/kg#	91
4) Vinyl chloride	2.22	62	36019	49.67	ug/kg#	99
5) Bromomethane	2.61	94	20447	72.28	ug/kg#	72
6) Chloroethane	2.75	64	21405	49.36	ug/kg#	75
7) Trichlorofluoromethane	3.07	101	159583	103.10	ug/kg	100
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	52486	58.96	ug/kg	97
9) 1,1-Dichloroethene	3.74	61	88742	70.41	ug/kg#	72
10) Methylene chloride	4.39	84	29018	31.77	ug/kg#	41
11) MTBE	4.72	73	127855	64.38	ug/kg#	79
12) T-1,2-dichloroethene	4.74	96	32679	40.60	ug/kg#	60
13) 1,1-Dichloroethane	5.31	63	79077	52.02	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	122275	88.74	ug/kg#	42
15) Cis-1,2-dichloroethene	6.12	96	34875	40.83	ug/kg#	42
16) Bromochloromethane	6.44	128	14845	40.45	ug/kg#	62
17) Chloroform	6.58	83	105747	72.61	ug/kg	99
18) 1,1,1-Trichloroethane	6.77	97	134848	95.58	ug/kg#	92
19) 1,1-Dichloropropene	6.94	75	70962	60.43	ug/kg	95
20) Carbon tetrachloride	6.93	119	108255	101.31	ug/kg	99
22) 1,2-Dichloroethane	7.21	62	113674	103.01	ug/kg#	90
23) Benzene	7.15	78	120982	37.19	ug/kg#	55
25) Trichloroethene	7.79	130	41054	53.95	ug/kg	93
26) 1,2-Dichloropropane	8.01	63	28947	42.79	ug/kg#	15
27) Dibromomethane	8.08	93	24002	69.73	ug/kg	96
28) Bromodichloromethane	8.23	83	80152	90.74	ug/kg#	97
29) Cis-1,3-dichloropropene	8.57	75	61429	58.88	ug/kg#	84
31) Toluene	8.82	92	87754	49.02	ug/kg#	94
32) Trans-1,3-dichloropropene	8.99	75	72412	76.64	ug/kg#	94
33) 1,1,2-Trichloroethane	9.13	97	25311	48.64	ug/kg#	70
34) Tetrachloroethene (PCE)	9.19	166	52246	58.25	ug/kg#	85
35) 1,3-Dichloropropane	9.24	76	51546	55.11	ug/kg	100
36) Dibromochloromethane	9.39	129	39985	74.22	ug/kg#	95
37) 1,2-Dibromoethane	9.48	107	30520	57.62	ug/kg	99
39) Chlorobenzene	9.79	112	95026	47.70	ug/kg#	85
40) 1,1,1,2-Tetrachloroethane	9.85	131	52649	79.29	ug/kg#	79
41) Ethylbenzene	9.85	106	59976	50.98	ug/kg	84
42) P+m-Xylene	9.92	106	144164	103.30	ug/kg#	66
43) O-Xylene	10.17	106	70400	52.00	ug/kg#	47
44) Styrene	10.18	104	110130	51.70	ug/kg#	58
45) Bromoform	10.31	173	22292	60.80	ug/kg	98
46) Isopropylbenzene	10.38	105	237151	63.93	ug/kg	94
47) 1,1,2,2-Tetrachloroethane	10.56	83	27432	42.86	ug/kg#	83
49) 1,2,3-Trichloropropane	10.60	110	15727	72.96	ug/kg	94
50) n-propylbenzene	10.62	91	250595	60.38	ug/kg	100
51) bromobenzene	10.59	156	45357	53.49	ug/kg	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV014.D Vial: 14
Acq On : 30 Nov 2020 1:17 pm Operator: RCC
Sample : 2021163-CAL2 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:51 2020 Quant Results File: 8260REG.RES

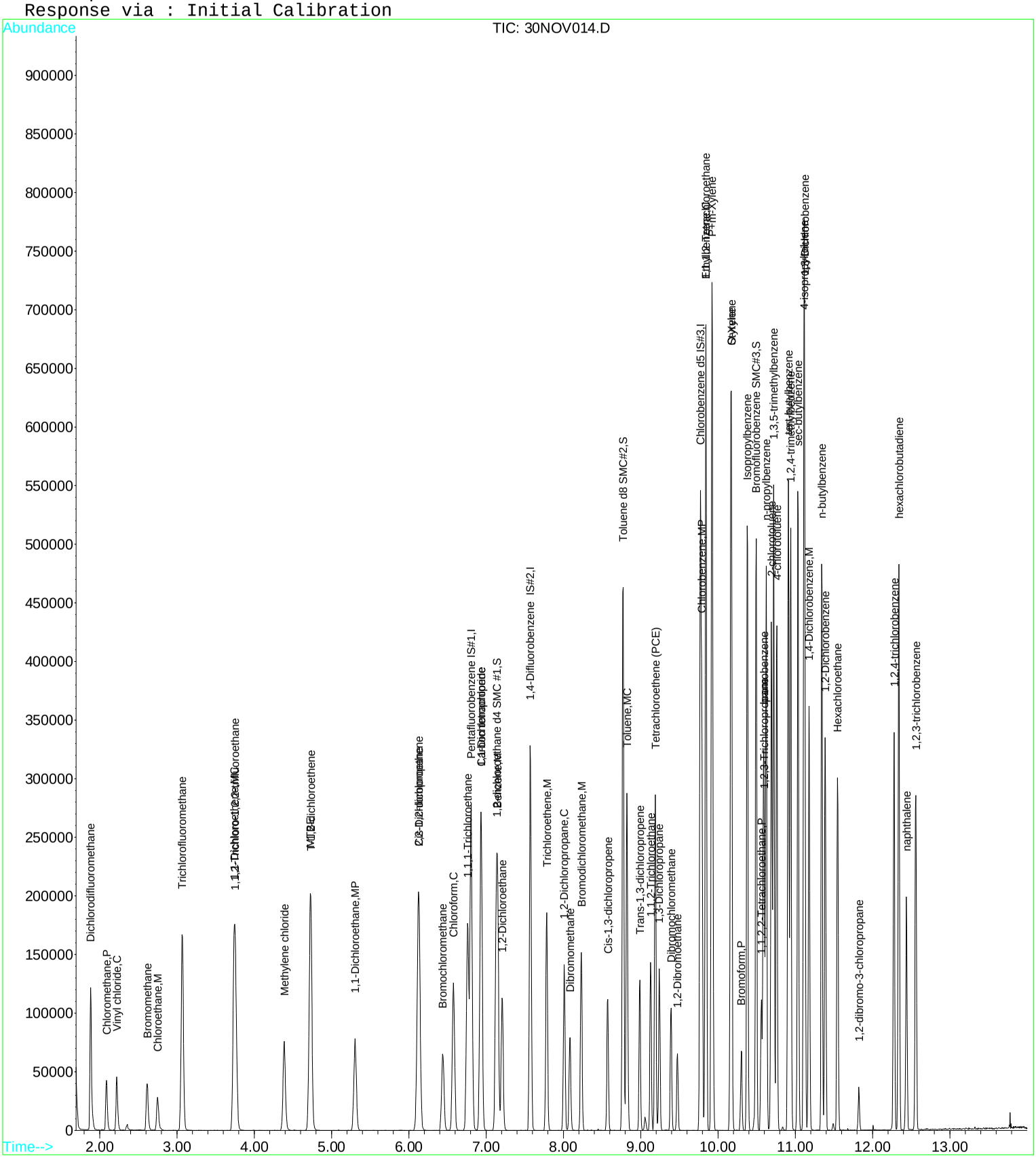
Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	219076	68.52	ug/kg#	86
53)	2-chlorotoluene	10.69	91	199464m	68.35	ug/kg	
54)	4-chlorotoluene	10.76	91	181122	68.24	ug/kg	89
55)	tert-butylbenzene	10.91	119	183235	66.59	ug/kg	89
56)	1,2,4-trimethylbenzene	10.94	105	210131	67.68	ug/kg#	86
57)	sec-butylbenzene	11.03	105	232432	59.46	ug/kg	98
58)	4-isopropyltoluene	11.12	119	205082	65.87	ug/kg#	86
59)	1,3-Dichlorobenzene	11.13	146	90807	57.45	ug/kg#	68
60)	1,4-Dichlorobenzene	11.18	146	92694	55.25	ug/kg#	77
61)	n-butylbenzene	11.34	91	180200	61.45	ug/kg	96
62)	1,2-Dichlorobenzene	11.39	146	79812	52.04	ug/kg#	67
63)	Hexachloroethane	11.55	117	33222	64.19	ug/kg#	87
64)	1,2-dibromo-3-chloropropan	11.82	75	10436	85.30	ug/kg#	81
65)	1,2,4-trichlorobenzene	12.28	180	64560	56.29	ug/kg	100
66)	hexachlorobutadiene	12.34	225	76494	80.39	ug/kg	96
67)	naphthalene	12.44	128	100142	49.12	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	59274	55.99	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV014.D Vial: 14
Acq On : 30 Nov 2020 1:17 pm Operator: RCC
Sample : 2021163-CAL2 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:51 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration

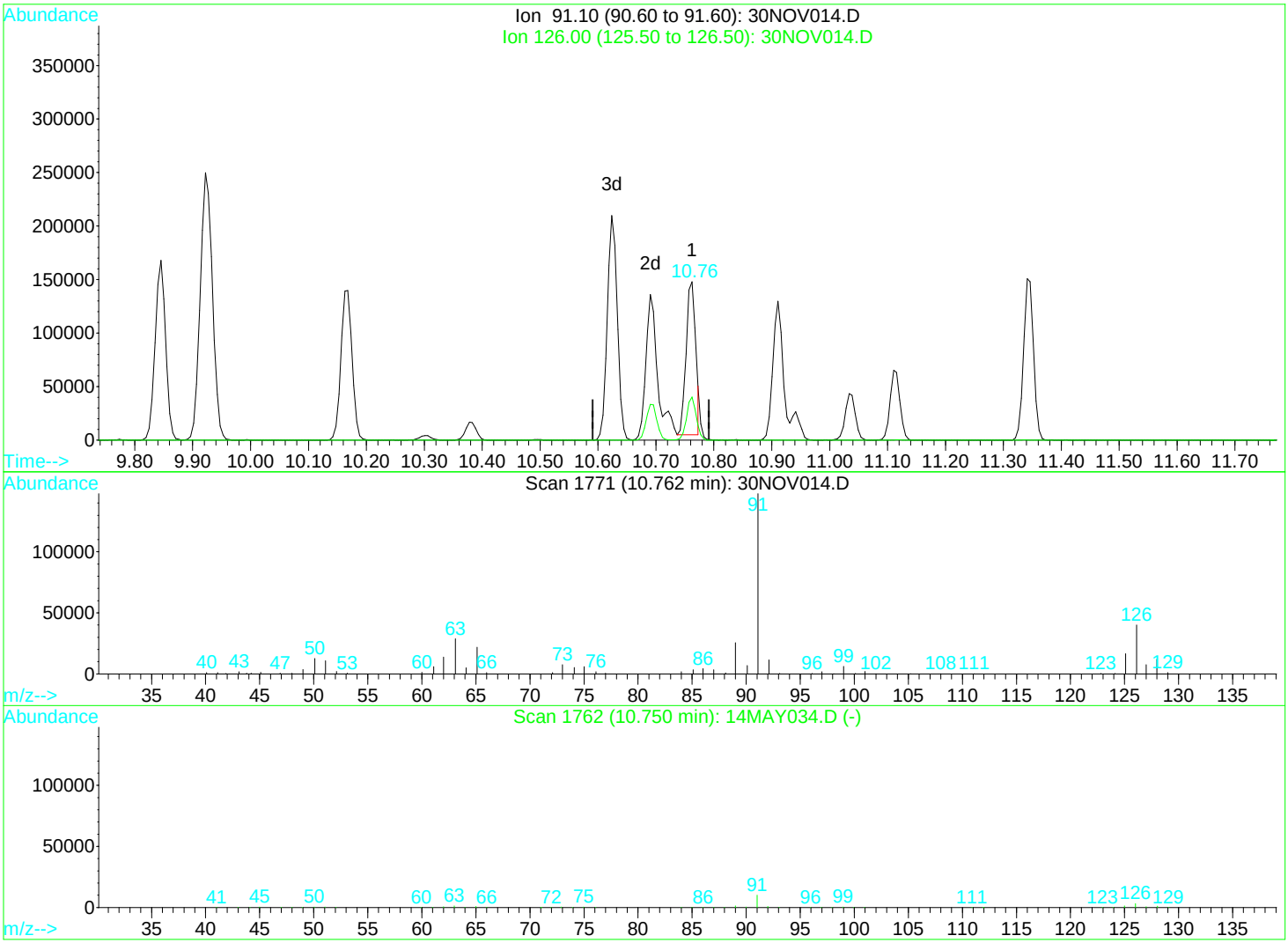


BC Laboratories, Inc.

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV014.D Vial: 14
Acq On : 30 Nov 2020 1:17 pm Operator: RCC
Sample : 2021163-CAL2 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV014.D

(53) 2-chlorotoluene

10.76min 56.43ug/kg

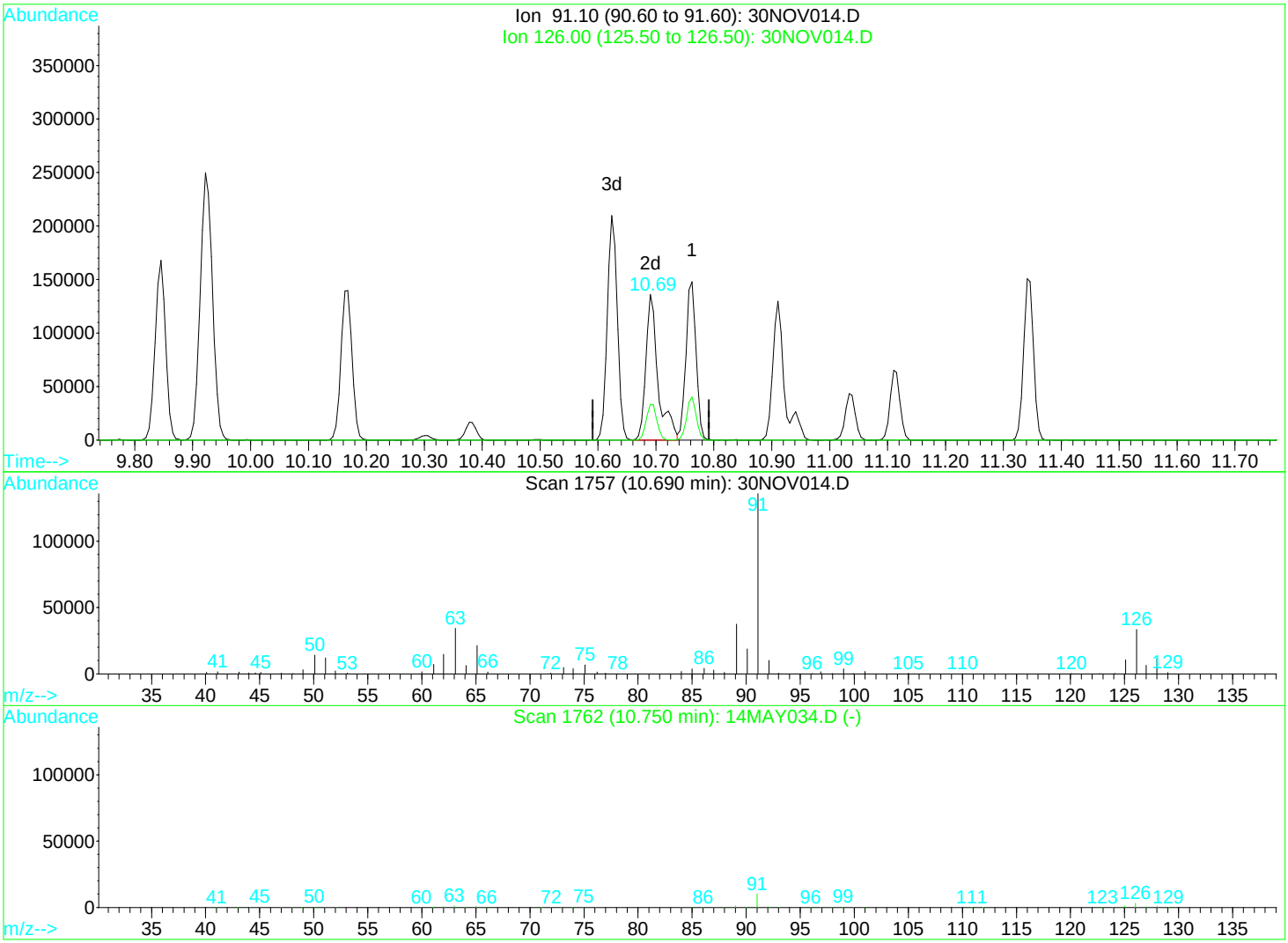
response 164662

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	26.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV014.D Vial: 14
Acq On : 30 Nov 2020 1:17 pm Operator: RCC
Sample : 2021163-CAL2 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:51 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV014.D

(53) 2-chlorotoluene

10.69min 68.35ug/kg m

response 199464

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.19#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV015.D Vial: 15
Acq On : 30 Nov 2020 1:38 pm Operator: RCC
Sample : 2021163-CAL3 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.80	168	143582	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	164056	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	51106	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	136344	101.93	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 203.86%#			
30) Toluene d8 SMC#2	8.77	98	206807	53.18	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.36%			
48) Bromofluorobenzene SMC#3	10.49	95	111345	66.53	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 133.06%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	217738	307.00	ug/kg	98
3) Chloromethane	2.09	50	88815	134.08	ug/kg#	94
4) Vinyl chloride	2.22	62	90307	123.90	ug/kg#	98
5) Bromomethane	2.61	94	59684	209.92	ug/kg#	76
6) Chloroethane	2.75	64	49765	114.17	ug/kg#	77
7) Trichlorofluoromethane	3.07	101	381709	245.35	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	120123	134.26	ug/kg	94
9) 1,1-Dichloroethene	3.74	61	210578	166.22	ug/kg#	73
10) Methylene chloride	4.39	84	71671	78.08	ug/kg#	52
11) MTBE	4.72	73	300298	150.44	ug/kg#	79
12) T-1,2-dichloroethene	4.73	96	79614	98.41	ug/kg#	62
13) 1,1-Dichloroethane	5.31	63	188626	123.46	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	291290	210.32	ug/kg#	41
15) Cis-1,2-dichloroethene	6.13	96	82329	95.89	ug/kg#	43
16) Bromochloromethane	6.44	128	38101	103.30	ug/kg#	71
17) Chloroform	6.58	83	246721	168.54	ug/kg	99
18) 1,1,1-Trichloroethane	6.76	97	318948	224.91	ug/kg#	96
19) 1,1-Dichloropropene	6.94	75	168493	142.76	ug/kg	94
20) Carbon tetrachloride	6.93	119	263653	245.48	ug/kg	96
22) 1,2-Dichloroethane	7.21	62	259041	233.54	ug/kg#	91
23) Benzene	7.15	78	292155	89.36	ug/kg#	70
25) Trichloroethene	7.79	130	92977	124.99	ug/kg	90
26) 1,2-Dichloropropane	8.01	63	67067	101.42	ug/kg#	15
27) Dibromomethane	8.08	93	57072	169.62	ug/kg	98
28) Bromodichloromethane	8.23	83	189721	219.73	ug/kg#	95
29) Cis-1,3-dichloropropene	8.57	75	150462	147.54	ug/kg#	85
31) Toluene	8.82	92	201432	115.11	ug/kg#	92
32) Trans-1,3-dichloropropene	8.99	75	172187	186.45	ug/kg#	94
33) 1,1,2-Trichloroethane	9.13	97	60395	118.73	ug/kg#	71
34) Tetrachloroethene (PCE)	9.19	166	122735	139.99	ug/kg#	85
35) 1,3-Dichloropropane	9.24	76	121596	132.99	ug/kg	100
36) Dibromochloromethane	9.39	129	102284	194.23	ug/kg#	97
37) 1,2-Dibromoethane	9.47	107	72230	139.50	ug/kg	100
39) Chlorobenzene	9.79	112	221437	109.65	ug/kg#	85
40) 1,1,1,2-Tetrachloroethane	9.85	131	117152	174.04	ug/kg#	82
41) Ethylbenzene	9.85	106	141195	118.39	ug/kg	83
42) P+m-Xylene	9.92	106	343101	242.53	ug/kg#	70
43) O-Xylene	10.16	106	162525	118.42	ug/kg#	46
44) Styrene	10.17	104	267153	123.73	ug/kg#	60
45) Bromoform	10.30	173	60732	163.41	ug/kg	98
46) Isopropylbenzene	10.38	105	552277	146.87	ug/kg	94
47) 1,1,2,2-Tetrachloroethane	10.56	83	64285	99.09	ug/kg#	84
49) 1,2,3-Trichloropropane	10.60	110	39075	178.83	ug/kg	88
50) n-propylbenzene	10.62	91	595139	141.46	ug/kg	100
51) bromobenzene	10.59	156	106754	124.20	ug/kg	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV015.D Vial: 15
Acq On : 30 Nov 2020 1:38 pm Operator: RCC
Sample : 2021163-CAL3 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

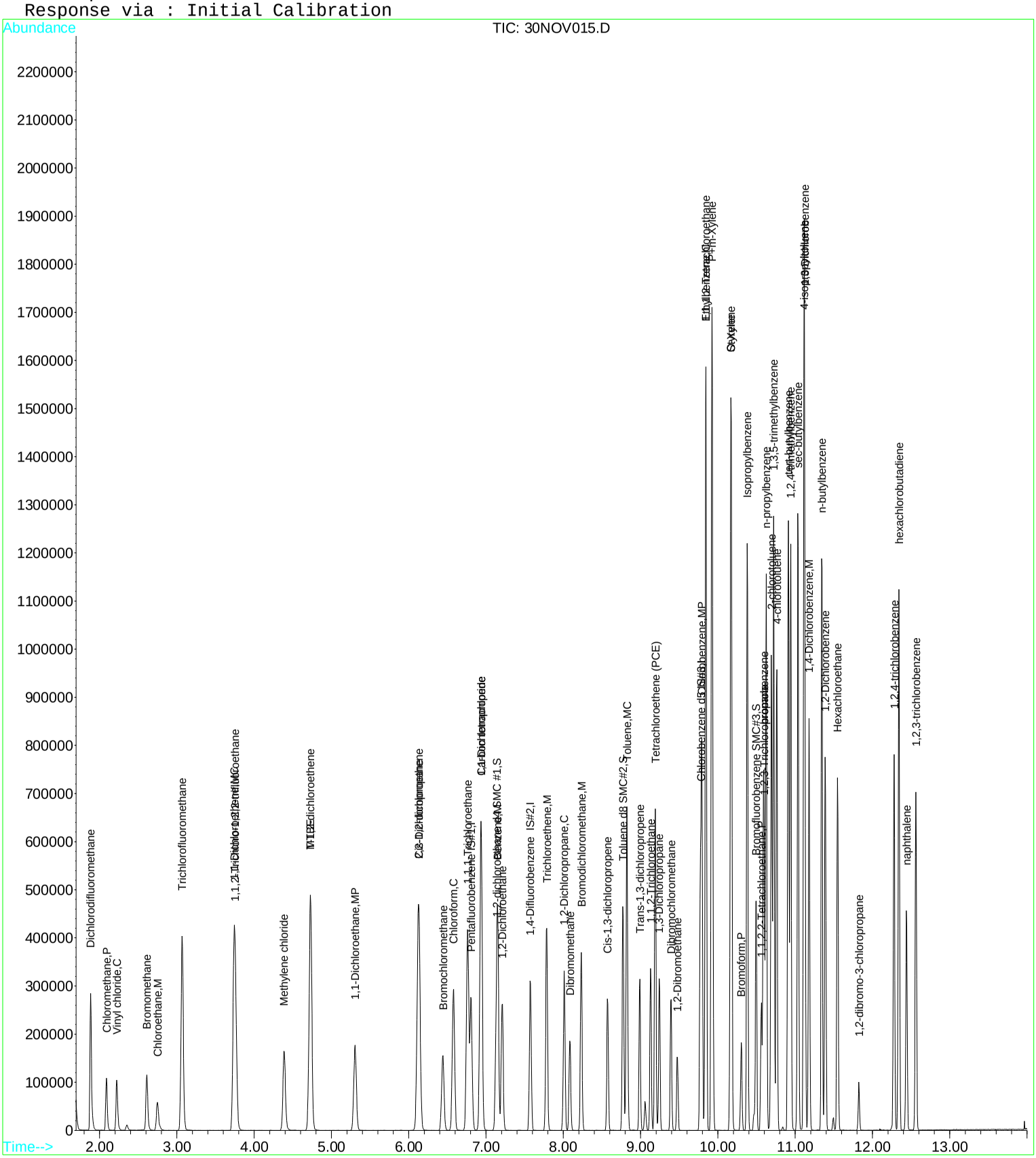
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	514305	158.68	ug/kg#	84
53)	2-chlorotoluene	10.69	91	462241m	156.26	ug/kg	
54)	4-chlorotoluene	10.76	91	416540	154.80	ug/kg#	88
55)	tert-butylbenzene	10.91	119	442373	158.58	ug/kg	90
56)	1,2,4-trimethylbenzene	10.94	105	494446	157.09	ug/kg#	86
57)	sec-butylbenzene	11.03	105	559582	141.21	ug/kg	100
58)	4-isopropyltoluene	11.12	119	501487	158.89	ug/kg#	88
59)	1,3-Dichlorobenzene	11.13	146	213094	132.99	ug/kg#	69
60)	1,4-Dichlorobenzene	11.18	146	209351	123.10	ug/kg#	74
61)	n-butylbenzene	11.34	91	439381	147.82	ug/kg	96
62)	1,2-Dichlorobenzene	11.39	146	192375	123.73	ug/kg#	73
63)	Hexachloroethane	11.55	117	86694	165.25	ug/kg#	90
64)	1,2-dibromo-3-chloropropan	11.82	75	26116	210.57	ug/kg#	81
65)	1,2,4-trichlorobenzene	12.28	180	153420	131.96	ug/kg	99
66)	hexachlorobutadiene	12.34	225	177946	184.47	ug/kg	96
67)	naphthalene	12.44	128	245134	118.62	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	138399	128.96	ug/kg	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV015.D Vial: 15
Acq On : 30 Nov 2020 1:38 pm Operator: RCC
Sample : 2021163-CAL3 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

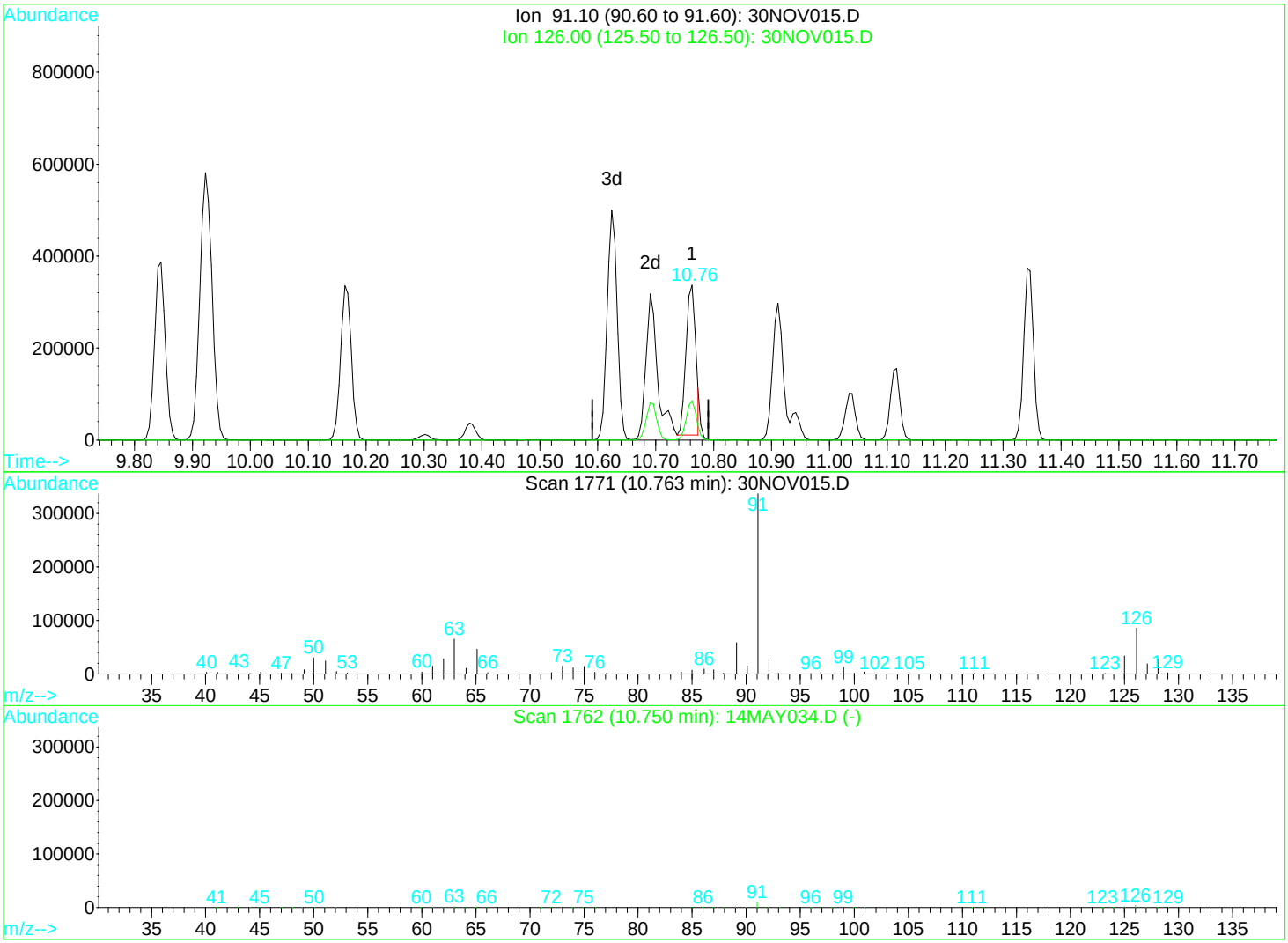
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV015.D Vial: 15
Acq On : 30 Nov 2020 1:38 pm Operator: RCC
Sample : 2021163-CAL3 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV015.D

(53) 2-chlorotoluene

10.76min 128.34ug/kg

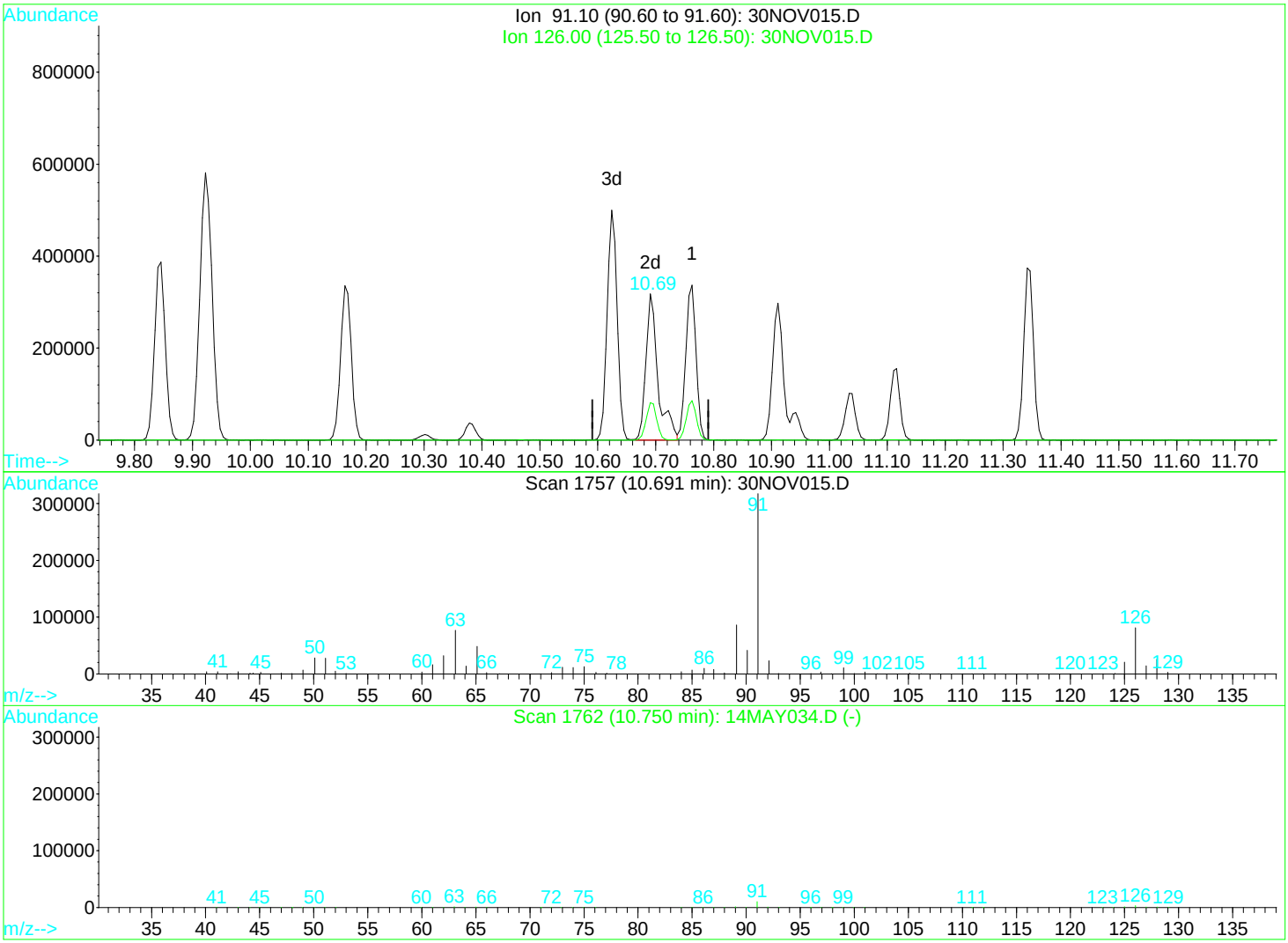
response 379670

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	26.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV015.D Vial: 15
Acq On : 30 Nov 2020 1:38 pm Operator: RCC
Sample : 2021163-CAL3 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV015.D

(53) 2-chlorotoluene

10.69min 156.26ug/kg m

response 462241

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	21.50#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV016.D Vial: 16
Acq On : 30 Nov 2020 1:59 pm Operator: RCC
Sample : 2021163-CAL4 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	154717	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	179495	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.78	119	53363	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	142093	98.58	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 197.16%#			
30) Toluene d8 SMC#2	8.77	98	220561	51.83	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.66%			
48) Bromofluorobenzene SMC#3	10.49	95	121423	69.48	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 138.96%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.89	85	490849	642.25	ug/kg	99
3) Chloromethane	2.09	50	214854	301.02	ug/kg#	94
4) Vinyl chloride	2.22	62	220671	280.96	ug/kg#	98
5) Bromomethane	2.61	94	147287	480.75	ug/kg#	78
6) Chloroethane	2.75	64	127117	270.65	ug/kg#	81
7) Trichlorofluoromethane	3.06	101	839360	500.68	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	277324	287.65	ug/kg	96
9) 1,1-Dichloroethene	3.74	61	480457	351.96	ug/kg#	75
10) Methylene chloride	4.39	84	163109	164.91	ug/kg#	54
11) MTBE	4.72	73	690047	320.82	ug/kg#	79
12) T-1,2-dichloroethene	4.73	96	184331	211.44	ug/kg#	64
13) 1,1-Dichloroethane	5.30	63	434543	263.96	ug/kg	97
14) 2,2-Dichloropropane	6.13	77	668616	448.01	ug/kg#	42
15) Cis-1,2-dichloroethene	6.13	96	191281	206.76	ug/kg#	44
16) Bromochloromethane	6.45	128	87471	220.08	ug/kg#	74
17) Chloroform	6.58	83	562664	356.71	ug/kg	99
18) 1,1,1-Trichloroethane	6.76	97	729161	477.17	ug/kg#	96
19) 1,1-Dichloropropene	6.94	75	391125	307.55	ug/kg	95
20) Carbon tetrachloride	6.93	119	607175	524.64	ug/kg	97
22) 1,2-Dichloroethane	7.21	62	573935	480.20	ug/kg#	93
23) Benzene	7.15	78	680094	193.05	ug/kg#	75
25) Trichloroethene	7.78	130	223827	275.02	ug/kg	93
26) 1,2-Dichloropropane	8.01	63	158423	218.96	ug/kg#	21
27) Dibromomethane	8.08	93	130772	355.24	ug/kg	97
28) Bromodichloromethane	8.23	83	441913	467.80	ug/kg#	95
29) Cis-1,3-dichloropropene	8.57	75	351327	314.86	ug/kg#	84
31) Toluene	8.82	92	475154	248.17	ug/kg#	94
32) Trans-1,3-dichloropropene	8.99	75	406087	401.90	ug/kg#	94
33) 1,1,2-Trichloroethane	9.13	97	140654	252.73	ug/kg#	72
34) Tetrachloroethene (PCE)	9.19	166	291936	304.34	ug/kg#	88
35) 1,3-Dichloropropane	9.24	76	275453	275.36	ug/kg	100
36) Dibromochloromethane	9.39	129	250893	435.46	ug/kg#	96
37) 1,2-Dibromoethane	9.47	107	169434	299.09	ug/kg	98
39) Chlorobenzene	9.79	112	519675	246.44	ug/kg#	87
40) 1,1,1,2-Tetrachloroethane	9.84	131	282778	402.32	ug/kg#	83
41) Ethylbenzene	9.84	106	344395	276.56	ug/kg	91
42) P+m-Xylene	9.92	106	830966	562.55	ug/kg	78
43) O-Xylene	10.17	106	394033	274.97	ug/kg#	53
44) Styrene	10.18	104	650007	288.31	ug/kg#	62
45) Bromoform	10.30	173	152636	393.33	ug/kg	97
46) Isopropylbenzene	10.38	105	1271743	323.90	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	153981	227.30	ug/kg#	85
49) 1,2,3-Trichloropropane	10.60	110	85504	374.76	ug/kg	91
50) n-propylbenzene	10.63	91	1368799	311.58	ug/kg	99
51) bromobenzene	10.59	156	252354	281.18	ug/kg	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV016.D Vial: 16
Acq On : 30 Nov 2020 1:59 pm Operator: RCC
Sample : 2021163-CAL4 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

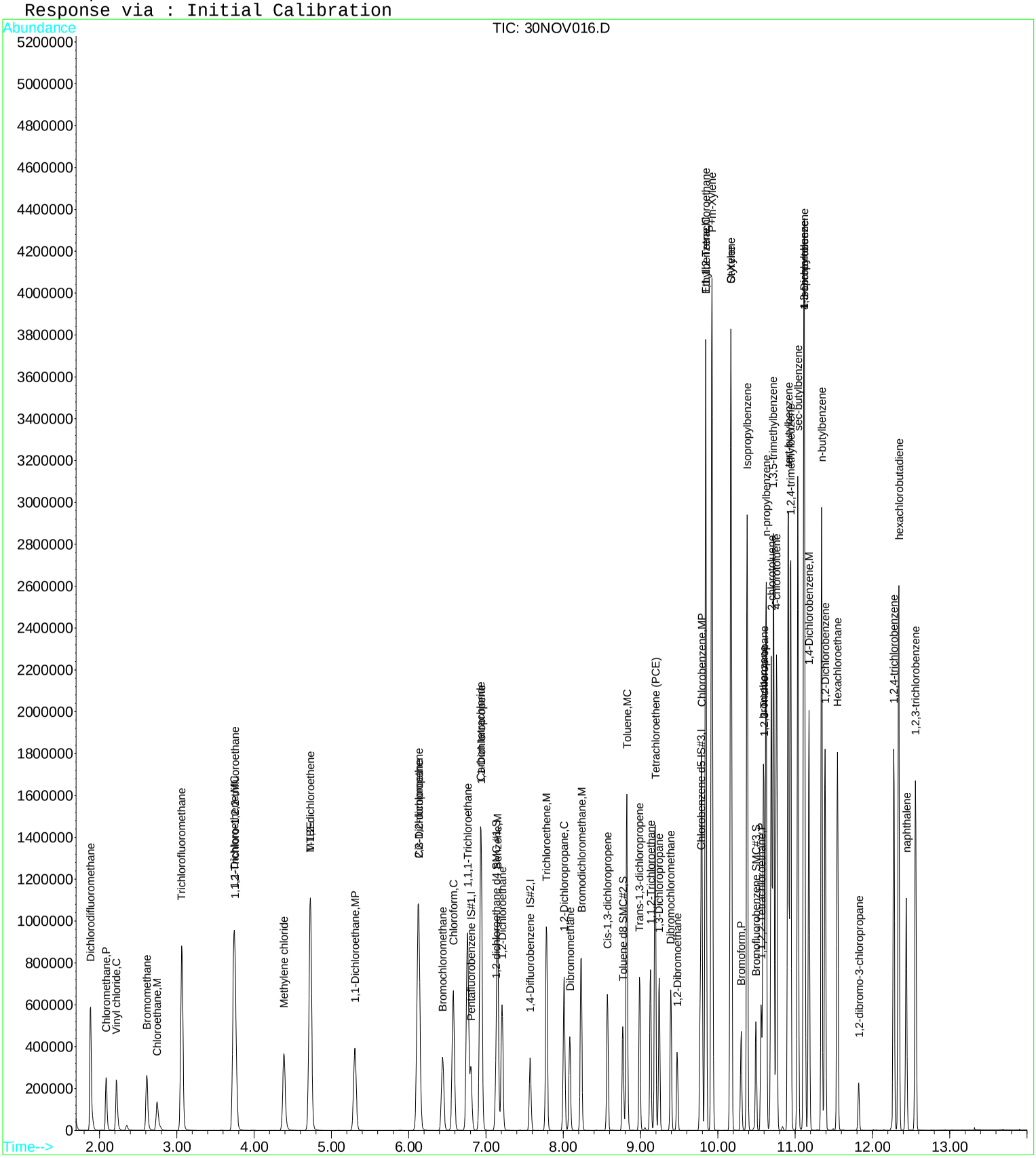
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	1203643	355.65	ug/kg	87
53)	2-chlorotoluene	10.69	91	1082796m	350.55	ug/kg	
54)	4-chlorotoluene	10.76	91	967593	344.39	ug/kg	90
55)	tert-butylbenzene	10.91	119	956902	328.53	ug/kg#	80
56)	1,2,4-trimethylbenzene	10.94	105	1178837	358.69	ug/kg#	86
57)	sec-butylbenzene	11.04	105	1314262	317.64	ug/kg	99
58)	4-isopropyltoluene	11.11	119	1200931	364.40	ug/kg#	89
59)	1,3-Dichlorobenzene	11.12	146	510045	304.84	ug/kg#	71
60)	1,4-Dichlorobenzene	11.18	146	500781	282.00	ug/kg#	76
61)	n-butylbenzene	11.34	91	1075912	346.65	ug/kg	97
62)	1,2-Dichlorobenzene	11.39	146	456086	280.93	ug/kg#	74
63)	Hexachloroethane	11.55	117	219852	401.34	ug/kg#	90
64)	1,2-dibromo-3-chloropropan	11.82	75	64899	501.13	ug/kg#	82
65)	1,2,4-trichlorobenzene	12.28	180	374474	308.48	ug/kg	100
66)	hexachlorobutadiene	12.34	225	430010	426.93	ug/kg	96
67)	naphthalene	12.44	128	587203	272.13	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	339996	303.41	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV016.D Vial: 16
Acq On : 30 Nov 2020 1:59 pm Operator: RCC
Sample : 2021163-CAL4 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

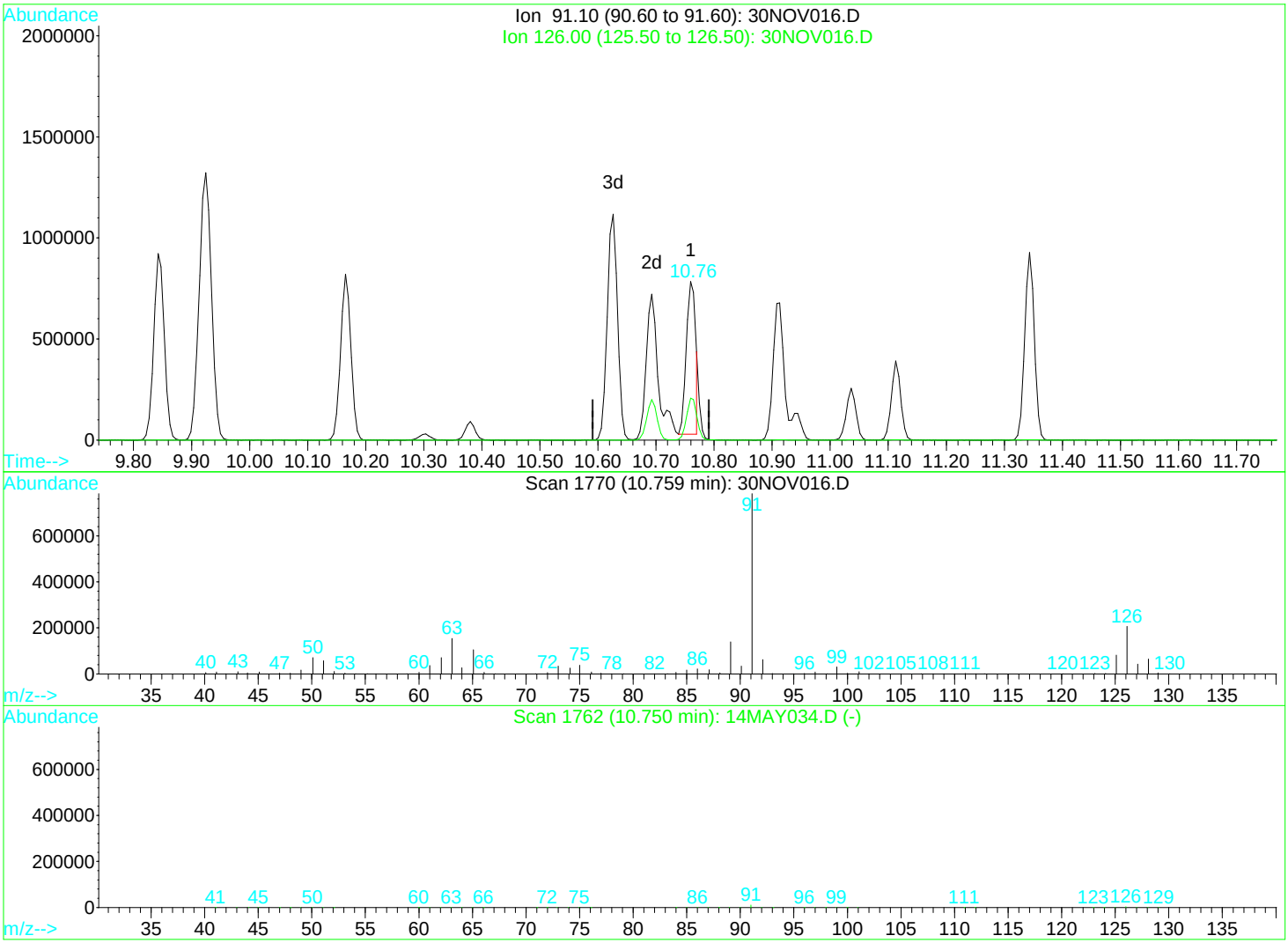
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV016.D Vial: 16
Acq On : 30 Nov 2020 1:59 pm Operator: RCC
Sample : 2021163-CAL4 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV016.D

(53) 2-chlorotoluene

10.76min 272.65ug/kg

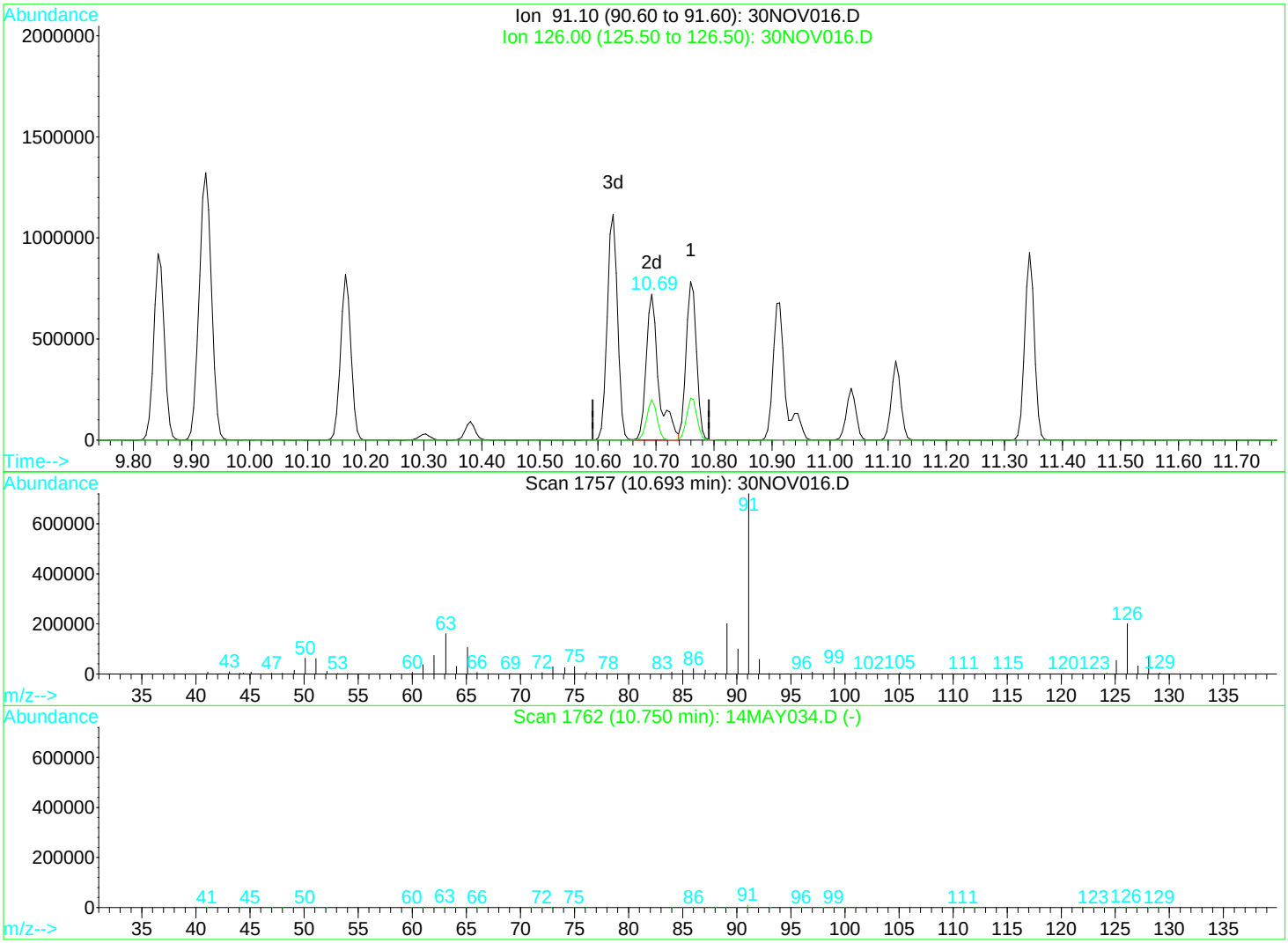
response 842166

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV016.D Vial: 16
Acq On : 30 Nov 2020 1:59 pm Operator: RCC
Sample : 2021163-CAL4 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV016.D

(53) 2-chlorotoluene

10.69min 350.55ug/kg m

response 1082796

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	21.32#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV017.D Vial: 17
Acq On : 30 Nov 2020 2:20 pm Operator: RCC
Sample : 2021163-CAL5 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	174552	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	198724	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	59973	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	145264	89.33	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 178.66%#			
30) Toluene d8 SMC#2	8.77	98	248152	52.68	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.36%			
48) Bromofluorobenzene SMC#3	10.50	95	129237	65.80	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 131.60%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	761641	883.33	ug/kg	99
3) Chloromethane	2.09	50	383926	476.77	ug/kg#	95
4) Vinyl chloride	2.22	62	379900	428.73	ug/kg#	99
5) Bromomethane	2.62	94	274420	793.93	ug/kg#	82
6) Chloroethane	2.74	64	242765	458.14	ug/kg#	84
7) Trichlorofluoromethane	3.07	101	1339976	708.48	ug/kg	100
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	465789	428.24	ug/kg	94
9) 1,1-Dichloroethene	3.73	61	792103	514.32	ug/kg#	76
10) Methylene chloride	4.39	84	280296	251.18	ug/kg#	57
11) MTBE	4.73	73	1173547	483.61	ug/kg#	81
12) T-1,2-dichloroethene	4.73	96	324952	330.39	ug/kg#	69
13) 1,1-Dichloroethane	5.31	63	732203	394.23	ug/kg	99
14) 2,2-Dichloropropane	6.13	77	1105224	656.40	ug/kg#	43
15) Cis-1,2-dichloroethene	6.13	96	337005	322.89	ug/kg#	51
16) Bromochloromethane	6.44	128	154107	343.68	ug/kg#	78
17) Chloroform	6.58	83	938850	527.56	ug/kg	100
18) 1,1,1-Trichloroethane	6.76	97	1179639	684.25	ug/kg	91
19) 1,1-Dichloropropene	6.94	75	652207	454.56	ug/kg	96
20) Carbon tetrachloride	6.93	119	993317	760.77	ug/kg	96
22) 1,2-Dichloroethane	7.21	62	924211	685.40	ug/kg#	94
23) Benzene	7.15	78	1176416	295.98	ug/kg#	78
25) Trichloroethene	7.79	130	380991	422.84	ug/kg	94
26) 1,2-Dichloropropane	8.01	63	275099	343.43	ug/kg#	29
27) Dibromomethane	8.08	93	215365	528.42	ug/kg	92
28) Bromodichloromethane	8.23	83	732819	700.68	ug/kg#	95
29) Cis-1,3-dichloropropene	8.57	75	601797	487.15	ug/kg#	85
31) Toluene	8.82	92	826682	389.99	ug/kg#	96
32) Trans-1,3-dichloropropene	8.99	75	676187	604.46	ug/kg#	95
33) 1,1,2-Trichloroethane	9.13	97	245744	398.84	ug/kg#	74
34) Tetrachloroethene (PCE)	9.19	166	495977	467.01	ug/kg#	91
35) 1,3-Dichloropropane	9.25	76	470064	424.44	ug/kg	99
36) Dibromochloromethane	9.39	129	424727	665.84	ug/kg#	97
37) 1,2-Dibromoethane	9.48	107	290450	463.10	ug/kg	99
39) Chlorobenzene	9.79	112	889995	375.54	ug/kg	89
40) 1,1,1,2-Tetrachloroethane	9.84	131	480102	607.77	ug/kg#	85
41) Ethylbenzene	9.84	106	601269	429.62	ug/kg	99
42) P+m-Xylene	9.92	106	1428415	860.43	ug/kg#	90
43) O-Xylene	10.17	106	687992	427.19	ug/kg#	61
44) Styrene	10.18	104	1123265	443.31	ug/kg#	66
45) Bromoform	10.31	173	266317	610.63	ug/kg	97
46) Isopropylbenzene	10.38	105	2060923	467.05	ug/kg	98
47) 1,1,2,2-Tetrachloroethane	10.56	83	255375	335.43	ug/kg#	85
49) 1,2,3-Trichloropropane	10.60	110	145777	568.51	ug/kg	90
50) n-propylbenzene	10.62	91	2203115	446.22	ug/kg	96
51) bromobenzene	10.59	156	431261	427.56	ug/kg	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV017.D Vial: 17
Acq On : 30 Nov 2020 2:20 pm Operator: RCC
Sample : 2021163-CAL5 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

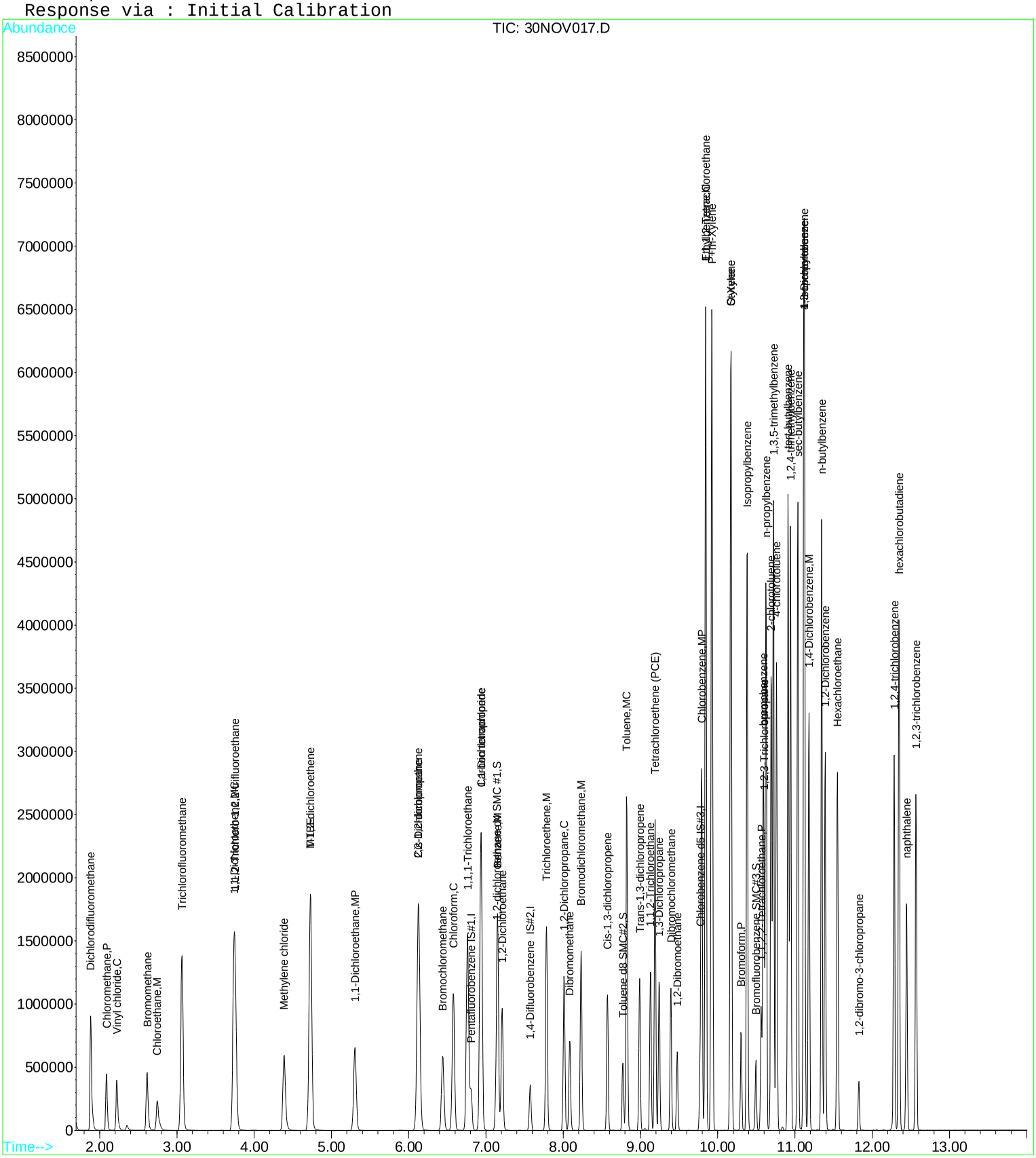
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	1942940	510.83	ug/kg	90
53)	2-chlorotoluene	10.69	91	1761993m	507.57	ug/kg	
54)	4-chlorotoluene	10.76	91	1572408	497.97	ug/kg	92
55)	tert-butylbenzene	10.91	119	1595418	487.37	ug/kg	87
56)	1,2,4-trimethylbenzene	10.94	105	1901713	514.86	ug/kg	91
57)	sec-butylbenzene	11.04	105	2125979	457.18	ug/kg	97
58)	4-isopropyltoluene	11.12	119	1978284	534.11	ug/kg#	90
59)	1,3-Dichlorobenzene	11.13	146	882578	469.36	ug/kg#	75
60)	1,4-Dichlorobenzene	11.18	146	846944	424.37	ug/kg#	79
61)	n-butylbenzene	11.35	91	1741800	499.35	ug/kg	98
62)	1,2-Dichlorobenzene	11.39	146	772575	423.42	ug/kg#	77
63)	Hexachloroethane	11.55	117	365485	593.66	ug/kg#	89
64)	1,2-dibromo-3-chloropropan	11.83	75	108143	743.01	ug/kg	85
65)	1,2,4-trichlorobenzene	12.28	180	628586	460.73	ug/kg	99
66)	hexachlorobutadiene	12.35	225	697819	616.46	ug/kg	97
67)	naphthalene	12.45	128	991325	408.79	ug/kg	100
68)	1,2,3-trichlorobenzene	12.57	180	567529	450.64	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV017.D Vial: 17
Acq On : 30 Nov 2020 2:20 pm Operator: RCC
Sample : 2021163-CAL5 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: 8260REG.RES

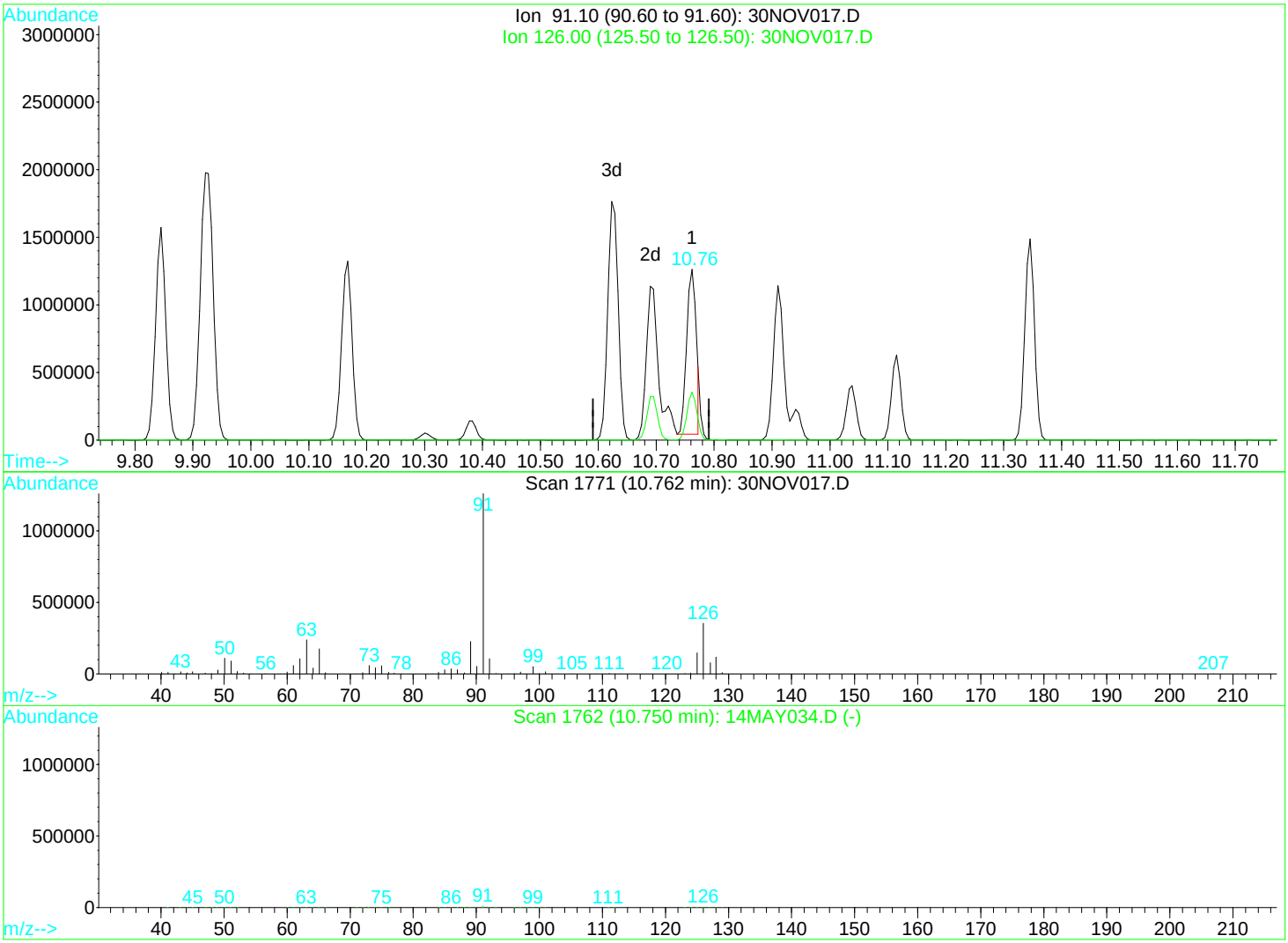
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV017.D Vial: 17
Acq On : 30 Nov 2020 2:20 pm Operator: RCC
Sample : 2021163-CAL5 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:50 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV017.D

(53) 2-chlorotoluene

10.76min 405.47ug/kg

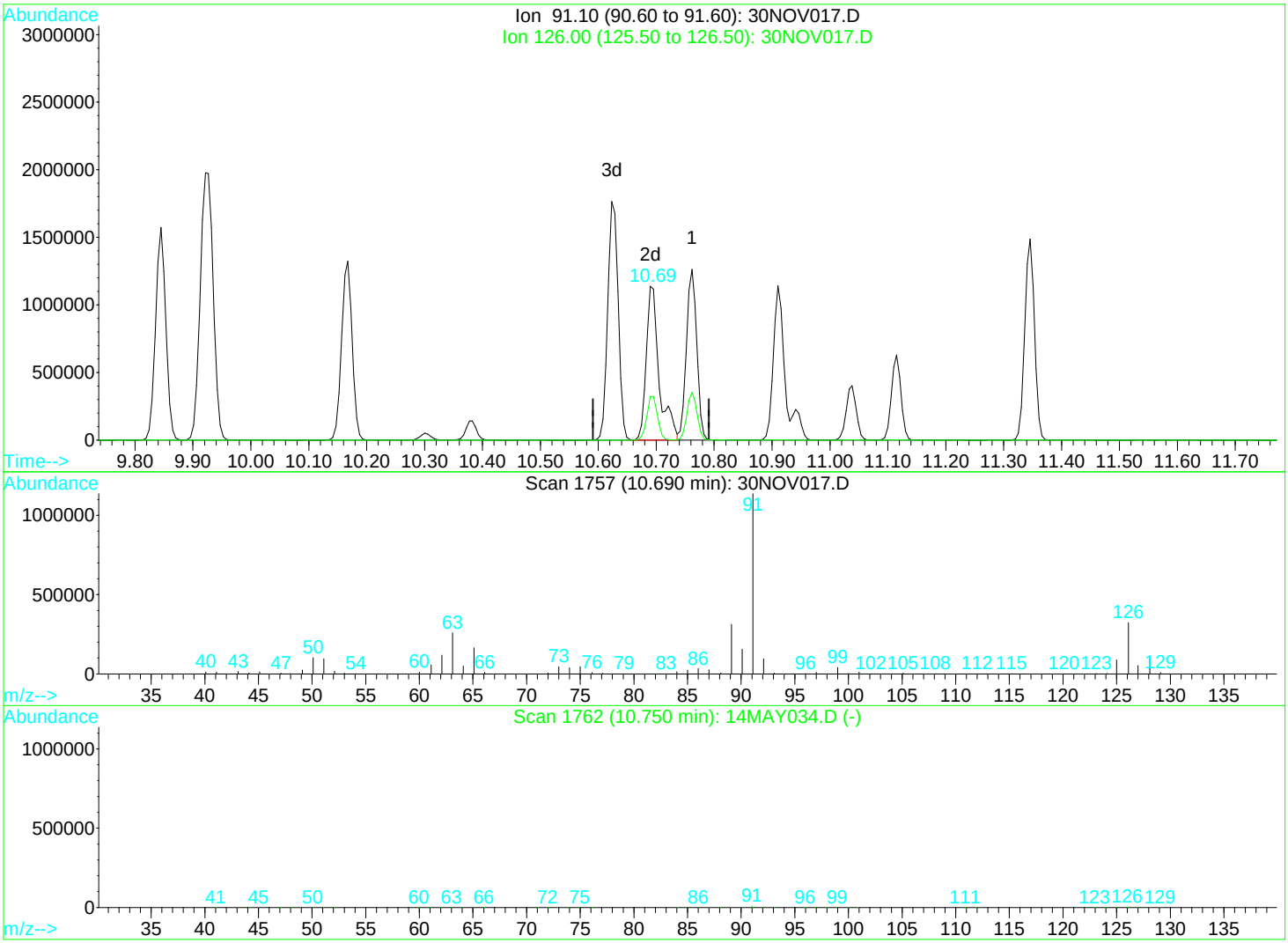
response 1407575

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	28.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV017.D Vial: 17
Acq On : 30 Nov 2020 2:20 pm Operator: RCC
Sample : 2021163-CAL5 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:52 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV017.D

(53) 2-chlorotoluene

10.69min 507.57ug/kg m

response 1761993

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.89#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV018.D Vial: 18
Acq On : 30 Nov 2020 2:41 pm Operator: RCC
Sample : 2021163-CAL6 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:57 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	202466	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	234262	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	72813	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	163986	86.94	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 173.88%#			
30) Toluene d8 SMC#2	8.77	98	292443	52.66	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.32%			
48) Bromofluorobenzene SMC#3	10.50	95	147470	61.84	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 123.68%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	1011172	1011.04	ug/kg	99
3) Chloromethane	2.09	50	611324	654.49	ug/kg#	96
4) Vinyl chloride	2.22	62	554502	539.49	ug/kg#	99
5) Bromomethane	2.61	94	390119	973.05	ug/kg#	83
6) Chloroethane	2.74	64	383711	624.29	ug/kg#	88
7) Trichlorofluoromethane	3.06	101	1847251	842.03	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	676347	536.09	ug/kg	94
9) 1,1-Dichloroethene	3.73	61	1122724	628.49	ug/kg#	78
10) Methylene chloride	4.39	84	423946	327.53	ug/kg#	62
11) MTBE	4.72	73	1695496	602.37	ug/kg#	81
12) T-1,2-dichloroethene	4.73	96	483842	424.11	ug/kg#	71
13) 1,1-Dichloroethane	5.31	63	1071988	497.60	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	1541087	789.08	ug/kg#	45
15) Cis-1,2-dichloroethene	6.13	96	511566	422.56	ug/kg#	58
16) Bromochloromethane	6.44	128	230811	443.77	ug/kg#	80
17) Chloroform	6.58	83	1345899	652.02	ug/kg	99
18) 1,1,1-Trichloroethane	6.76	97	1655920	828.09	ug/kg#	93
19) 1,1-Dichloropropene	6.95	75	953170	572.73	ug/kg	97
20) Carbon tetrachloride	6.93	119	1387409	916.09	ug/kg	97
22) 1,2-Dichloroethane	7.21	62	1282175	819.77	ug/kg	94
23) Benzene	7.15	78	1757808	381.29	ug/kg#	80
25) Trichloroethene	7.79	130	566736	533.57	ug/kg	96
26) 1,2-Dichloropropane	8.01	63	416023	440.57	ug/kg#	37
27) Dibromomethane	8.08	93	313178	651.84	ug/kg	90
28) Bromodichloromethane	8.23	83	1055569	856.17	ug/kg#	96
29) Cis-1,3-dichloropropene	8.57	75	890915	611.78	ug/kg#	85
31) Toluene	8.82	92	1247048	499.06	ug/kg#	97
32) Trans-1,3-dichloropropene	8.99	75	979510	742.77	ug/kg	95
33) 1,1,2-Trichloroethane	9.13	97	366272	504.27	ug/kg#	77
34) Tetrachloroethene (PCE)	9.19	166	738715	590.05	ug/kg#	93
35) 1,3-Dichloropropane	9.24	76	690314	528.75	ug/kg	98
36) Dibromochloromethane	9.39	129	617539	821.24	ug/kg#	98
37) 1,2-Dibromoethane	9.48	107	429367	580.73	ug/kg	98
39) Chlorobenzene	9.79	112	1330939	462.56	ug/kg	90
40) 1,1,1,2-Tetrachloroethane	9.85	131	704619	734.70	ug/kg#	86
41) Ethylbenzene	9.85	106	917586	540.02	ug/kg	90
42) P+m-Xylene	9.92	106	2149672	1066.55	ug/kg#	95
43) O-Xylene	10.17	106	1050858	537.44	ug/kg#	72
44) Styrene	10.18	104	1691837	549.96	ug/kg#	69
45) Bromoform	10.30	173	380096	717.83	ug/kg	97
46) Isopropylbenzene	10.38	105	2835347	529.24	ug/kg	97
47) 1,1,2,2-Tetrachloroethane	10.56	83	387226	418.92	ug/kg#	87
49) 1,2,3-Trichloropropane	10.60	110	208967	671.24	ug/kg	91
50) n-propylbenzene	10.62	91	3002077	500.82	ug/kg#	91
51) bromobenzene	10.59	156	645581	527.17	ug/kg	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV018.D Vial: 18
Acq On : 30 Nov 2020 2:41 pm Operator: RCC
Sample : 2021163-CAL6 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:57 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

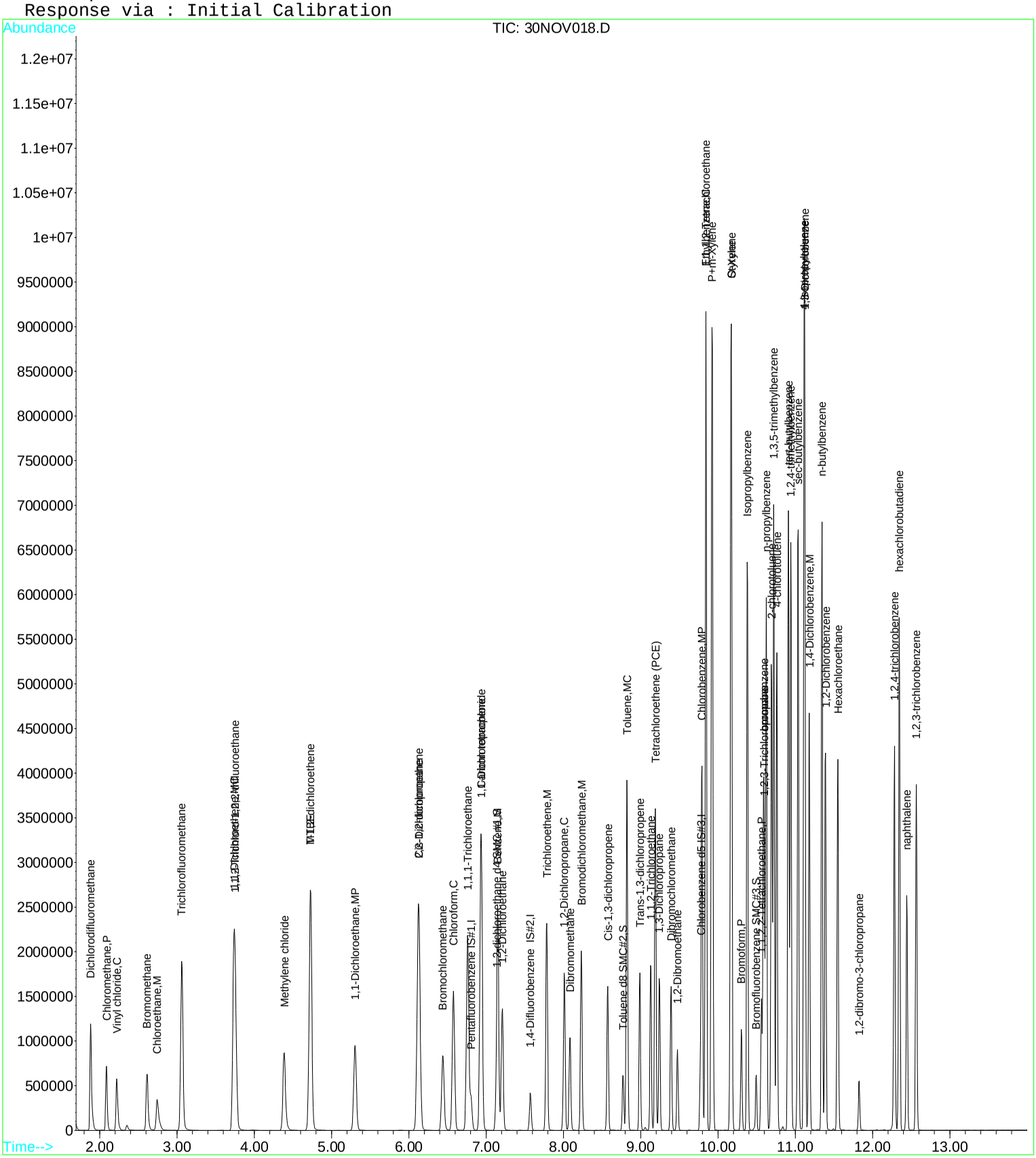
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	2677522	579.82	ug/kg	96
53)	2-chlorotoluene	10.69	91	2506775m	594.77	ug/kg	
54)	4-chlorotoluene	10.76	91	2218502	578.69	ug/kg	95
55)	tert-butylbenzene	10.91	119	2270465	571.28	ug/kg	89
56)	1,2,4-trimethylbenzene	10.94	105	2645353	589.90	ug/kg	95
57)	sec-butylbenzene	11.04	105	2918060	516.86	ug/kg	92
58)	4-isopropyltoluene	11.12	119	2764634	614.79	ug/kg#	89
59)	1,3-Dichlorobenzene	11.13	146	1330229	582.67	ug/kg#	80
60)	1,4-Dichlorobenzene	11.18	146	1261173	520.49	ug/kg#	82
61)	n-butylbenzene	11.35	91	2421776	571.85	ug/kg#	95
62)	1,2-Dichlorobenzene	11.39	146	1142124	515.58	ug/kg#	79
63)	Hexachloroethane	11.55	117	541322	724.21	ug/kg#	88
64)	1,2-dibromo-3-chloropropan	11.82	75	154796	876.00	ug/kg	88
65)	1,2,4-trichlorobenzene	12.28	180	924785	558.31	ug/kg	99
66)	hexachlorobutadiene	12.35	225	988180	719.03	ug/kg	97
67)	naphthalene	12.44	128	1426344	484.45	ug/kg	100
68)	1,2,3-trichlorobenzene	12.57	180	834422	545.73	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV018.D Vial: 18
Acq On : 30 Nov 2020 2:41 pm Operator: RCC
Sample : 2021163-CAL6 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:57 2020 Quant Results File: 8260REG.RES

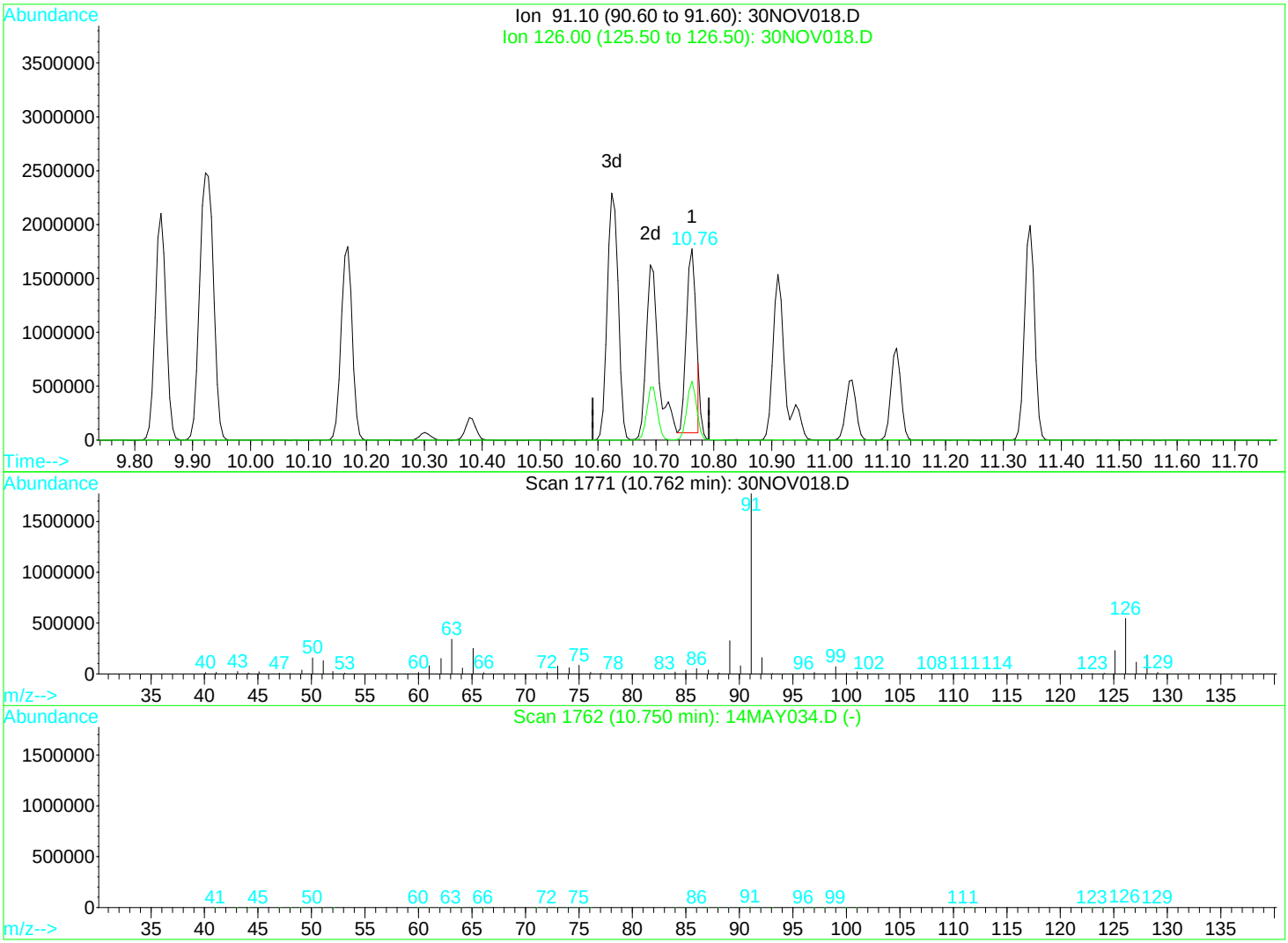
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV018.D Vial: 18
Acq On : 30 Nov 2020 2:41 pm Operator: RCC
Sample : 2021163-CAL6 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:56 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV018.D

(53) 2-chlorotoluene

10.76min 470.25ug/kg

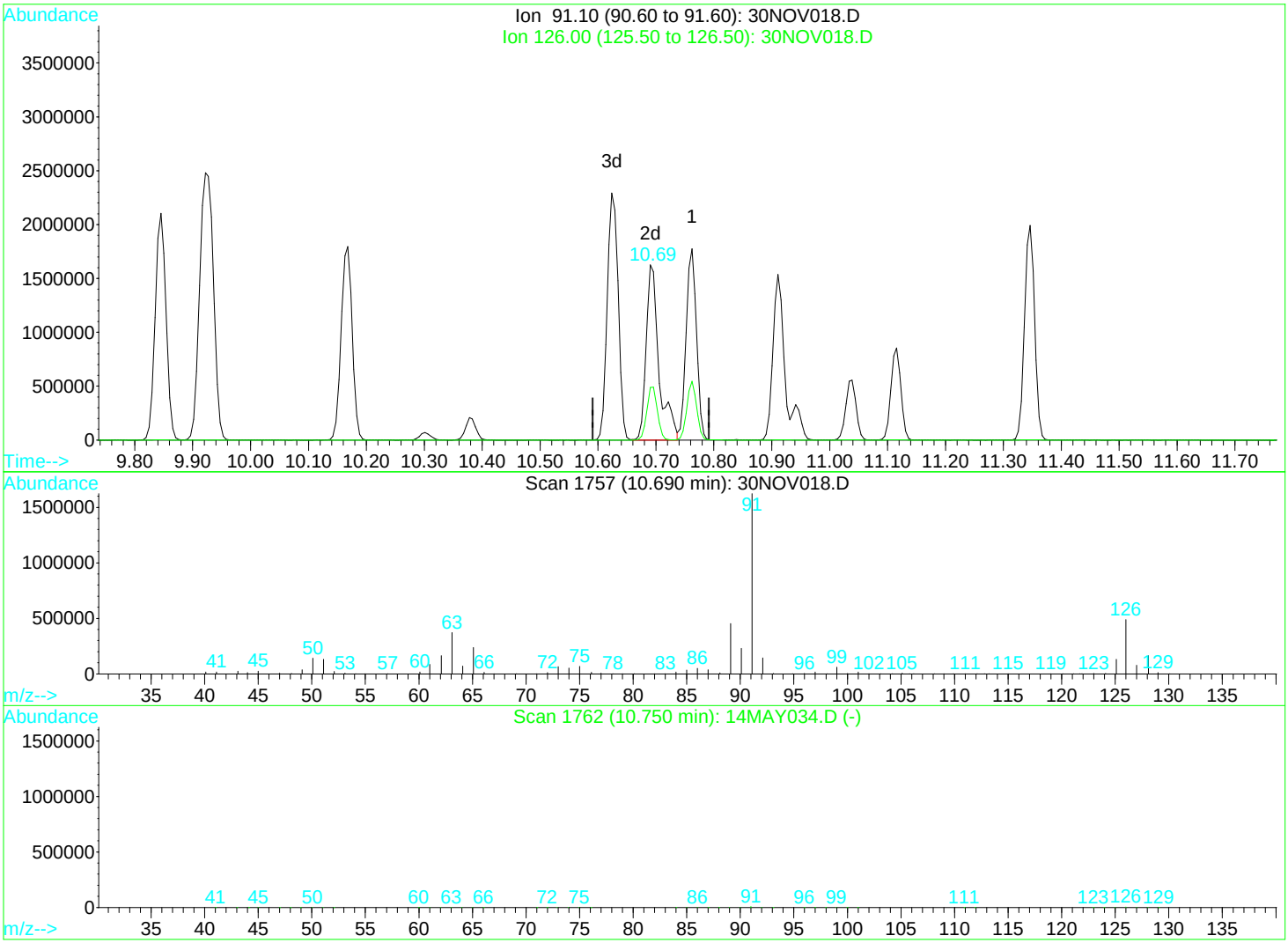
response 1981935

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	30.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV018.D Vial: 18
Acq On : 30 Nov 2020 2:41 pm Operator: RCC
Sample : 2021163-CAL6 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 14:57 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 14:49:55 2020
Response via : Multiple Level Calibration



TIC: 30NOV018.D

(53) 2-chlorotoluene

10.69min 594.77ug/kg m

response 2506775

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	24.31#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV038.D Vial: 38
Acq On : 12 Nov 2020 7:24 pm Operator: RCC
Sample : 2020136-CALD Inst : MS-V17
Misc : TPPH; 5mL; 0K12036 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:48 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

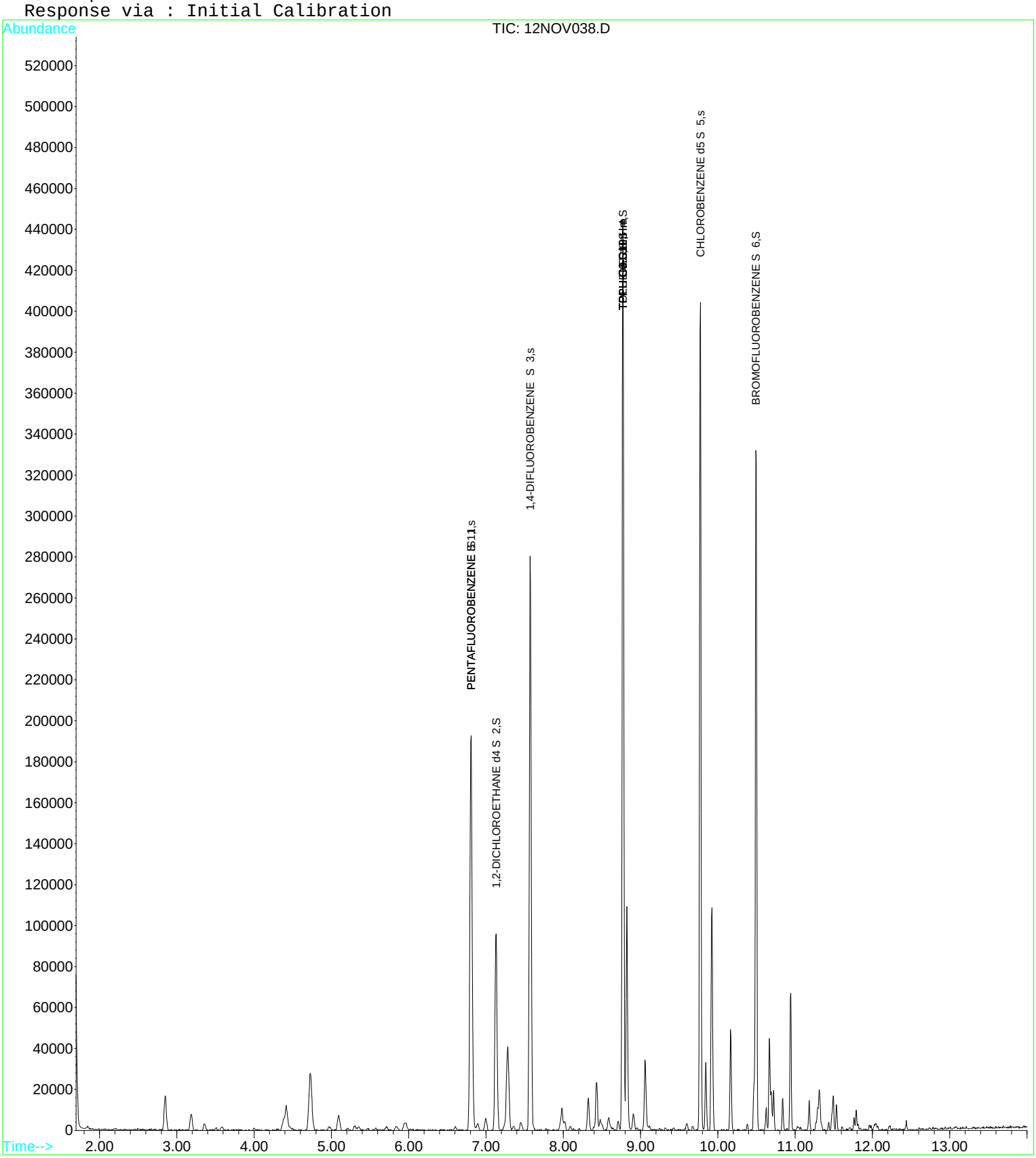
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	144401	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	403119m	36.68	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	183998m	38.32	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	470707m	39.29	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	646297m	46.81	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.78	TIC	537994m	40.49	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.49	TIC	448002m	37.91	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	8.77	TIC	1400516m	112.75	ug/kg	
9) TPPH C6-C12	8.77	TIC	1178657m	111.44	ug/kg	
10) TPPH C6-C10	8.77	TIC	916531m	117.42	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV038.D Vial: 38
Acq On : 12 Nov 2020 7:24 pm Operator: RCC
Sample : 2020136-CALD Inst : MS-V17
Misc : TPPH; 5mL; 0K12036 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:48 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV039.D Vial: 39
Acq On : 12 Nov 2020 7:45 pm Operator: RCC
Sample : 2020136-CALE Inst : MS-V17
Misc : TPPH; 5mL; 0K12037 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:49 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

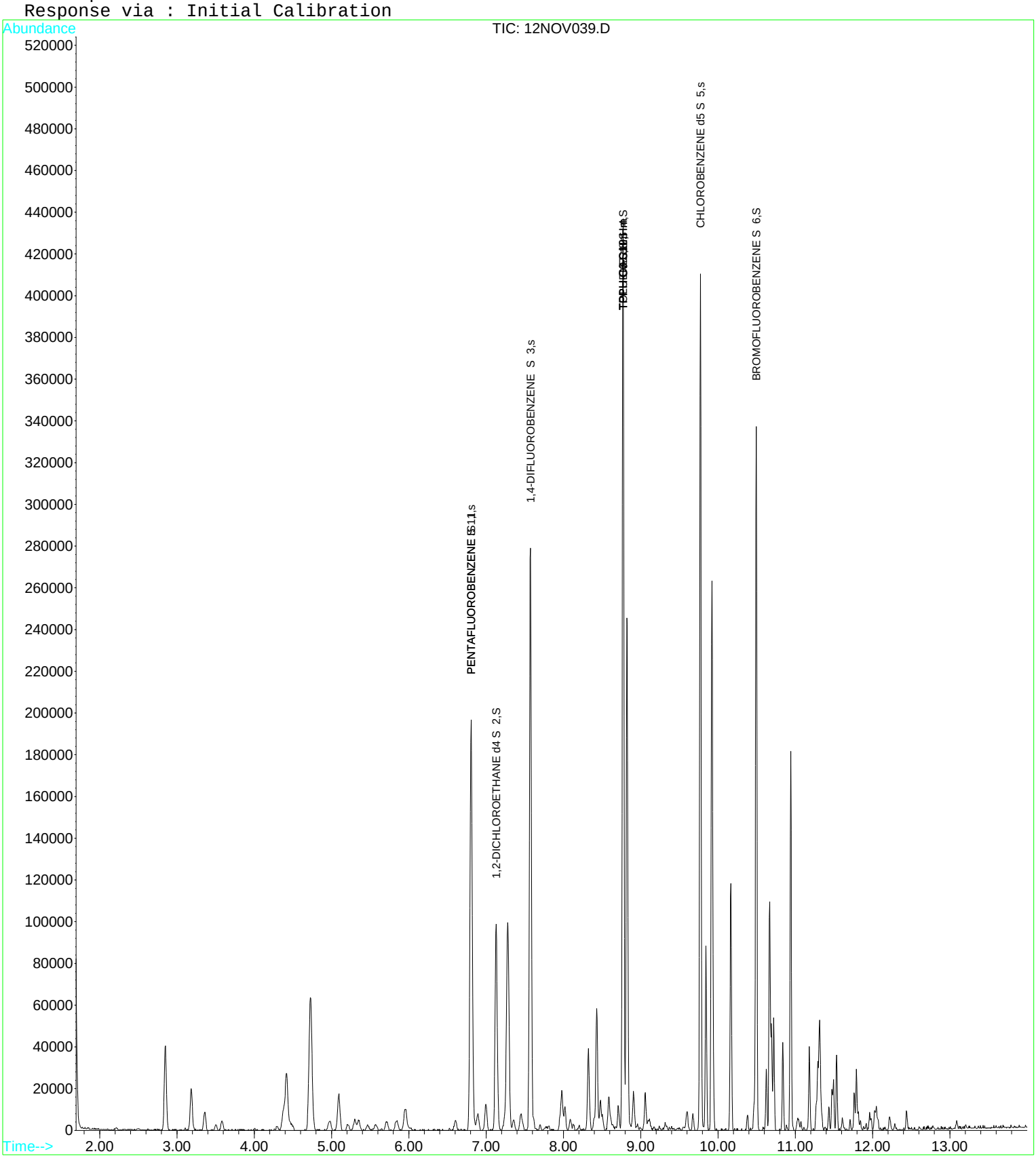
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	141389	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	412546m	38.34	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	194248m	41.32	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	478356m	40.78	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	637675m	47.17	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	533759m	41.03	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	431178m	37.27	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	8.77	TIC	3387770m	278.54	ug/kg	
9) TPPH C6-C12	8.77	TIC	2890827m	279.15	ug/kg	
10) TPPH C6-C10	8.77	TIC	2187117m	286.16	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV039.D Vial: 39
Acq On : 12 Nov 2020 7:45 pm Operator: RCC
Sample : 2020136-CALE Inst : MS-V17
Misc : TPPH; 5mL; 0K12037 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:49 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV040.D Vial: 40
Acq On : 12 Nov 2020 8:06 pm Operator: RCC
Sample : 2020136-CALF Inst : MS-V17
Misc : TPPH; 5mL; 0K12038 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:50 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

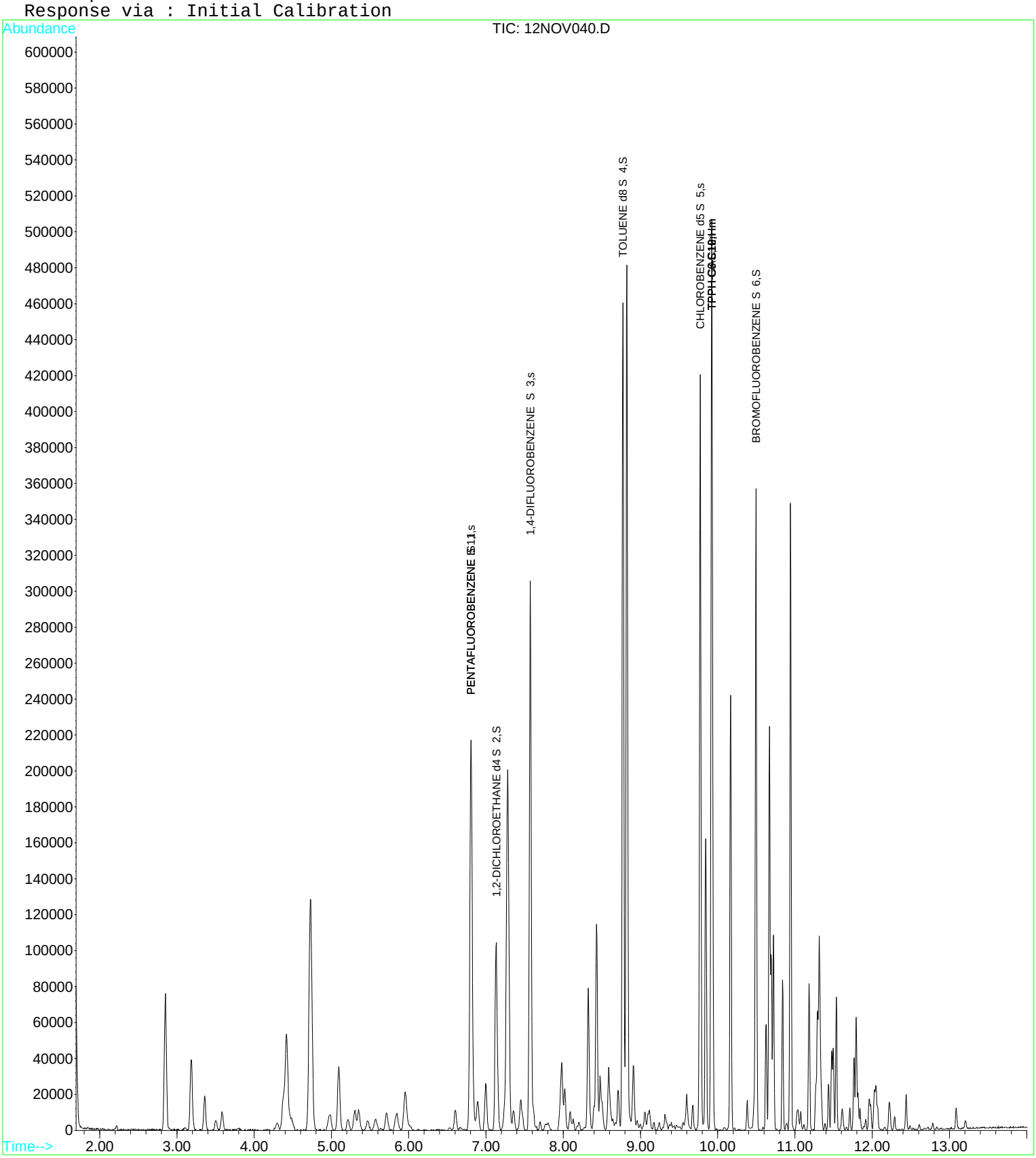
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	148272	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	467756m	41.45	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	217000m	44.02	ug/kg	0.11
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	528202m	42.94	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	671020m	47.34	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	562544m	41.24	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	454436m	37.46	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	6836472m	536.00	ug/kg	
9) TPPH C6-C12	9.92	TIC	5851001m	538.76	ug/kg	
10) TPPH C6-C10	9.92	TIC	4347422m	542.41	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV040.D Vial: 40
Acq On : 12 Nov 2020 8:06 pm Operator: RCC
Sample : 2020136-CALF Inst : MS-V17
Misc : TPPH; 5mL; 0K12038 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:50 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV041.D Vial: 41
Acq On : 12 Nov 2020 8:27 pm Operator: RCC
Sample : 2020136-CALG Inst : MS-V17
Misc : TPPH; 5mL; 0K12039 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:50 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

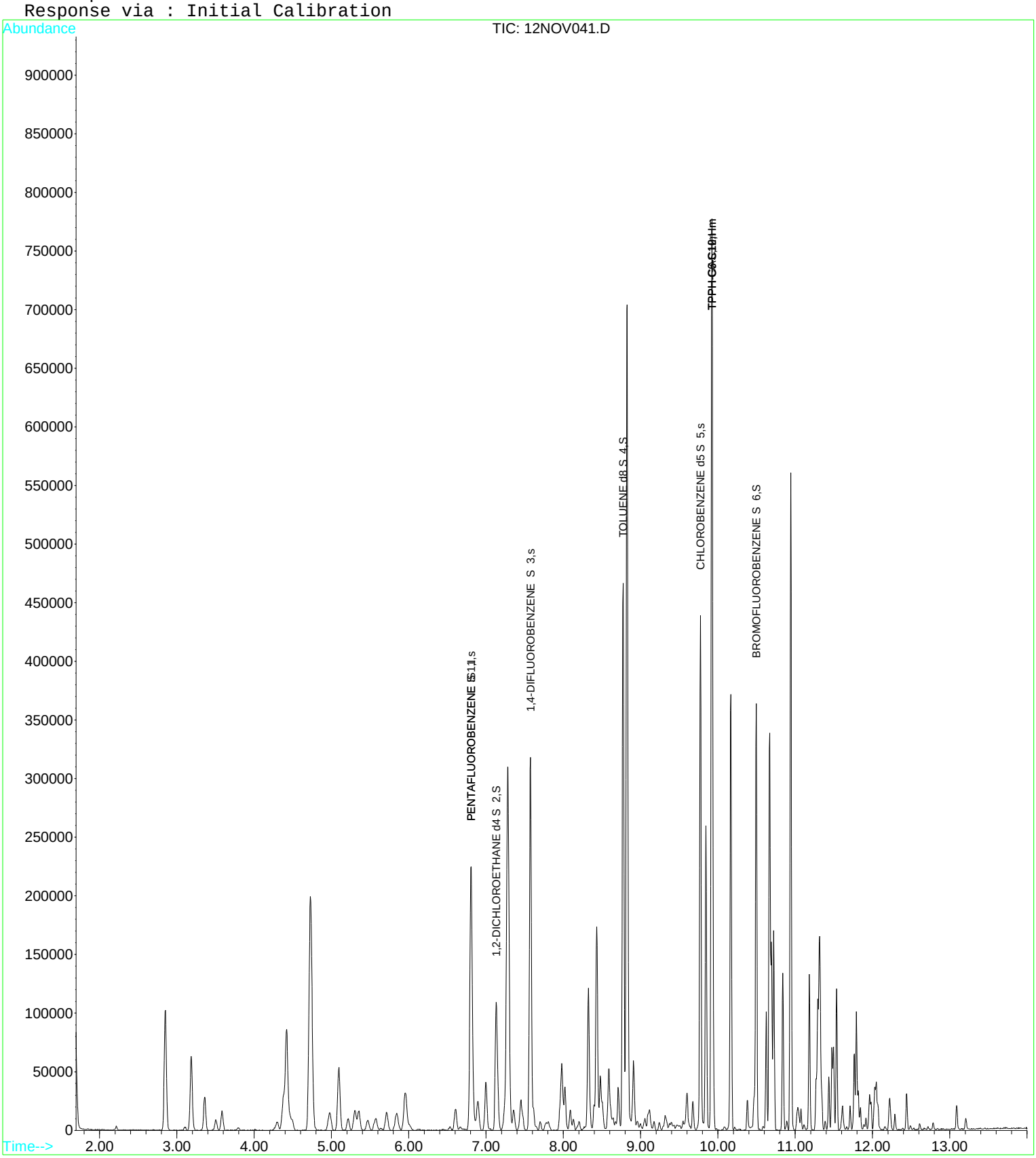
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	152666	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	518925m	44.66	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	239251m	47.13	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	568517m	44.89	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	686749m	47.05	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	573382m	40.82	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	483094m	38.67	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	10783482m	821.12	ug/kg	
9) TPPH C6-C12	9.92	TIC	9221432m	824.67	ug/kg	
10) TPPH C6-C10	9.92	TIC	6819401m	826.34	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV041.D Vial: 41
Acq On : 12 Nov 2020 8:27 pm Operator: RCC
Sample : 2020136-CALG Inst : MS-V17
Misc : TPPH; 5mL; 0K12039 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:50 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV042.D Vial: 42
Acq On : 12 Nov 2020 8:48 pm Operator: RCC
Sample : 2020136-CALH Inst : MS-V17
Misc : TPPH; 5mL; 0K12040 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:51 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

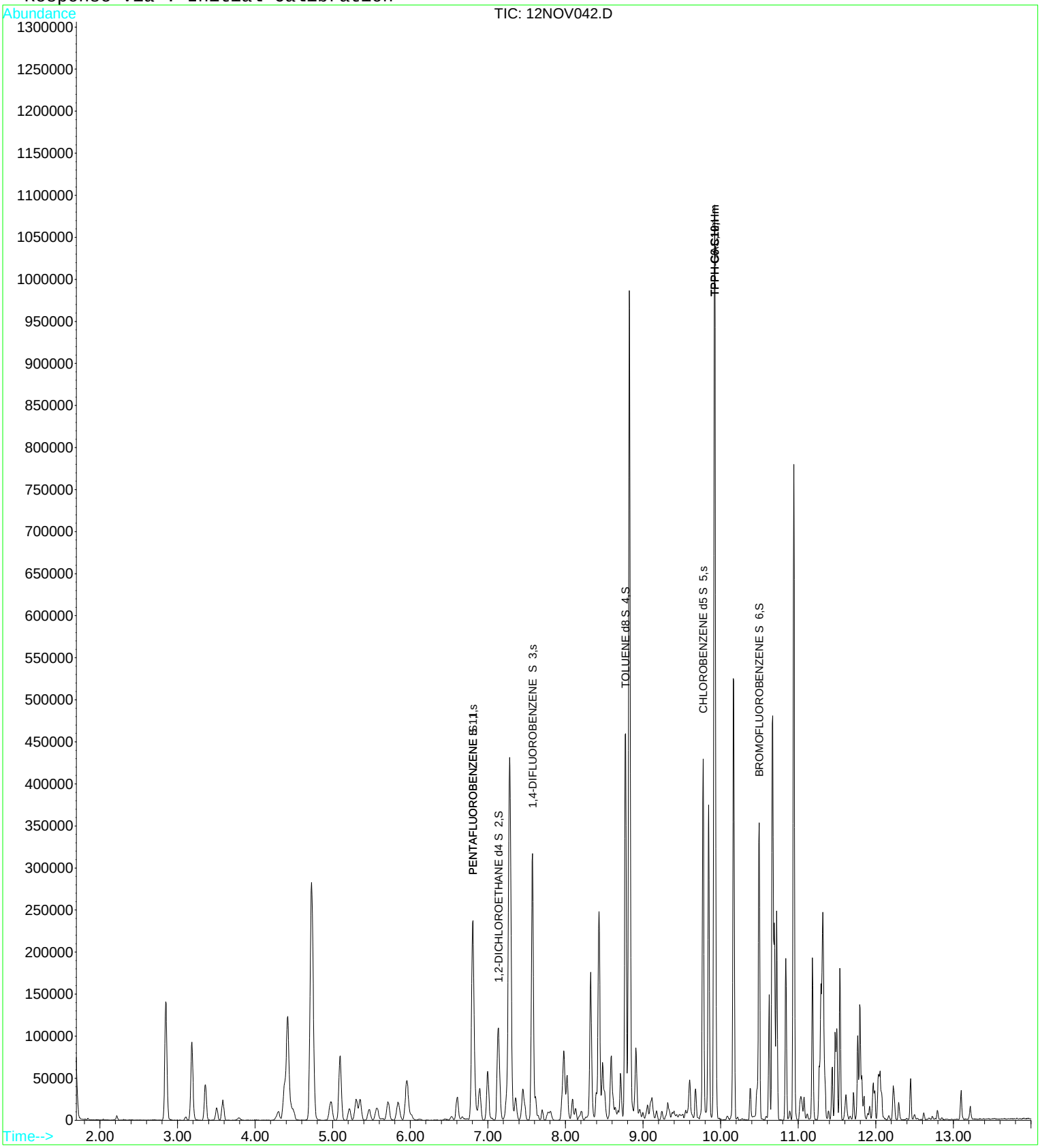
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	150295	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	564497m	49.35	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.14	TIC	259450m	51.92	ug/kg	0.11
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	606607m	48.65	ug/kg	0.09
5) TOLUENE d8 S 4	8.78	TIC	717614m	49.94	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	584662m	42.28	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	498257m	40.51	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	15511684m	1199.79	ug/kg	
9) TPPH C6-C12	9.92	TIC	13432127m	1220.18	ug/kg	
10) TPPH C6-C10	9.92	TIC	9970485m	1227.23	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV042.D Vial: 42
Acq On : 12 Nov 2020 8:48 pm Operator: RCC
Sample : 2020136-CALH Inst : MS-V17
Misc : TPPH; 5mL; 0K12040 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:51 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV043.D Vial: 43
Acq On : 12 Nov 2020 9:09 pm Operator: RCC
Sample : 2020136-CALI Inst : MS-V17
Misc : TPPH; 5mL; 0K12041 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:52 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

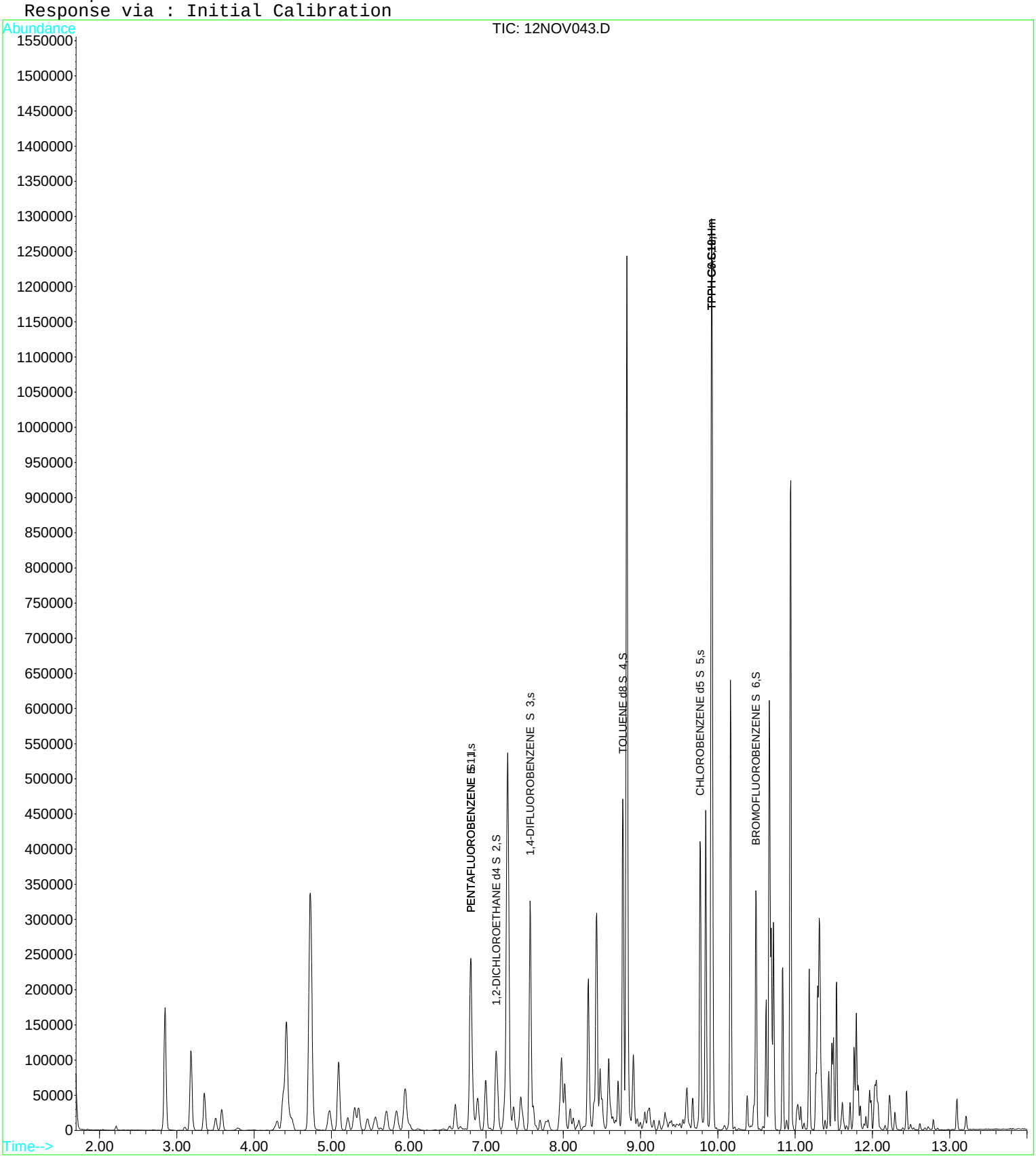
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	147134	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.80	TIC	605697m	54.09	ug/kg	0.10
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	273188m	55.84	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	635396m	52.06	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	695619m	49.45	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	586726m	43.34	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.49	TIC	495758m	41.18	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	19208097m	1517.62	ug/kg	
9) TPPH C6-C12	9.92	TIC	16544295m	1535.18	ug/kg	
10) TPPH C6-C10	9.92	TIC	12245519m	1539.64	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV043.D Vial: 43
Acq On : 12 Nov 2020 9:09 pm Operator: RCC
Sample : 2020136-CALI Inst : MS-V17
Misc : TPPH; 5mL; 0K12041 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:52 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Raw Data - ICV

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV022.D Vial: 22
Acq On : 30 Nov 2020 4:04 pm Operator: RCC
Sample : 2021163-ICV1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:45 2021 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	175790	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	208227	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	61213	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	145025	45.29	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.58%			
30) Toluene d8 SMC#2	8.77	98	252549	48.91	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.82%			
48) Bromofluorobenzene SMC#3	10.49	95	128379	47.96	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.92%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.89	85	161083	78.68	ug/kg	98
3) Chloromethane	2.09	50	96738	103.32	ug/kg#	95
4) Vinyl chloride	2.22	62	97095	105.30	ug/kg#	99
5) Bromomethane	2.61	94	61409	96.90	ug/kg#	81
6) Chloroethane	2.75	64	67167	116.84	ug/kg#	84
7) Trichlorofluoromethane	3.07	101	346446	96.13	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	135999	114.72	ug/kg	93
9) 1,1-Dichloroethene	3.73	61	165181	80.86	ug/kg#	77
10) Methylene chloride	4.39	84	76278	101.25	ug/kg#	65
11) MTBE	4.72	73	327718	108.15	ug/kg#	83
12) T-1,2-dichloroethene	4.73	96	81807	102.31	ug/kg#	72
13) 1,1-Dichloroethane	5.30	63	193390	102.39	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	275175	97.89	ug/kg#	46
15) Cis-1,2-dichloroethene	6.13	96	95282	111.47	ug/kg#	61
16) Bromochloromethane	6.45	128	41951	111.44	ug/kg#	82
17) Chloroform	6.58	83	262652	106.18	ug/kg	100
18) 1,1,1-Trichloroethane	6.76	97	297082	96.75	ug/kg#	95
19) 1,1-Dichloropropene	6.94	75	163775	98.31	ug/kg	98
20) Carbon tetrachloride	6.93	119	236461	93.70	ug/kg	98
22) 1,2-Dichloroethane	7.21	62	236284	91.92	ug/kg#	93
23) Benzene	7.15	78	324403	109.46	ug/kg#	74
25) Trichloroethene	7.78	130	102377	103.04	ug/kg	94
26) 1,2-Dichloropropane	8.01	63	78633	111.00	ug/kg#	36
27) Dibromomethane	8.08	93	56932	100.34	ug/kg	88
28) Bromodichloromethane	8.23	83	196863	103.46	ug/kg#	96
29) Cis-1,3-dichloropropene	8.57	75	168689	111.27	ug/kg#	86
31) Toluene	8.82	92	236477	110.59	ug/kg#	96
32) Trans-1,3-dichloropropene	8.99	75	190586	109.85	ug/kg#	96
33) 1,1,2-Trichloroethane	9.13	97	69439	106.98	ug/kg#	77
34) Tetrachloroethene (PCE)	9.19	166	127638	99.00	ug/kg#	94
35) 1,3-Dichloropropane	9.24	76	137444	108.82	ug/kg	97
36) Dibromochloromethane	9.39	129	113064	102.04	ug/kg	97
37) 1,2-Dibromoethane	9.48	107	81972	109.57	ug/kg	98
39) Chlorobenzene	9.79	112	254900	112.77	ug/kg	91
40) 1,1,1,2-Tetrachloroethane	9.85	131	124641	103.51	ug/kg#	85
41) Ethylbenzene	9.84	106	160258	108.91	ug/kg	86
42) P+m-Xylene	9.92	106	383785	217.11	ug/kg	78
43) O-Xylene	10.16	106	179881	106.74	ug/kg#	55
44) Styrene	10.18	104	306127	112.34	ug/kg#	71
45) Bromoform	10.30	173	70210	107.53	ug/kg	97
46) Isopropylbenzene	10.38	105	602948	113.76	ug/kg	95
47) 1,1,2,2-Tetrachloroethane	10.56	83	75652	114.08	ug/kg#	88
49) 1,2,3-Trichloropropane	10.60	110	43013	112.01	ug/kg	89
50) n-propylbenzene	10.63	91	630817	111.42	ug/kg	99
51) bromobenzene	10.59	156	121545	111.15	ug/kg	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV022.D Vial: 22
Acq On : 30 Nov 2020 4:04 pm Operator: RCC
Sample : 2021163-ICV1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:45 2021 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

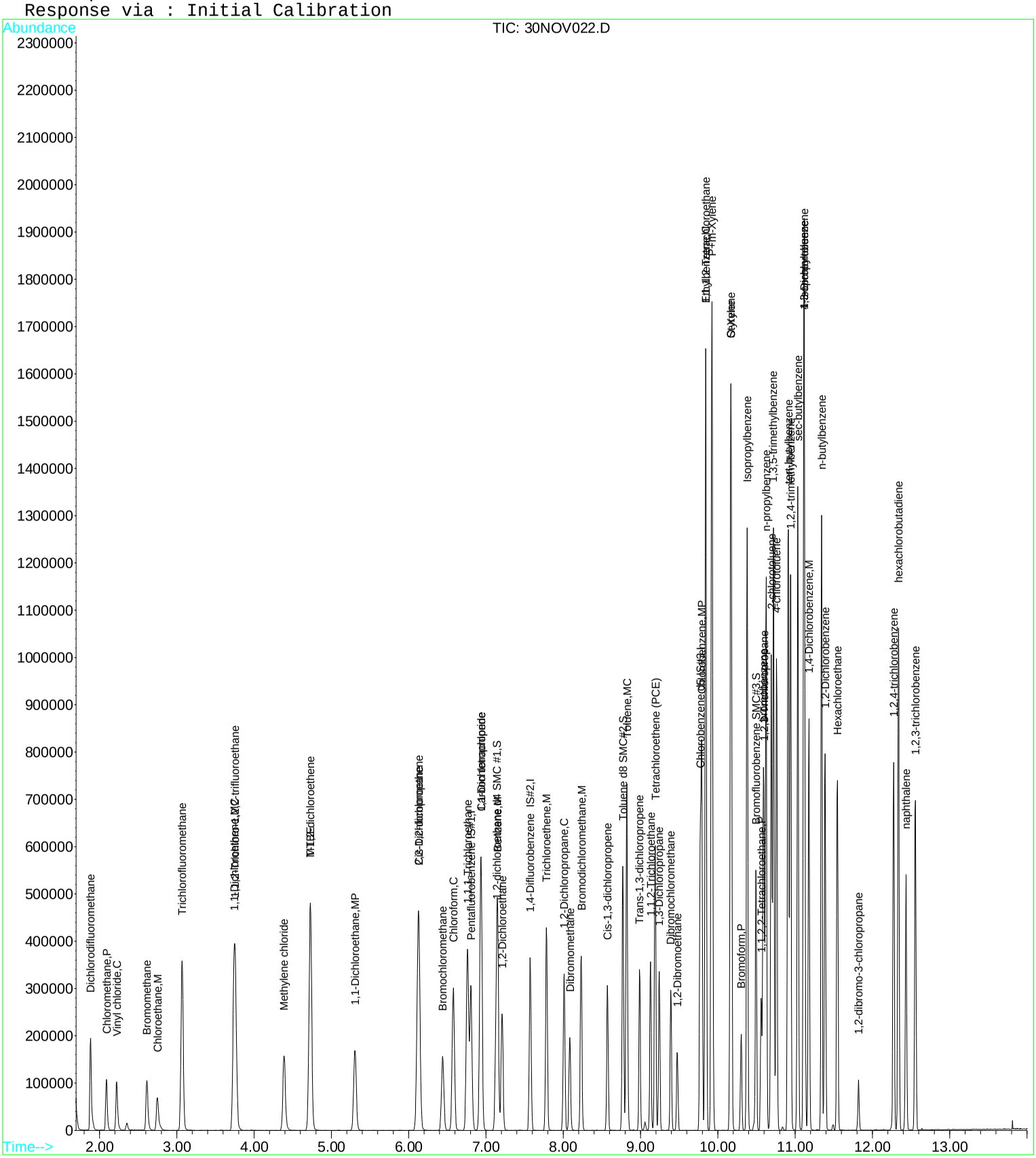
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	542871	108.87	ug/kg	88
53)	2-chlorotoluene	10.69	91	488998m	107.52	ug/kg	
54)	4-chlorotoluene	10.76	91	437964	106.29	ug/kg	91
55)	tert-butylbenzene	10.91	119	439226	106.89	ug/kg	87
56)	1,2,4-trimethylbenzene	10.94	105	528373	109.72	ug/kg#	86
57)	sec-butylbenzene	11.04	105	612349	114.41	ug/kg	100
58)	4-isopropyltoluene	11.11	119	556068	114.67	ug/kg#	91
59)	1,3-Dichlorobenzene	11.12	146	234366	107.37	ug/kg#	78
60)	1,4-Dichlorobenzene	11.18	146	231470	108.56	ug/kg#	84
61)	n-butylbenzene	11.34	91	482224	113.47	ug/kg	96
62)	1,2-Dichlorobenzene	11.39	146	213187	109.57	ug/kg#	80
63)	Hexachloroethane	11.55	117	92072	99.39	ug/kg#	88
64)	1,2-dibromo-3-chloropropan	11.82	75	28635	110.16	ug/kg	88
65)	1,2,4-trichlorobenzene	12.28	180	170584	108.92	ug/kg	98
66)	hexachlorobutadiene	12.34	225	185299	105.85	ug/kg	98
67)	naphthalene	12.43	128	286356	117.43	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	158929	112.36	ug/kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV022.D Vial: 22
Acq On : 30 Nov 2020 4:04 pm Operator: RCC
Sample : 2021163-ICV1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:45 2021 Quant Results File: 8260REG.RES

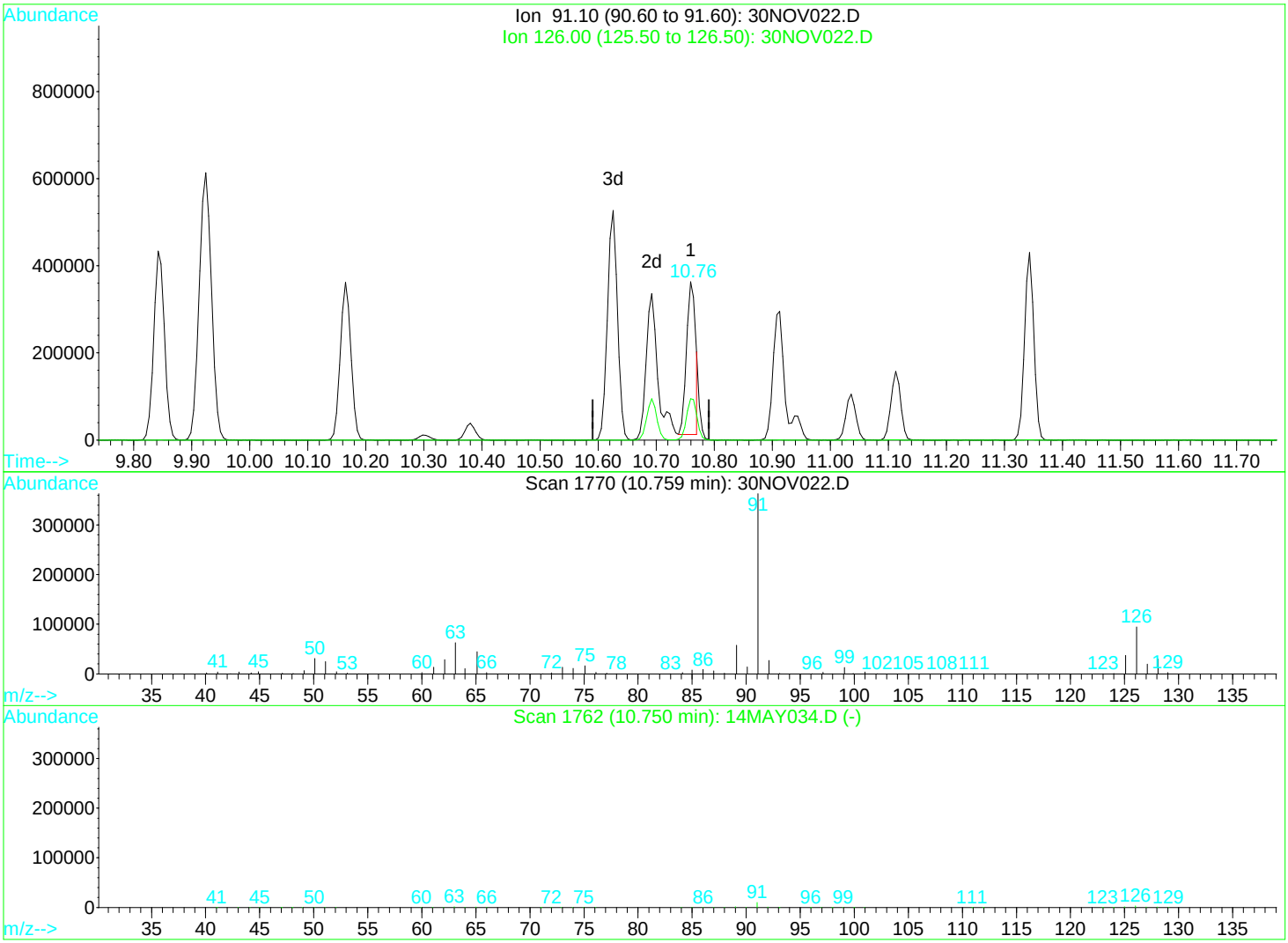
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV022.D Vial: 22
Acq On : 30 Nov 2020 4:04 pm Operator: RCC
Sample : 2021163-ICV1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:45 2021 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 30NOV022.D

(53) 2-chlorotoluene

10.76min 84.09ug/kg

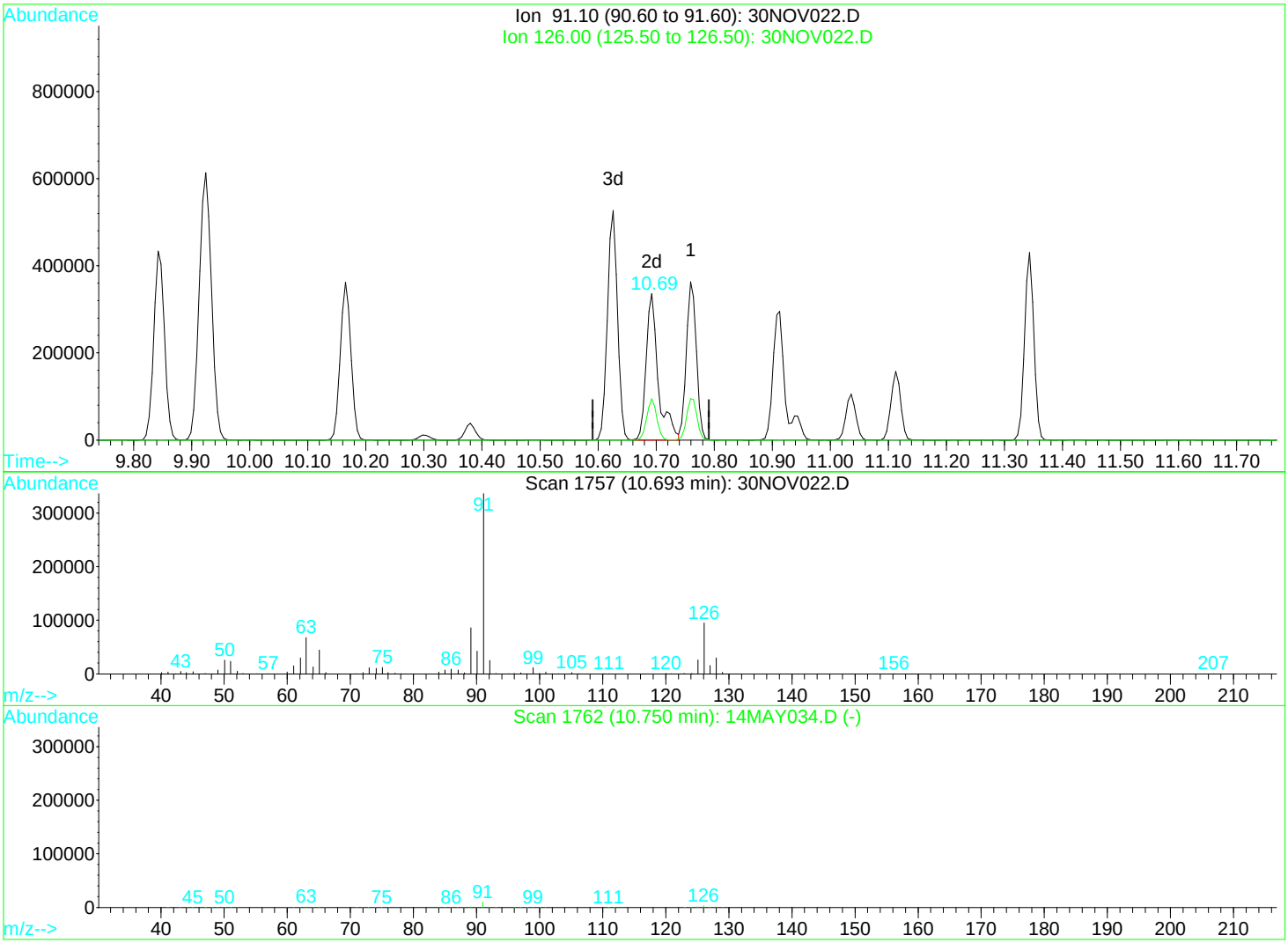
response 382414

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	28.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV022.D Vial: 22
Acq On : 30 Nov 2020 4:04 pm Operator: RCC
Sample : 2021163-ICV1 Inst : MS-V17
Misc : REG; 5mL; Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:45 2021 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 30NOV022.D

(53) 2-chlorotoluene

10.69min 107.52ug/kg m

response 488998

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.03#
0.00	0.00	0.00
0.00	0.00	0.00

Analyst: RCC
Date: 2021-03-31 14:45
Reason: (B) - Baseline Adjustment - moving peak start and/or end
(X) - Reviewed for acceptability

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV046.D Vial: 46
Acq On : 12 Nov 2020 10:12 pm Operator: RCC
Sample : 2020136-ICV3 Inst : MS-V17
Misc : TPPH; 5mL; 0K12042 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:56 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

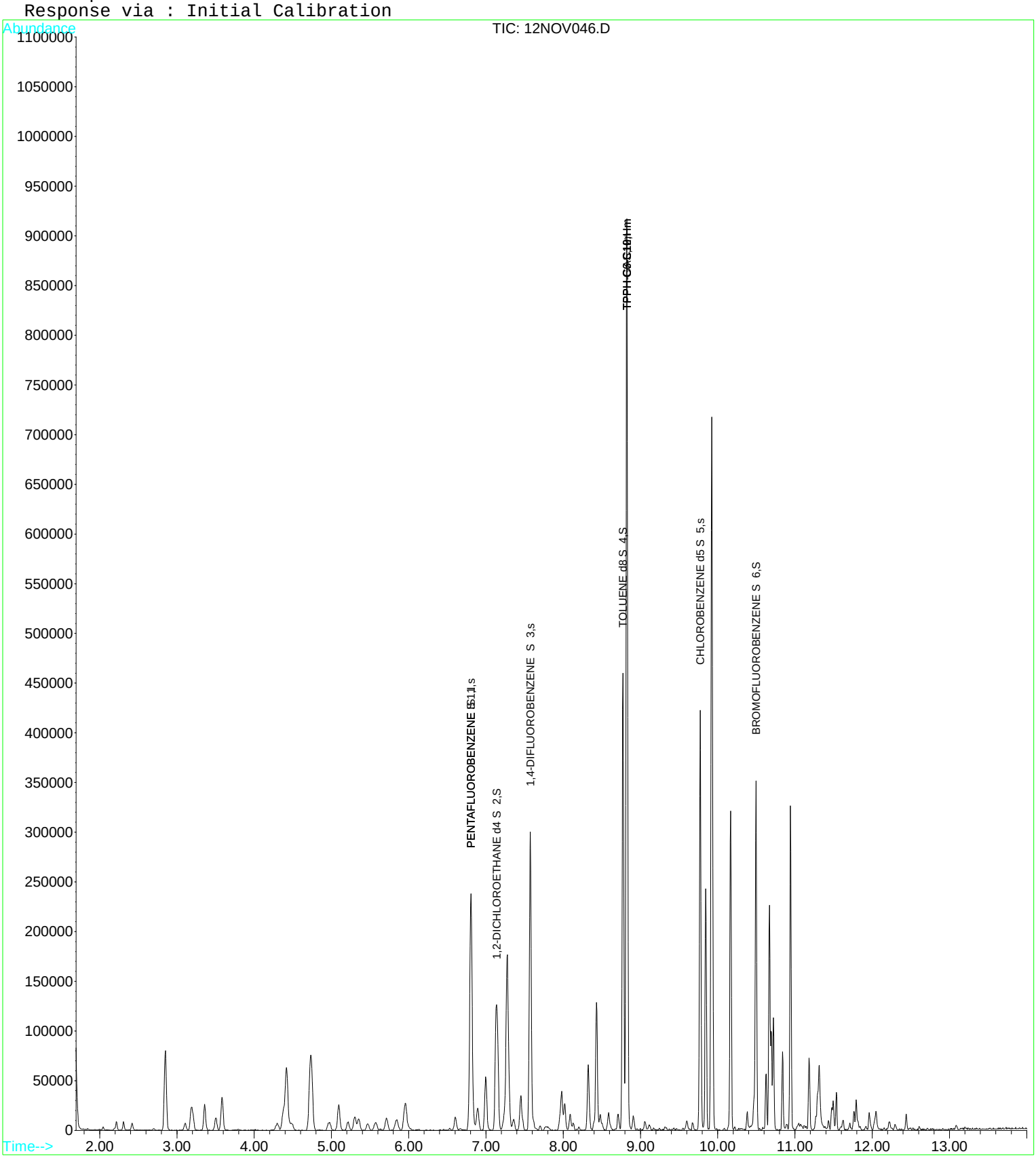
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	150896	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	519238m	51.27	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.14	TIC	334582m	71.82	ug/kg	0.11
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	530601m	47.34	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	676514m	48.89	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	561424m	48.68	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	482469m	50.31	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	8.82	TIC	7543504m	1022.19	ug/kg	
9) TPPH C6-C12	8.82	TIC	6551969m	1037.54	ug/kg	
10) TPPH C6-C10	8.82	TIC	5395947m	1139.84	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV046.D Vial: 46
Acq On : 12 Nov 2020 10:12 pm Operator: RCC
Sample : 2020136-ICV3 Inst : MS-V17
Misc : TPPH; 5mL; 0K12042 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:56 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration



Raw Data - ICB

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV024.D Vial: 24
Acq On : 30 Nov 2020 4:46 pm Operator: RCC
Sample : 2021163-ICB1 Inst : MS-V17
Misc : 1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:46 2021 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	182114	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	220676	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	63642	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	145704	43.92	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.84%			
30) Toluene d8 SMC#2	8.77	98	268288	49.02	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.04%			
48) Bromofluorobenzene SMC#3	10.50	95	129003	46.35	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.70%			

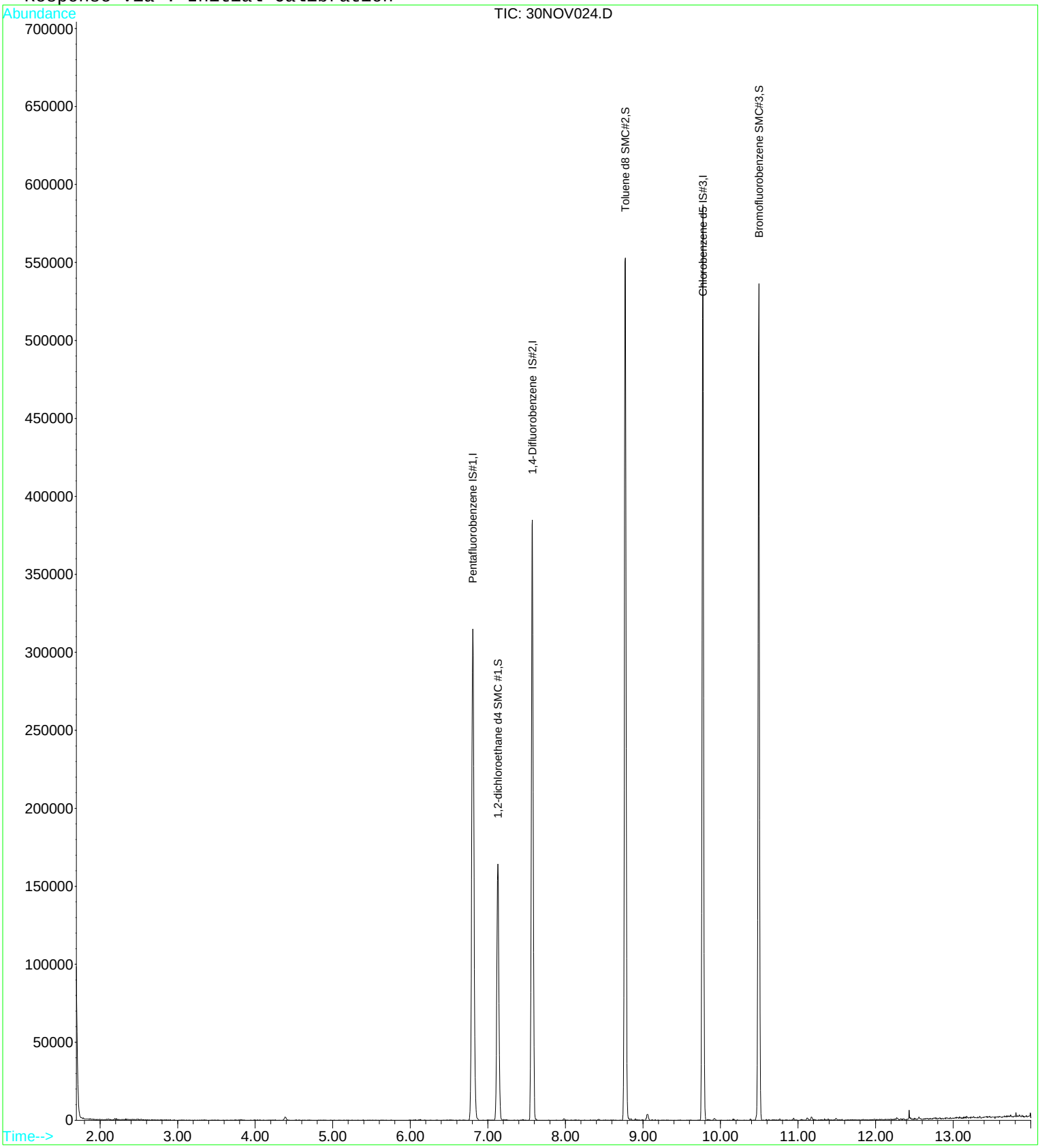
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV024.D Vial: 24
Acq On : 30 Nov 2020 4:46 pm Operator: RCC
Sample : 2021163-ICB1 Inst : MS-V17
Misc : 1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:46 2021 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV024.D Vial: 24
Acq On : 30 Nov 2020 4:46 pm Operator: RCC
Sample : IB Inst : MS-V17
Misc : 2021163-ICB1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:46 2021 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	182114	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	220676	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	63642	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	145704	43.92	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.84%			
30) Toluene d8 SMC#2	8.77	98	268288	49.02	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.04%			
48) Bromofluorobenzene SMC#3	10.50	95	129003	46.35	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.70%			

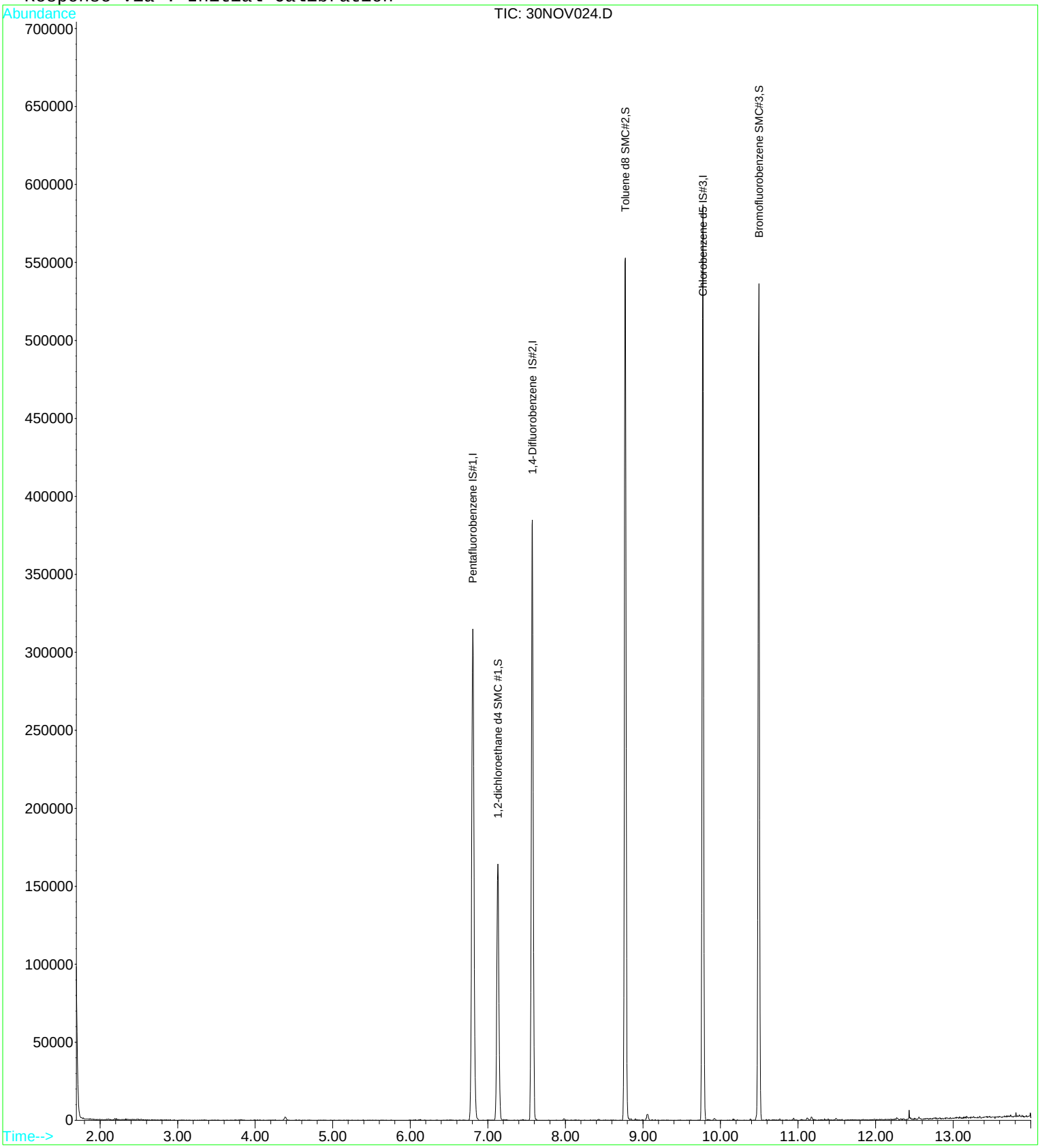
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV024.D Vial: 24
Acq On : 30 Nov 2020 4:46 pm Operator: RCC
Sample : IB Inst : MS-V17
Misc : 2021163-ICB1 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 31 14:46 2021 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV048.D Vial: 48
Acq On : 12 Nov 2020 10:54 pm Operator: RCC
Sample : 2020136-ICB3 Inst : MS-V17
Misc : TPPH; 5mL; 0K12021 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:57 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

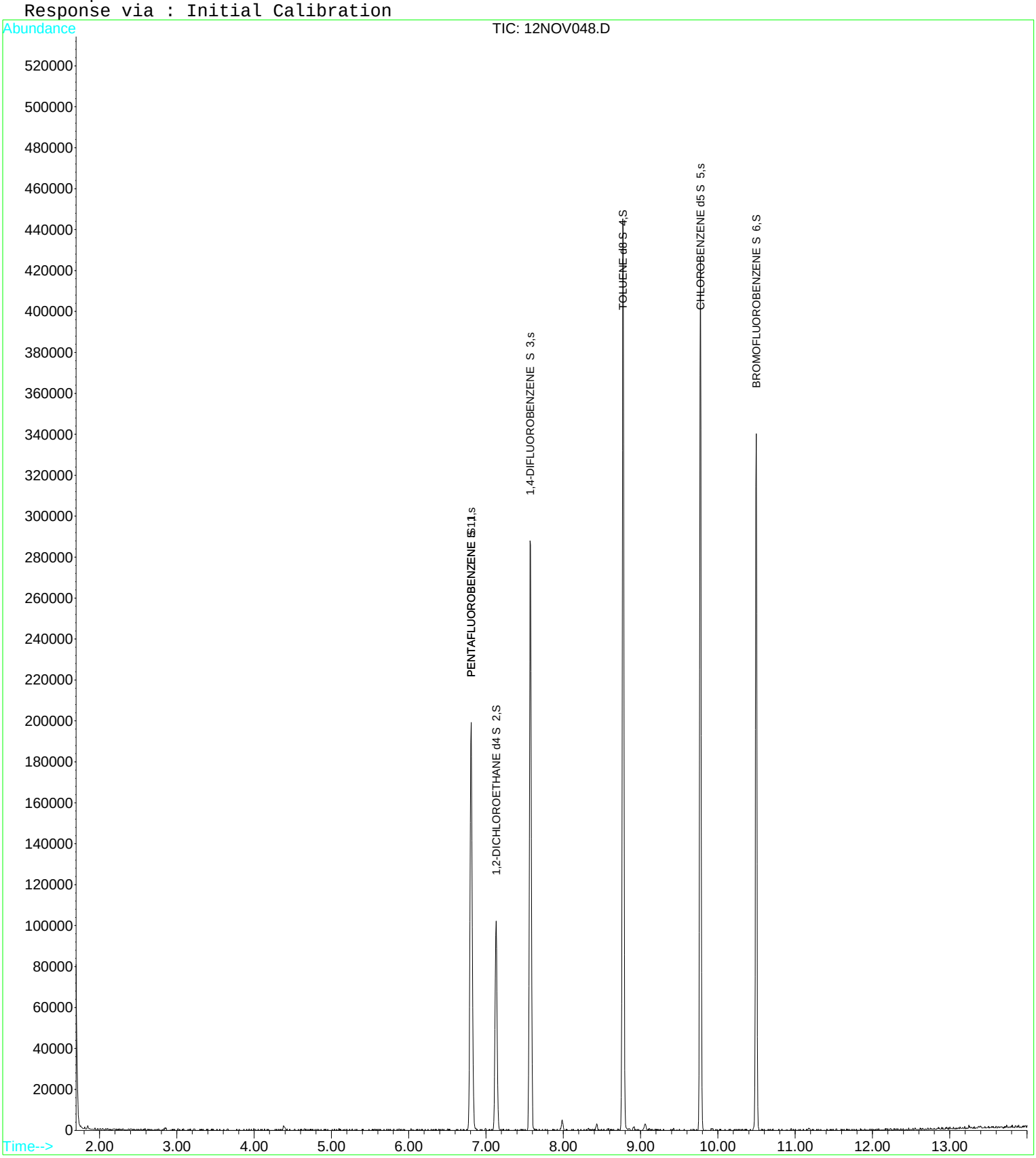
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	148235	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	399177m	40.12	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	187070m	40.88	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	473662m	43.02	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	656491m	48.29	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	549918m	48.54	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	429277m	45.57	ug/kg	0.08
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV048.D Vial: 48
Acq On : 12 Nov 2020 10:54 pm Operator: RCC
Sample : 2020136-ICB3 Inst : MS-V17
Misc : TPPH; 5mL; 0K12021 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 6:57 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration



Raw Data - CCV

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC003.D Vial: 3
Acq On : 1 Dec 2020 9:06 am Operator: RCC
Sample : 2021261-CCV1 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	193547	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	223485	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	68266	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	155890	44.22	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.44%			
30) Toluene d8 SMC#2	8.77	98	279402	50.41	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.82%			
48) Bromofluorobenzene SMC#3	10.50	95	140001	46.90	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	285746	126.77	ug/kg	99
3) Chloromethane	2.09	50	142480	138.22	ug/kg#	95
4) Vinyl chloride	2.22	62	146330	144.13	ug/kg#	99
5) Bromomethane	2.61	94	88158	123.15	ug/kg#	82
6) Chloroethane	2.75	64	75717	119.21	ug/kg#	82
7) Trichlorofluoromethane	3.07	101	469501	118.33	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	169206	129.64	ug/kg	94
9) 1,1-Dichloroethene	3.74	61	280210	124.59	ug/kg#	77
10) Methylene chloride	4.39	84	108123	130.36	ug/kg#	64
11) MTBE	4.72	73	422437	126.62	ug/kg#	83
12) T-1,2-dichloroethene	4.73	96	116996	132.90	ug/kg#	68
13) 1,1-Dichloroethane	5.31	63	266362	128.08	ug/kg	99
14) 2,2-Dichloropropane	6.13	77	382671	123.65	ug/kg#	45
15) Cis-1,2-dichloroethene	6.13	96	126744	134.67	ug/kg#	57
16) Bromochloromethane	6.44	128	57125	137.83	ug/kg#	80
17) Chloroform	6.58	83	340103	124.88	ug/kg	100
18) 1,1,1-Trichloroethane	6.76	97	412356	121.97	ug/kg#	97
19) 1,1-Dichloropropene	6.94	75	235590	128.45	ug/kg	97
20) Carbon tetrachloride	6.93	119	335740	120.83	ug/kg	97
22) 1,2-Dichloroethane	7.21	62	329129	116.29	ug/kg#	94
23) Benzene	7.15	78	436702	133.84	ug/kg#	74
25) Trichloroethene	7.79	130	140421	131.68	ug/kg	96
26) 1,2-Dichloropropane	8.01	63	99874	131.36	ug/kg#	31
27) Dibromomethane	8.08	93	77412	127.12	ug/kg	91
28) Bromodichloromethane	8.23	83	255725	125.21	ug/kg#	95
29) Cis-1,3-dichloropropene	8.57	75	216594	133.11	ug/kg#	84
31) Toluene	8.82	92	299227	130.38	ug/kg#	92
32) Trans-1,3-dichloropropene	8.99	75	242663	130.32	ug/kg#	96
33) 1,1,2-Trichloroethane	9.13	97	91786	131.75	ug/kg#	77
34) Tetrachloroethene (PCE)	9.19	166	180716	130.60	ug/kg#	93
35) 1,3-Dichloropropane	9.24	76	171021	126.16	ug/kg	98
36) Dibromochloromethane	9.39	129	147333	123.28	ug/kg	96
37) 1,2-Dibromoethane	9.48	107	106353	132.45	ug/kg	100
39) Chlorobenzene	9.79	112	335473	133.08	ug/kg	91
40) 1,1,1,2-Tetrachloroethane	9.85	131	172300	128.30	ug/kg#	84
41) Ethylbenzene	9.85	106	210825	128.48	ug/kg	89
42) P+m-Xylene	9.92	106	511576	259.50	ug/kg	78
43) O-Xylene	10.17	106	246589	131.20	ug/kg#	57
44) Styrene	10.17	104	404476	133.10	ug/kg#	68
45) Bromoform	10.30	173	86305	118.12	ug/kg	98
46) Isopropylbenzene	10.38	105	788968	133.48	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	95446	129.06	ug/kg#	87
49) 1,2,3-Trichloropropane	10.60	110	53300	124.46	ug/kg	89
50) n-propylbenzene	10.62	91	836675	132.51	ug/kg	99
51) bromobenzene	10.59	156	158938	130.33	ug/kg	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC003.D Vial: 3
Acq On : 1 Dec 2020 9:06 am Operator: RCC
Sample : 2021261-CCV1 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

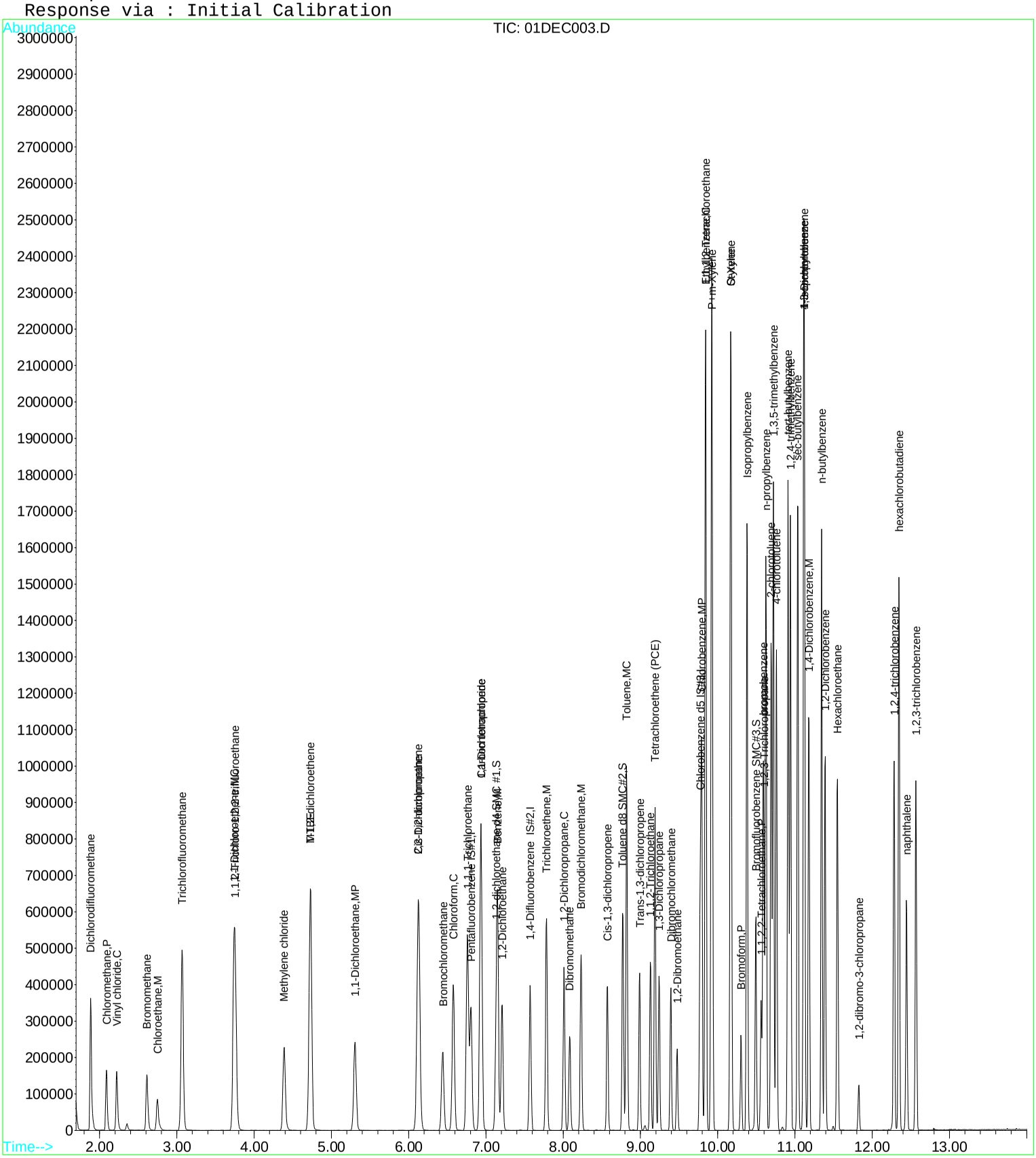
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	728029	130.92	ug/kg	87
53)	2-chlorotoluene	10.69	91	655348m	129.21	ug/kg	
54)	4-chlorotoluene	10.76	91	589840	128.36	ug/kg	90
55)	tert-butylbenzene	10.91	119	583293	127.29	ug/kg	88
56)	1,2,4-trimethylbenzene	10.94	105	709370	132.08	ug/kg	88
57)	sec-butylbenzene	11.04	105	798567	133.79	ug/kg	100
58)	4-isopropyltoluene	11.12	119	713873	132.00	ug/kg#	91
59)	1,3-Dichlorobenzene	11.13	146	310176	127.42	ug/kg#	76
60)	1,4-Dichlorobenzene	11.18	146	307703	129.41	ug/kg#	82
61)	n-butylbenzene	11.35	91	622176	131.28	ug/kg	96
62)	1,2-Dichlorobenzene	11.39	146	280826	129.42	ug/kg#	79
63)	Hexachloroethane	11.55	117	120236	115.92	ug/kg#	88
64)	1,2-dibromo-3-chloropropan	11.82	75	34853	120.23	ug/kg	86
65)	1,2,4-trichlorobenzene	12.28	180	221829	127.00	ug/kg	100
66)	hexachlorobutadiene	12.35	225	248988	127.54	ug/kg	96
67)	naphthalene	12.44	128	352477	129.62	ug/kg	100
68)	1,2,3-trichlorobenzene	12.57	180	206886	131.16	ug/kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC003.D Vial: 3
Acq On : 1 Dec 2020 9:06 am Operator: RCC
Sample : 2021261-CCV1 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: 8260REG.RES

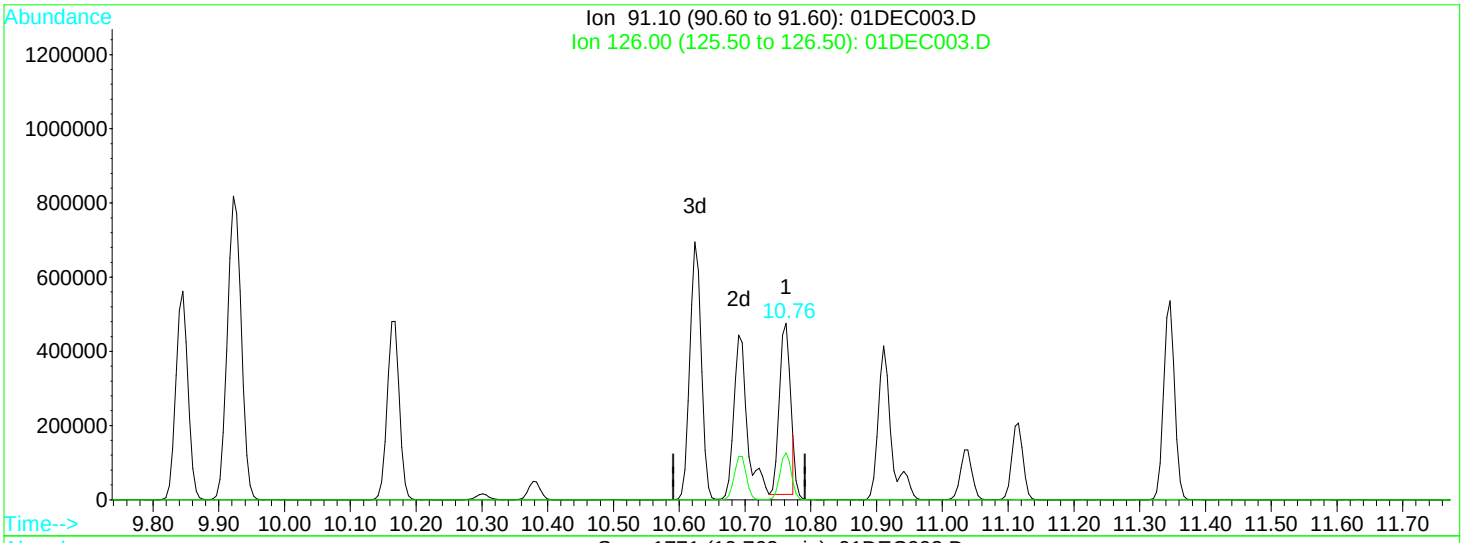
Method : C:\HPCHEM\1\METHODS\MSV-17\202102\16-1749\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Wed Feb 17 07:47:41 2021
Response via : Initial Calibration

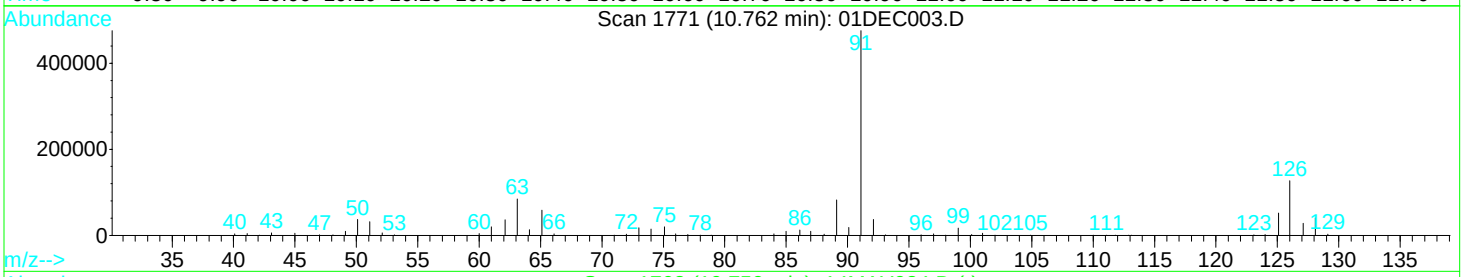


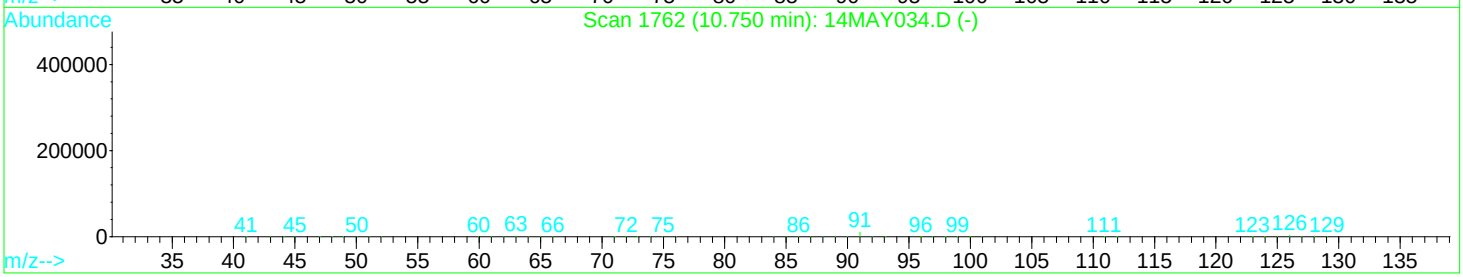
Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC003.D Vial: 3
Acq On : 1 Dec 2020 9:06 am Operator: RCC
Sample : 2021261-CCV1 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:21 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration







TIC: 01DEC003.D

(53) 2-chlorotoluene

10.76min 105.98ug/kg

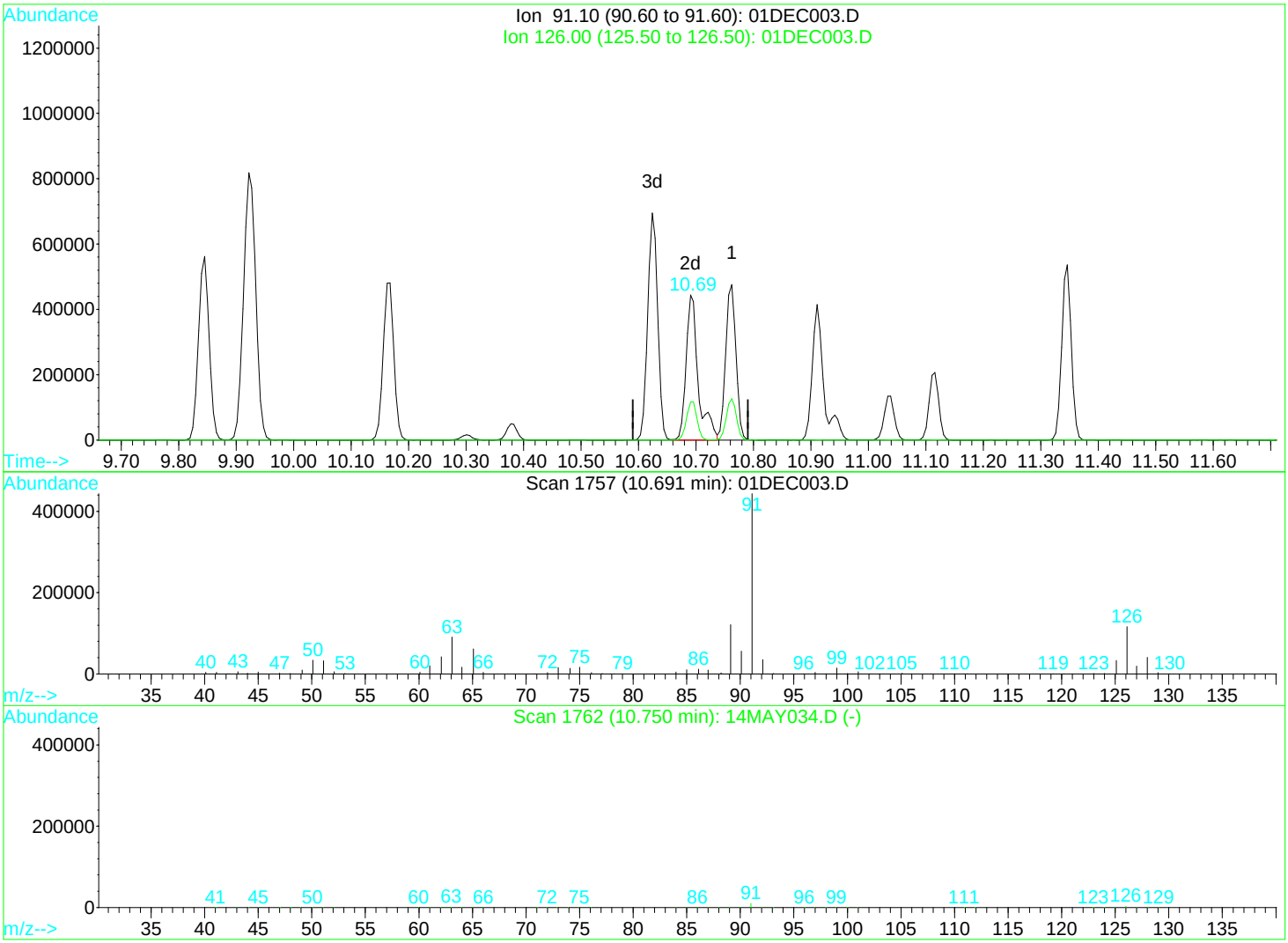
response 537512

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC003.D Vial: 3
Acq On : 1 Dec 2020 9:06 am Operator: RCC
Sample : 2021261-CCV1 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC003.D

(53) 2-chlorotoluene

10.69min 129.21ug/kg m

response 655348

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.36#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC007.D Vial: 7
Acq On : 1 Dec 2020 10:41 am Operator: RCC
Sample : 2021261-CCV3 Inst : MS-V17
Misc : TPPH; 0K12020; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:37 2021 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

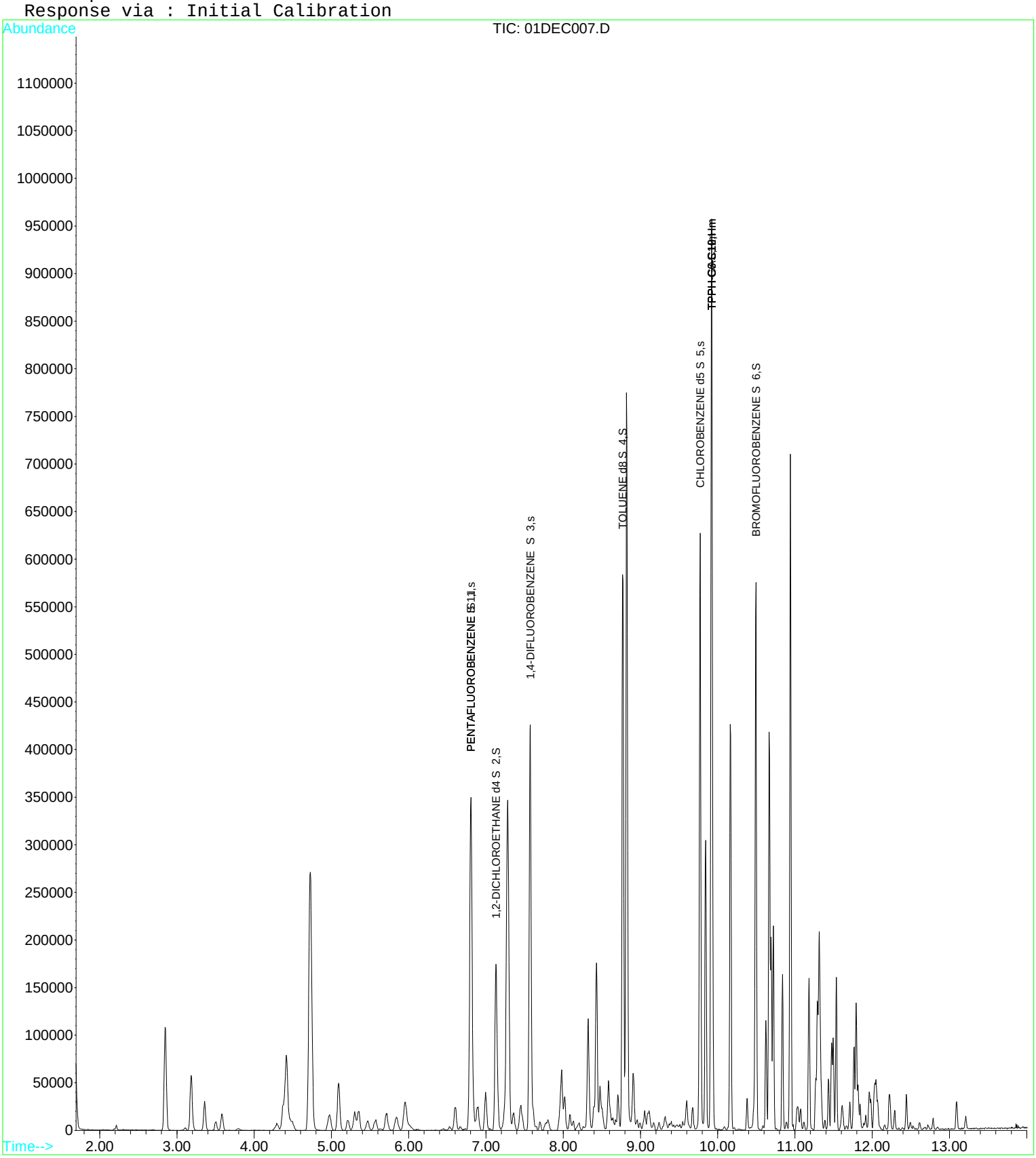
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	184549	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	750905m	60.62	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	368000m	64.59	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	773149m	56.40	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	893818m	52.81	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	831230m	58.93	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	748904m	63.85	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	12430512m	1377.26	ug/kg	
9) TPPH C6-C12	9.92	TIC	10730510m	1389.37	ug/kg	
10) TPPH C6-C10	9.92	TIC	7703953m	1330.63	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC007.D Vial: 7
Acq On : 1 Dec 2020 10:41 am Operator: RCC
Sample : 2021261-CCV3 Inst : MS-V17
Misc : TPPH; 0K12020; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:37 2021 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC037.D Vial: 37
Acq On : 1 Dec 2020 9:22 pm Operator: RCC
Sample : 2021261-CCV4 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:30 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	187527	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	221094	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	65446	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	148086	43.35	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 86.70%			
30) Toluene d8 SMC#2	8.77	98	271021	49.43	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.86%			
48) Bromofluorobenzene SMC#3	10.49	95	131638	45.99	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	263397	120.61	ug/kg	98
3) Chloromethane	2.09	50	135410	135.58	ug/kg#	94
4) Vinyl chloride	2.22	62	143893	146.28	ug/kg#	99
5) Bromomethane	2.61	94	80407	116.54	ug/kg#	81
6) Chloroethane	2.75	64	73929	120.00	ug/kg#	83
7) Trichlorofluoromethane	3.07	101	449578	116.94	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	161293	127.54	ug/kg	92
9) 1,1-Dichloroethene	3.74	61	267101	122.58	ug/kg#	79
10) Methylene chloride	4.39	84	98370	122.41	ug/kg#	64
11) MTBE	4.72	73	378930	117.23	ug/kg#	83
12) T-1,2-dichloroethene	4.73	96	114487	134.22	ug/kg#	71
13) 1,1-Dichloroethane	5.30	63	248111	123.14	ug/kg	99
14) 2,2-Dichloropropane	6.13	77	350117	116.76	ug/kg#	46
15) Cis-1,2-dichloroethene	6.13	96	120414	132.05	ug/kg#	60
16) Bromochloromethane	6.44	128	52620	131.04	ug/kg#	81
17) Chloroform	6.58	83	312858	118.56	ug/kg	100
18) 1,1,1-Trichloroethane	6.76	97	386904	118.11	ug/kg#	98
19) 1,1-Dichloropropene	6.94	75	223924	126.01	ug/kg	97
20) Carbon tetrachloride	6.93	119	314354	116.77	ug/kg	96
22) 1,2-Dichloroethane	7.21	62	289728	105.65	ug/kg	94
23) Benzene	7.15	78	424127	134.15	ug/kg#	77
25) Trichloroethene	7.79	130	136308	129.20	ug/kg	97
26) 1,2-Dichloropropane	8.01	63	95323	126.73	ug/kg#	38
27) Dibromomethane	8.08	93	68629	113.91	ug/kg	89
28) Bromodichloromethane	8.23	83	228755	113.22	ug/kg#	96
29) Cis-1,3-dichloropropene	8.57	75	195895	121.69	ug/kg#	86
31) Toluene	8.82	92	286367	126.13	ug/kg#	93
32) Trans-1,3-dichloropropene	8.99	75	214697	116.55	ug/kg#	96
33) 1,1,2-Trichloroethane	9.13	97	83107	120.59	ug/kg#	78
34) Tetrachloroethene (PCE)	9.19	166	174938	127.79	ug/kg#	95
35) 1,3-Dichloropropane	9.24	76	159820	119.17	ug/kg	99
36) Dibromochloromethane	9.39	129	131775	111.73	ug/kg	97
37) 1,2-Dibromoethane	9.48	107	95240	119.90	ug/kg	96
39) Chlorobenzene	9.79	112	317337	131.31	ug/kg	92
40) 1,1,1,2-Tetrachloroethane	9.85	131	157805	122.57	ug/kg#	84
41) Ethylbenzene	9.85	106	200693	127.57	ug/kg	89
42) P+m-Xylene	9.92	106	482942	255.53	ug/kg	78
43) O-Xylene	10.16	106	229930	127.61	ug/kg#	57
44) Styrene	10.18	104	380265	130.52	ug/kg#	71
45) Bromoform	10.30	173	78247	111.92	ug/kg	98
46) Isopropylbenzene	10.38	105	759024	133.95	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	86793	122.42	ug/kg#	87
49) 1,2,3-Trichloropropane	10.60	110	48293	117.62	ug/kg	89
50) n-propylbenzene	10.62	91	794810	131.31	ug/kg	99
51) bromobenzene	10.59	156	147808	126.42	ug/kg	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC037.D Vial: 37
Acq On : 1 Dec 2020 9:22 pm Operator: RCC
Sample : 2021261-CCV4 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:30 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

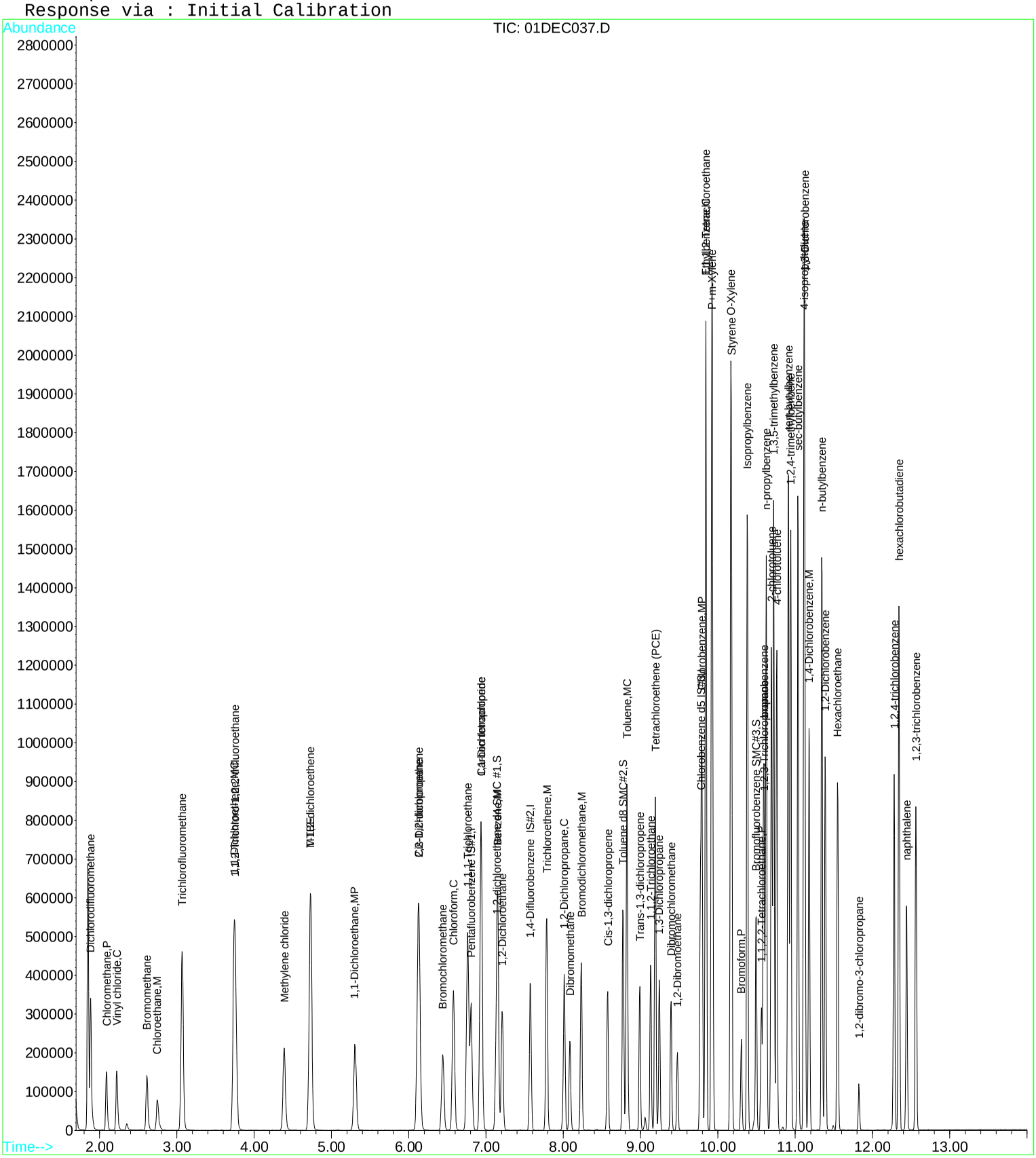
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	691819	129.77	ug/kg	87
53)	2-chlorotoluene	10.69	91	607109m	124.86	ug/kg	
54)	4-chlorotoluene	10.76	91	542585	123.16	ug/kg	91
55)	tert-butylbenzene	10.91	119	601452	136.91	ug/kg	97
56)	1,2,4-trimethylbenzene	10.94	105	662092	128.59	ug/kg	87
57)	sec-butylbenzene	11.03	105	758160	132.49	ug/kg	99
58)	4-isopropyltoluene	11.12	119	668711	128.98	ug/kg#	91
59)	1,3-Dichlorobenzene	11.13	146	288635	123.68	ug/kg#	79
60)	1,4-Dichlorobenzene	11.18	146	283569	124.40	ug/kg#	84
61)	n-butylbenzene	11.34	91	571455	125.77	ug/kg	96
62)	1,2-Dichlorobenzene	11.39	146	261236	125.58	ug/kg#	81
63)	Hexachloroethane	11.55	117	113461	114.14	ug/kg#	89
64)	1,2-dibromo-3-chloropropan	11.82	75	32470	116.84	ug/kg	84
65)	1,2,4-trichlorobenzene	12.28	180	201217	120.16	ug/kg	98
66)	hexachlorobutadiene	12.35	225	232583	124.27	ug/kg	98
67)	naphthalene	12.44	128	326869	125.38	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	188213	124.46	ug/kg	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC037.D Vial: 37
Acq On : 1 Dec 2020 9:22 pm Operator: RCC
Sample : 2021261-CCV4 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:30 2020 Quant Results File: 8260REG.RES

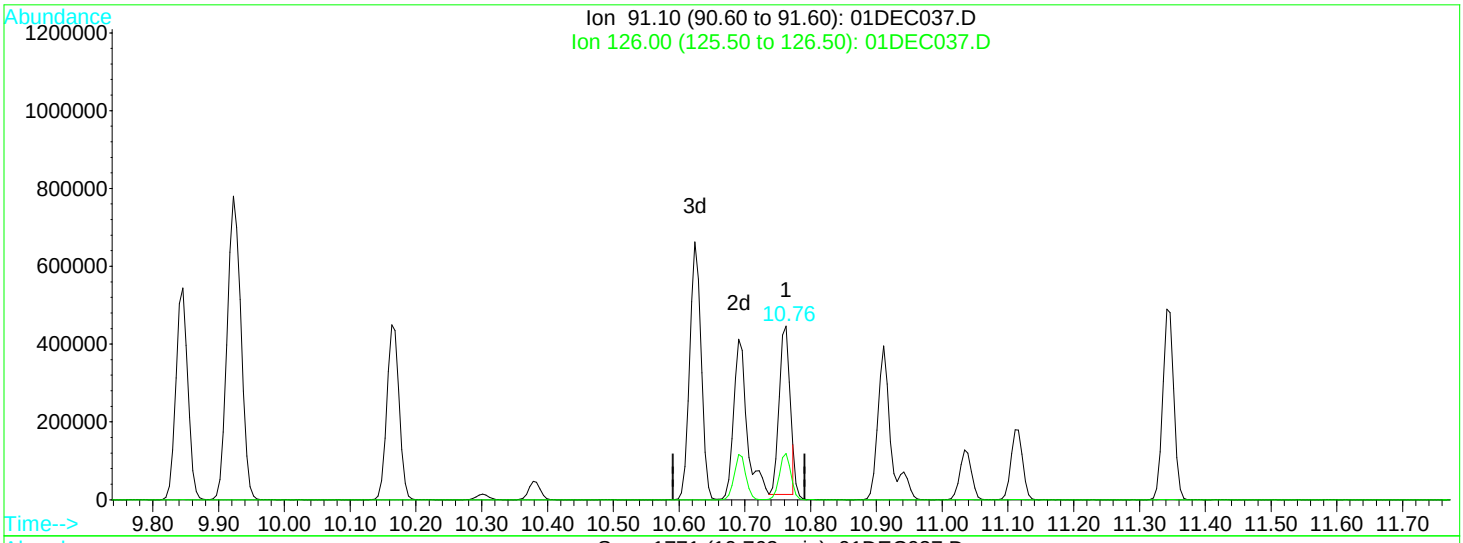
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration

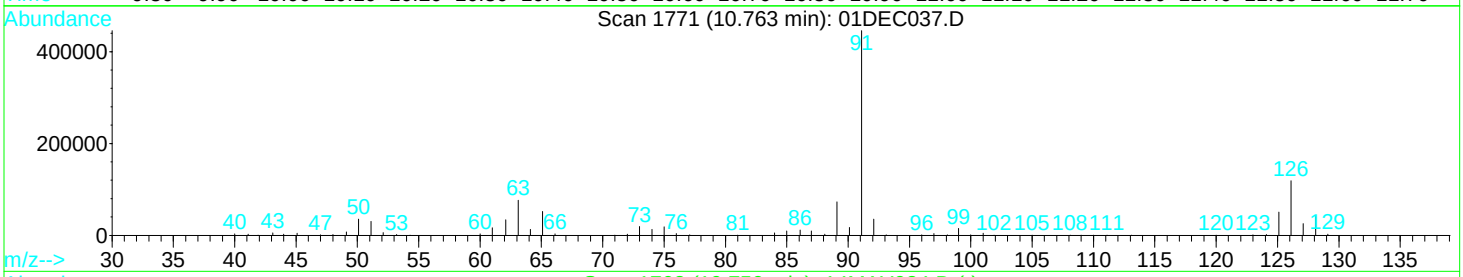


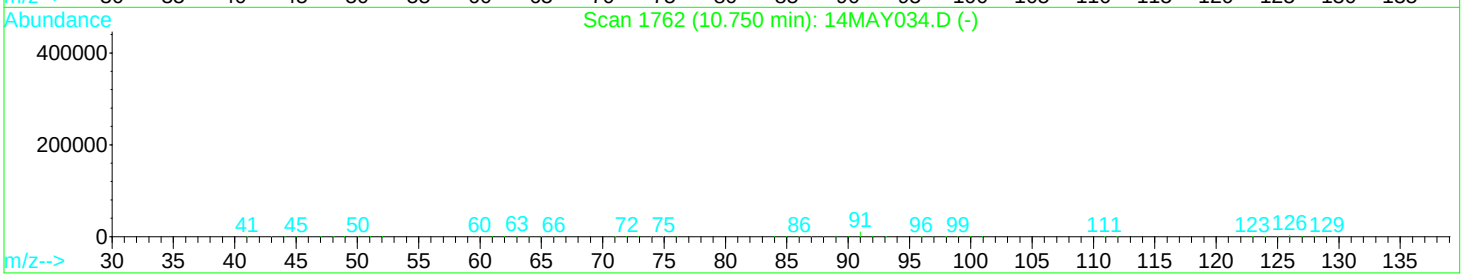
Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC037.D Vial: 37
Acq On : 1 Dec 2020 9:22 pm Operator: RCC
Sample : 2021261-CCV4 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 21:36 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration







TIC: 01DEC037.D

(53) 2-chlorotoluene

10.76min 102.38ug/kg

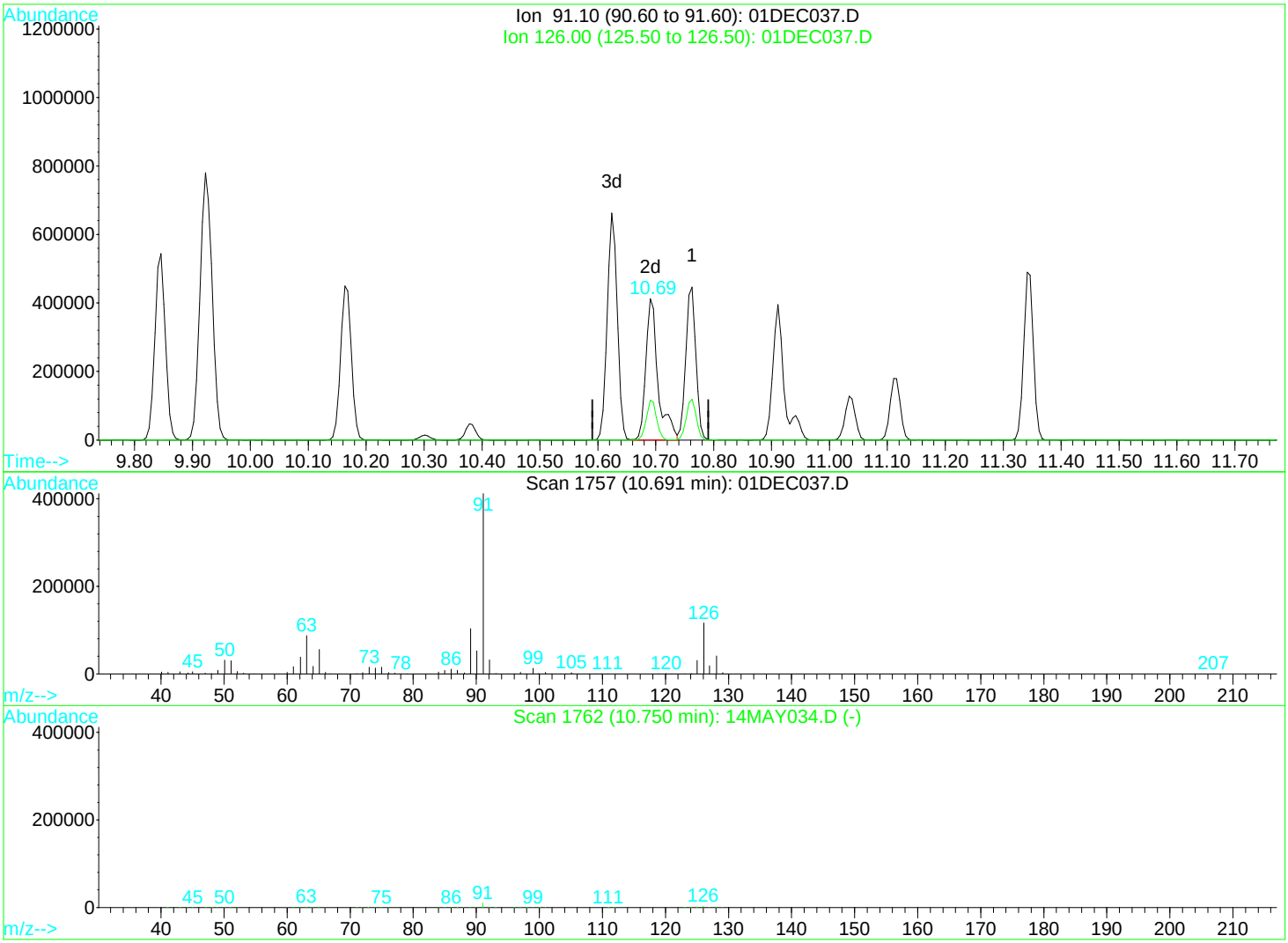
response 497801

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC037.D Vial: 37
Acq On : 1 Dec 2020 9:22 pm Operator: RCC
Sample : 2021261-CCV4 Inst : MS-V17
Misc : REG; 0K12018; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:30 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC037.D

(53) 2-chlorotoluene

10.69min 124.86ug/kg m

response 607109

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.85#
0.00	0.00	0.00
0.00	0.00	0.00

Analyst: RCC
Date: 2020-12-02 11:30
Reason: (P) - Peak Correction - misidentification correction
(X) - Reviewed for acceptability

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC039.D Vial: 39
Acq On : 1 Dec 2020 10:04 pm Operator: RCC
Sample : 2021261-CCV6 Inst : MS-V17
Misc : TPPH; 0K12020; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:44 2021 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

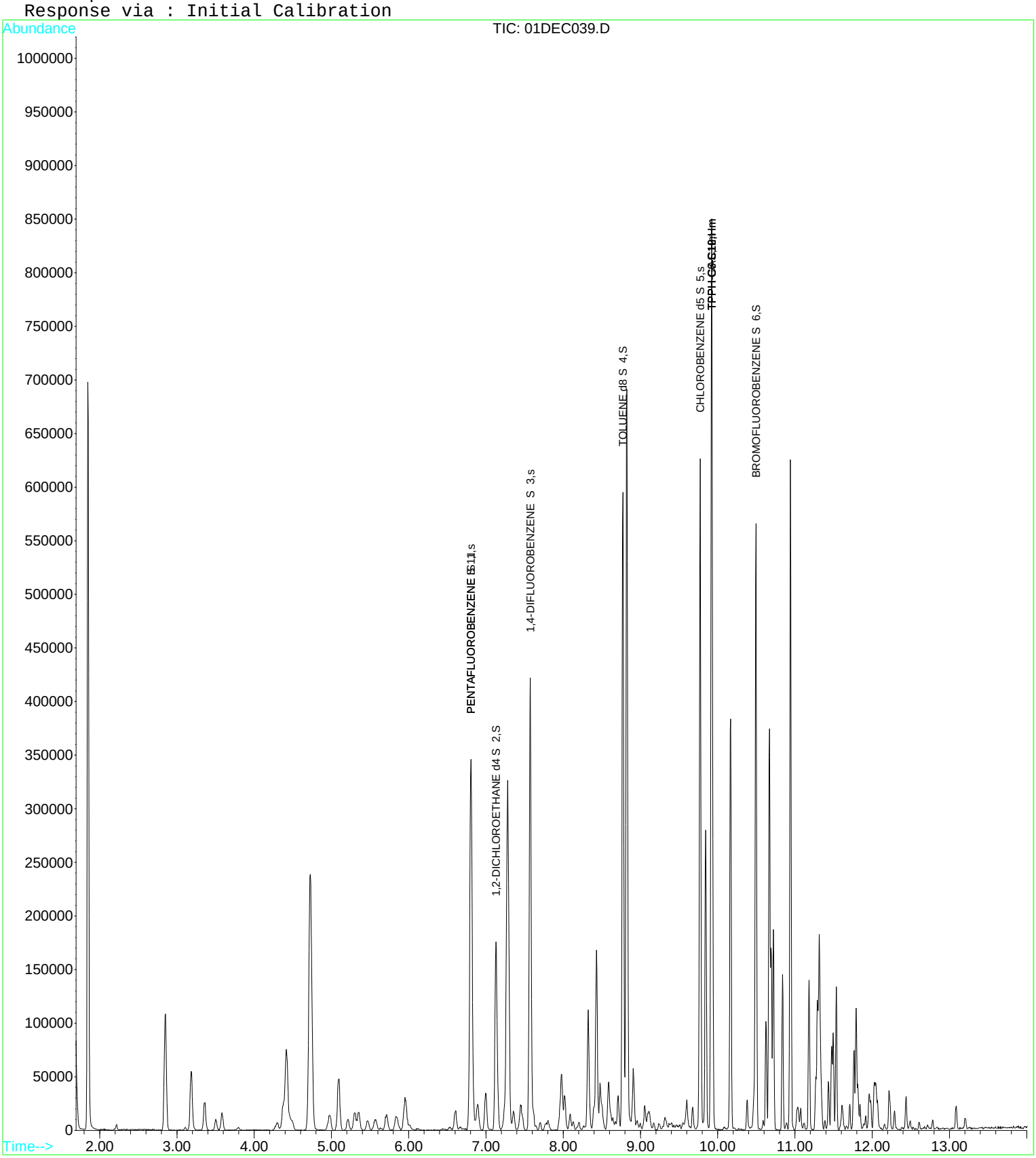
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	191991	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	748620m	58.09	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	363732m	61.37	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	744040m	52.17	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	870767m	49.46	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	811519m	55.31	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.49	TIC	739367m	60.60	ug/kg	0.08
Target Compounds						Qvalue
8) TPPH-GAS	9.92	TIC	11300572m	1203.53	ug/kg	
9) TPPH C6-C12	9.92	TIC	9683897m	1205.26	ug/kg	
10) TPPH C6-C10	9.92	TIC	7024159m	1166.19	ug/kg	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC039.D Vial: 39
Acq On : 1 Dec 2020 10:04 pm Operator: RCC
Sample : 2021261-CCV6 Inst : MS-V17
Misc : TPPH; 0K12020; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 11 12:44 2021 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1924\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Fri Nov 13 06:52:46 2020
Response via : Initial Calibration



Raw Data - CCB

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:14 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	188412	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	229326	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	68637	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	151549	44.16	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.32%			
30) Toluene d8 SMC#2	8.77	98	281165	49.44	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.88%			
48) Bromofluorobenzene SMC#3	10.50	95	135259	45.06	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.12%			

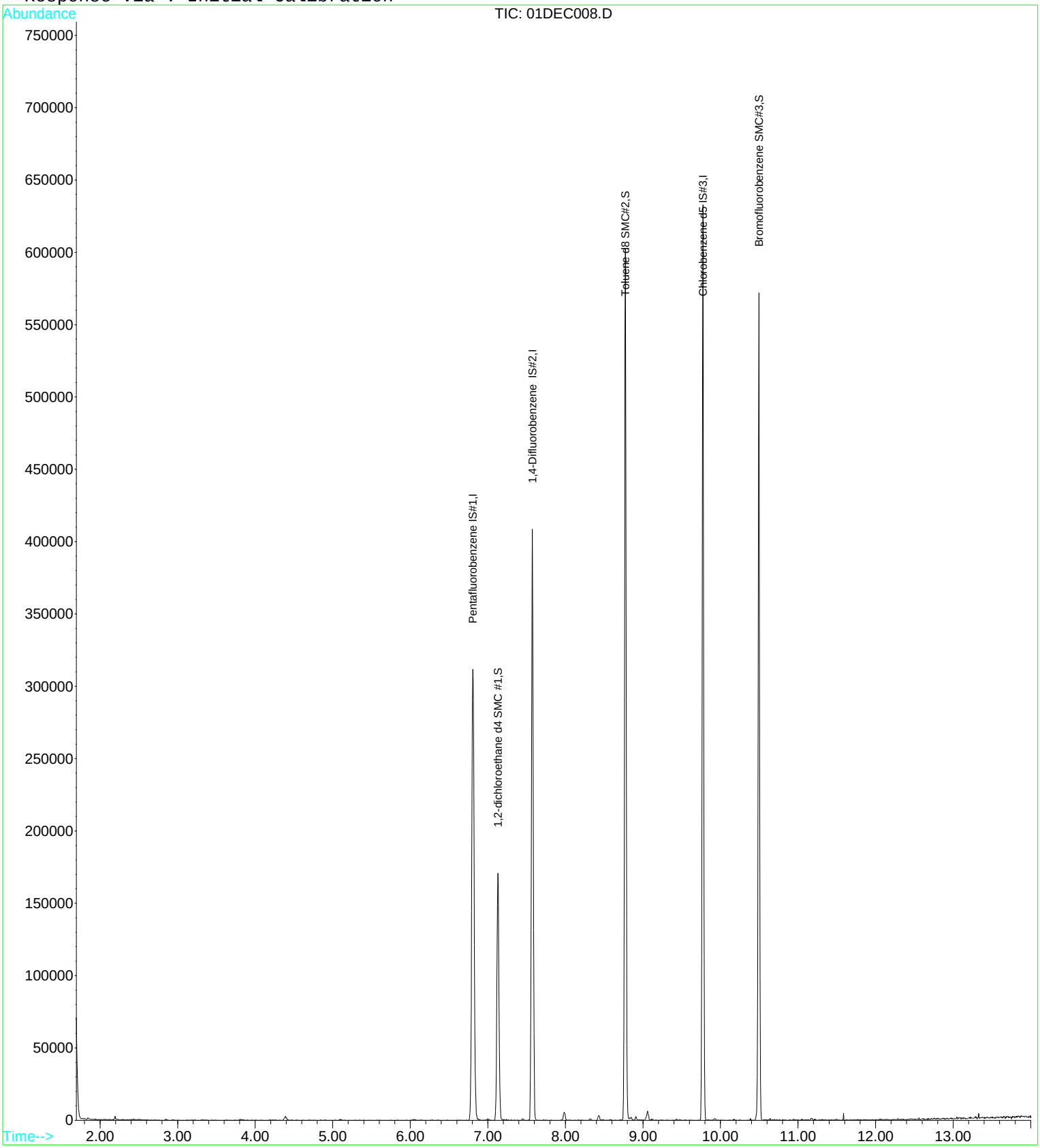
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:14 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:15 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

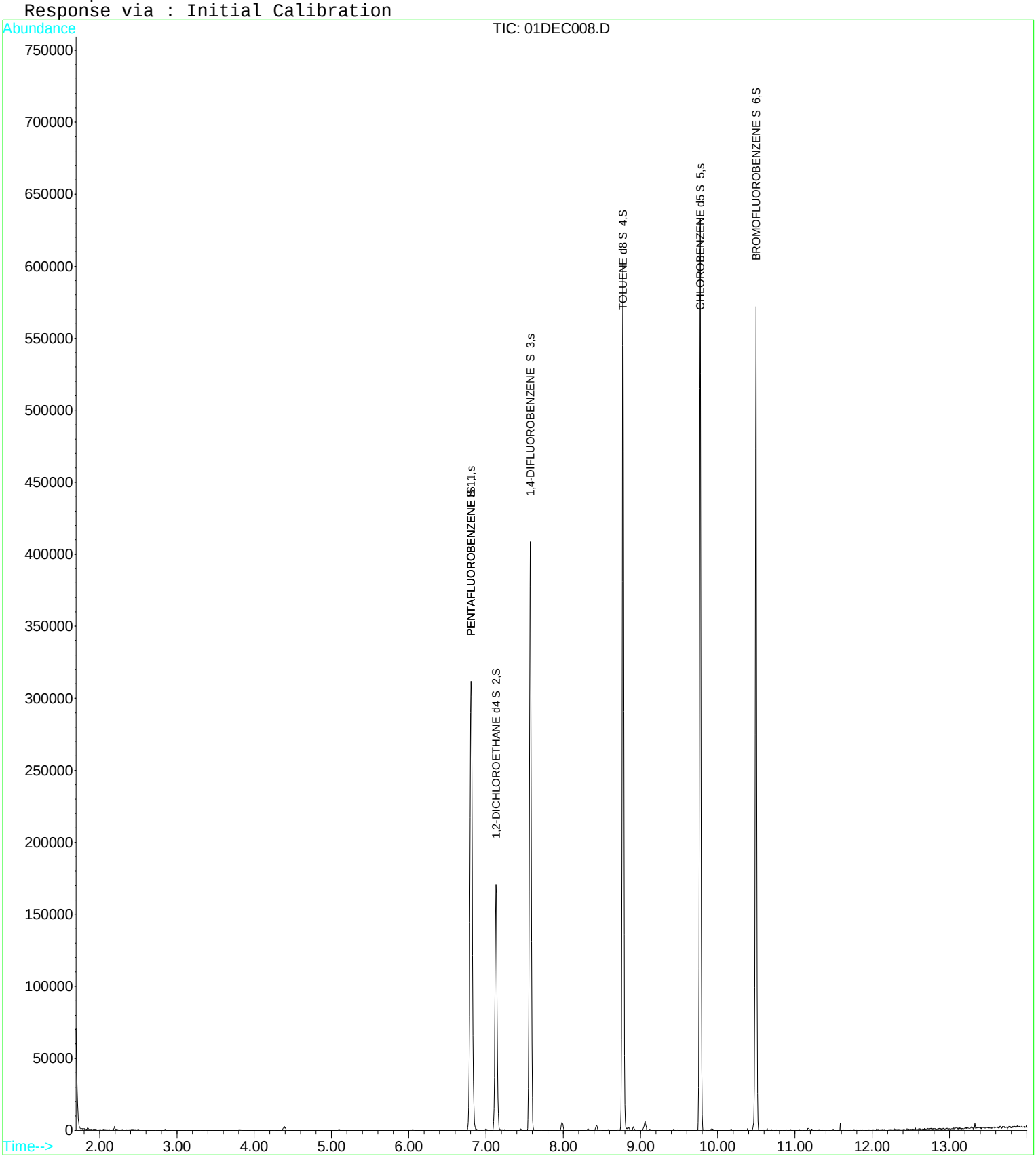
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	188412	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	648258m	45.21	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	316701m	50.55	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	663978m	42.48	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	854582m	47.44	ug/kg	0.09
6) CHLOROBENZENE d5 S 5	9.77	TIC	810046m	46.73	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	710643m	46.09	ug/kg	0.08
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:15 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202010\13-2141\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:14 2020 Quant Results File: 8260XTRA.RES

Quant Method : C:\HPCHEM\1...\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	188412	50.00	ug\kg	0.00
25) 1,4-Difluorobenzene IS#2	7.57	114	229326	50.00	ug\kg	0.00
32) Chlorobenzene d5 IS#3	9.77	119	68637	50.00	ug\kg	0.00

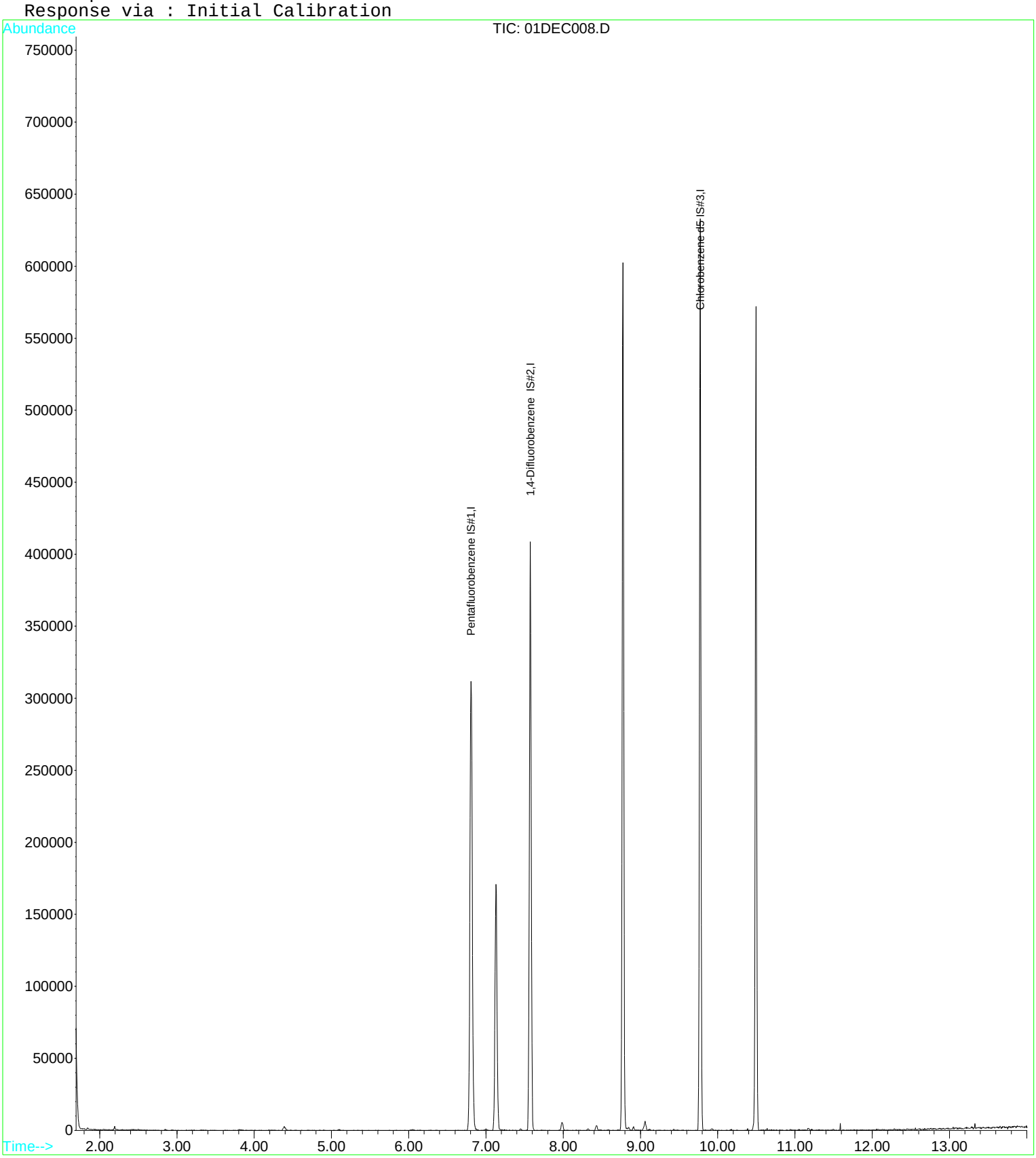
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC008.D Vial: 8
Acq On : 1 Dec 2020 11:16 am Operator: RCC
Sample : 2021261-CCB1 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 18:14 2020 Quant Results File: 8260XTRA.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1431\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:36 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	184199	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	218010	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	64730	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	144527	43.07	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 86.14%			
30) Toluene d8 SMC#2	8.77	98	263657	48.77	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.54%			
48) Bromofluorobenzene SMC#3	10.49	95	128044	45.23	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.46%			

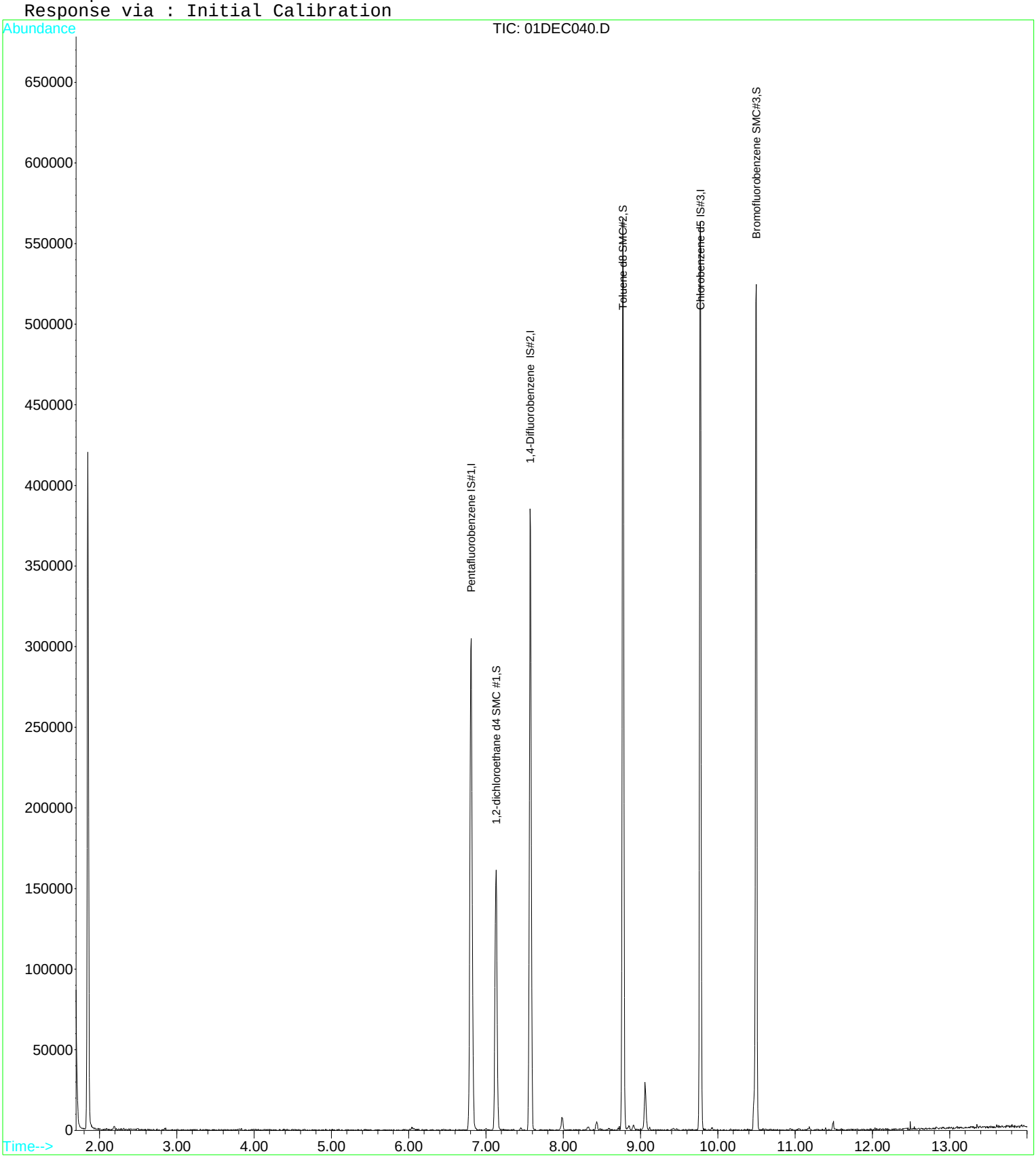
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:36 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:46 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

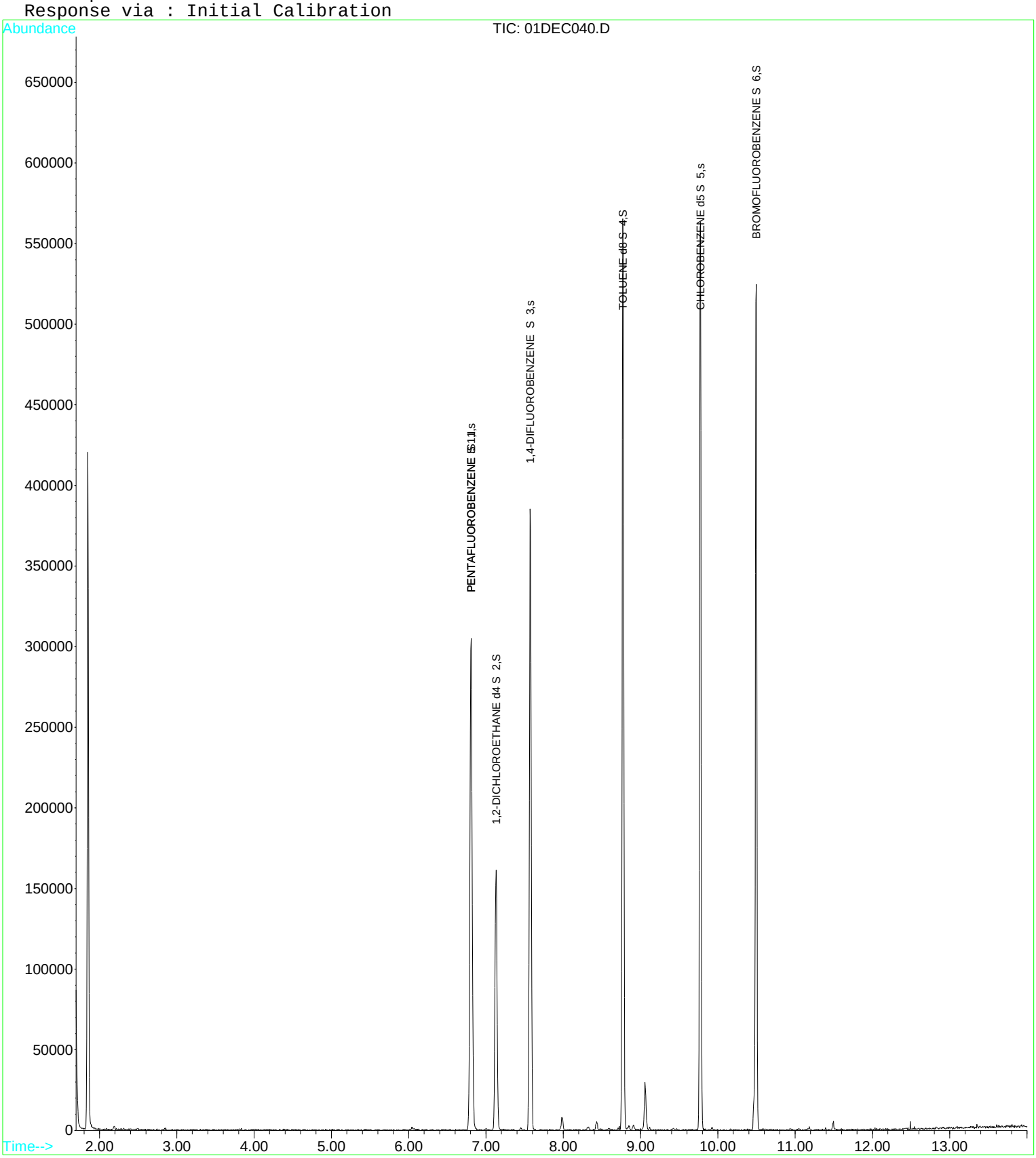
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	184199	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	619328m	44.18	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	303478m	49.55	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.57	TIC	628830m	41.15	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	807280m	45.84	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	763565m	45.05	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	697090m	46.25	ug/kg	0.08
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:46 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202010\13-2141\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:36 2020 Quant Results File: 8260XTRA.RES

Quant Method : C:\HPCHEM\1...\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	184199	50.00	ug\kg	0.00
25) 1,4-Difluorobenzene IS#2	7.58	114	218010	50.00	ug\kg	0.00
32) Chlorobenzene d5 IS#3	9.77	119	64730	50.00	ug\kg	0.00

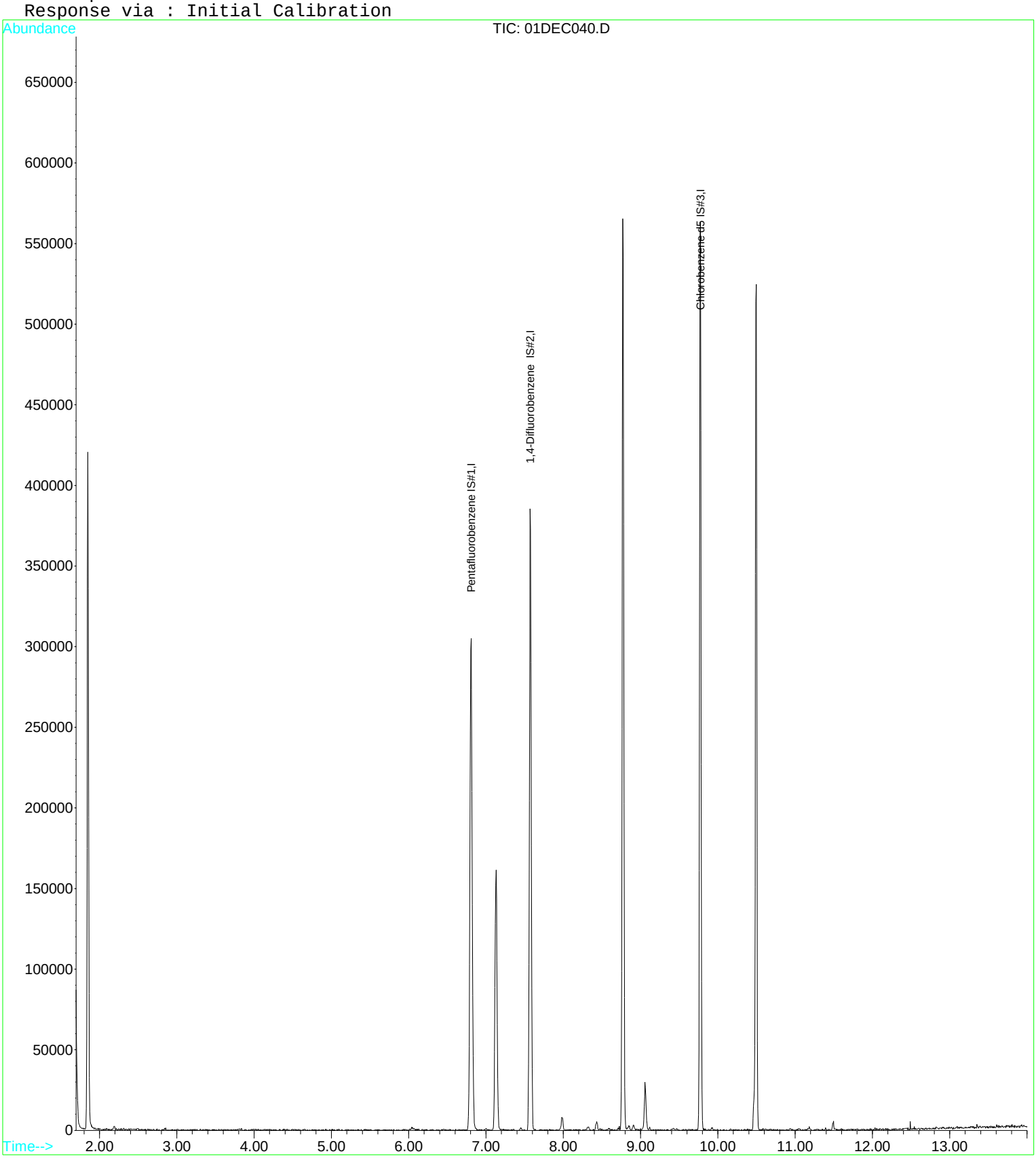
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC040.D Vial: 40
Acq On : 1 Dec 2020 10:25 pm Operator: RCC
Sample : 2021261-CCB2 Inst : MS-V17
Misc : RXT; 0K12021; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:36 2020 Quant Results File: 8260XTRA.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1431\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration



Raw Data - Tune

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC002.D Vial: 2
Acq On : 1 Dec 2020 8:45 am Operator: RCC
Sample : 2021261-TUN1 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	35310	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	44343	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.78	119	18776	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	28354	44.08	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.16%			
30) Toluene d8 SMC#2	8.77	98	55500	50.47	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.94%			
48) Bromofluorobenzene SMC#3	10.49	95	42656	51.95	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.90%			

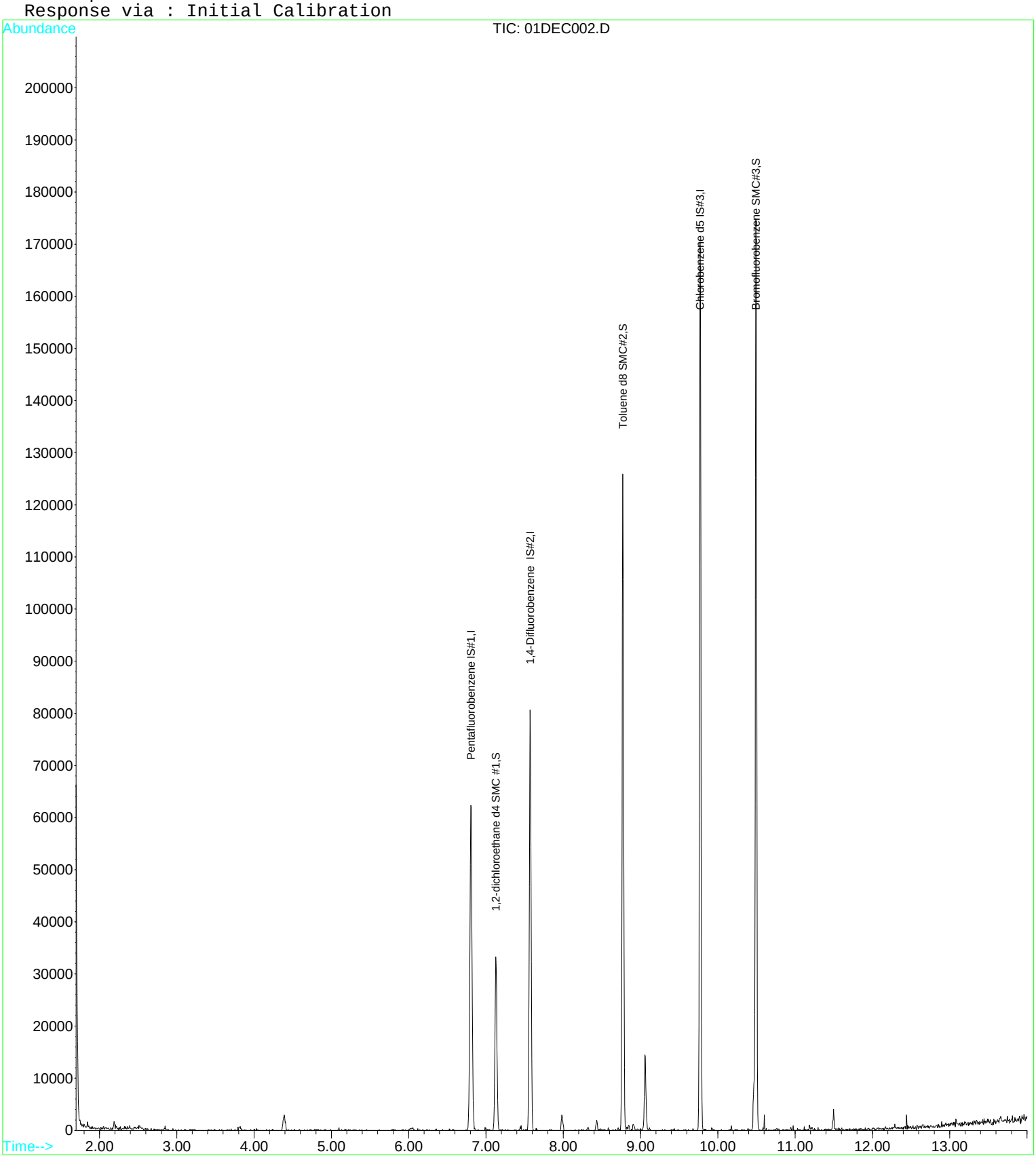
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC002.D Vial: 2
Acq On : 1 Dec 2020 8:45 am Operator: RCC
Sample : 2021261-TUN1 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 9:57 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC035.D Vial: 35
Acq On : 1 Dec 2020 8:40 pm Operator: RCC
Sample : 2021261-TUN2 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:29 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	35502	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	44234	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	18280	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	24363	37.67	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 75.34%#			
30) Toluene d8 SMC#2	8.77	98	54493	49.67	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.34%			
48) Bromofluorobenzene SMC#3	10.50	95	39142	48.96	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.92%			

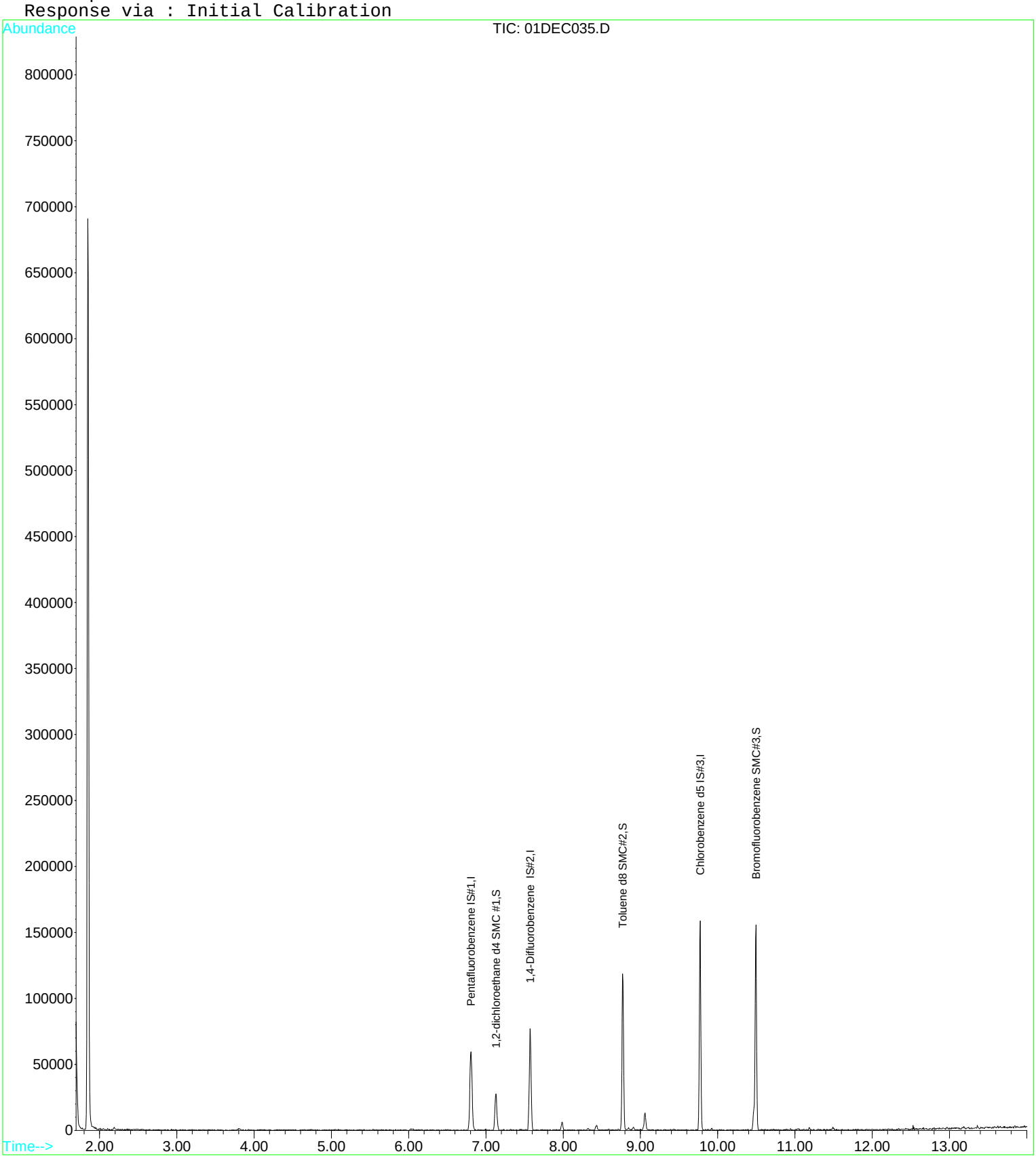
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC035.D Vial: 35
Acq On : 1 Dec 2020 8:40 pm Operator: RCC
Sample : 2021261-TUN2 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:29 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV036.D Vial: 36
Acq On : 12 Nov 2020 6:42 pm Operator: RCC
Sample : 2020136-TUN2 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 7:11 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Thu Nov 12 12:49:01 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	28070	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	40907	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	16931	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	12830	49.06	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.12%			
30) Toluene d8 SMC#2	8.77	98	49460	51.00	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.00%			
48) Bromofluorobenzene SMC#3	10.50	95	29374	52.98	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.96%			

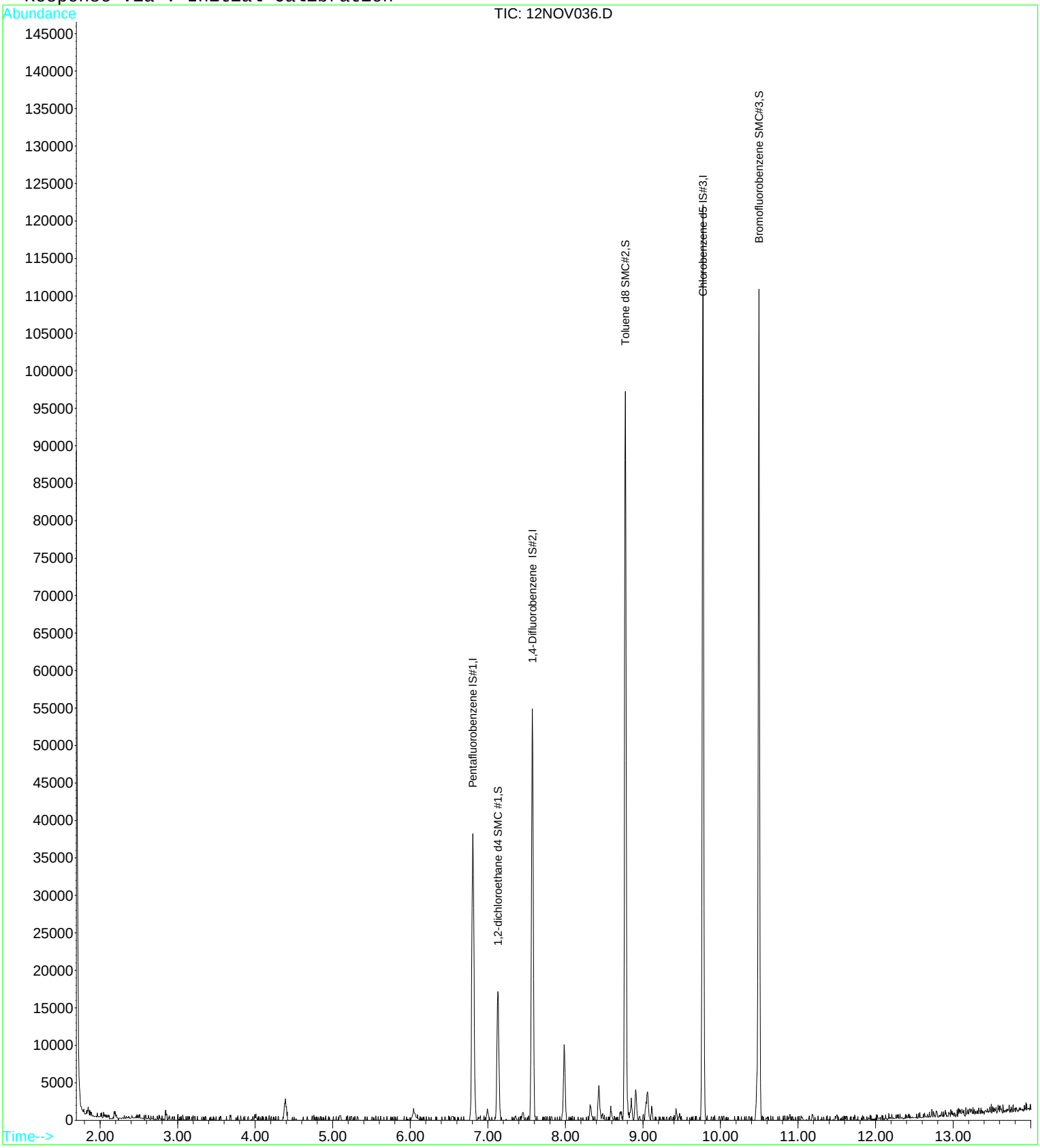
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV12\12NOV036.D Vial: 36
Acq On : 12 Nov 2020 6:42 pm Operator: RCC
Sample : 2020136-TUN2 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 13 7:11 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-0959\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Thu Nov 12 12:49:01 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV003.D Vial: 3
Acq On : 30 Nov 2020 9:08 am Operator: RCC
Sample : 2021163-TUN1 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 9:46 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Thu Nov 12 12:49:01 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	21212	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	29341	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	12759	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	10486	53.06	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.12%			
30) Toluene d8 SMC#2	8.77	98	35786	51.45	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.90%			
48) Bromofluorobenzene SMC#3	10.50	95	22075	52.83	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.66%			

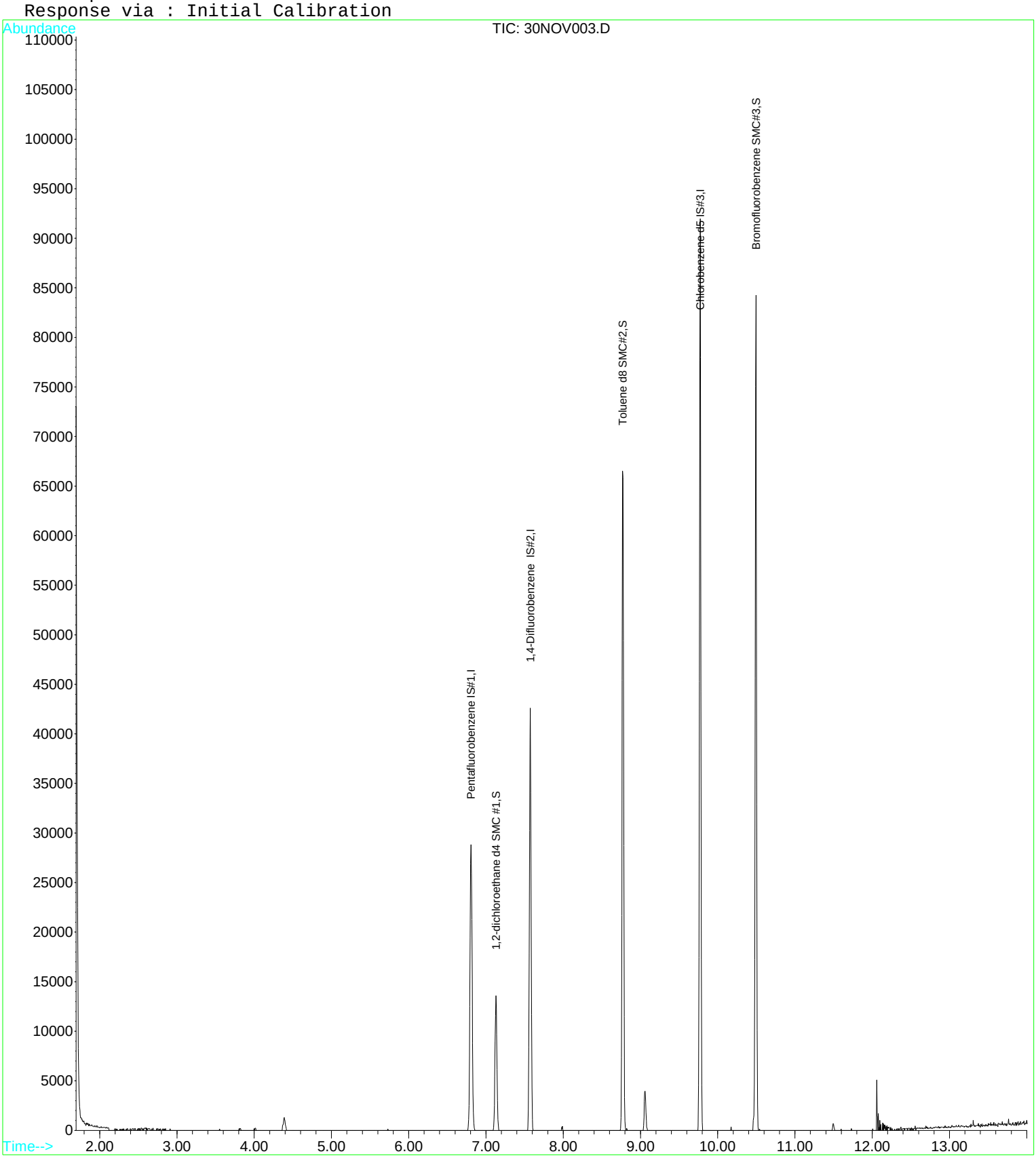
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\NOV20\NOV30\30NOV003.D Vial: 3
Acq On : 30 Nov 2020 9:08 am Operator: RCC
Sample : 2021163-TUN1 Inst : MS-V17
Misc : BFB; 0J21008; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 30 9:46 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-0959\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Thu Nov 12 12:49:01 2020
Response via : Initial Calibration



Raw Data - Method Blank

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:12 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	185209	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	220645	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	65767	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	152824	45.30	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.60%			
30) Toluene d8 SMC#2	8.77	98	269159	49.19	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.38%			
48) Bromofluorobenzene SMC#3	10.50	95	133067	46.27	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.54%			

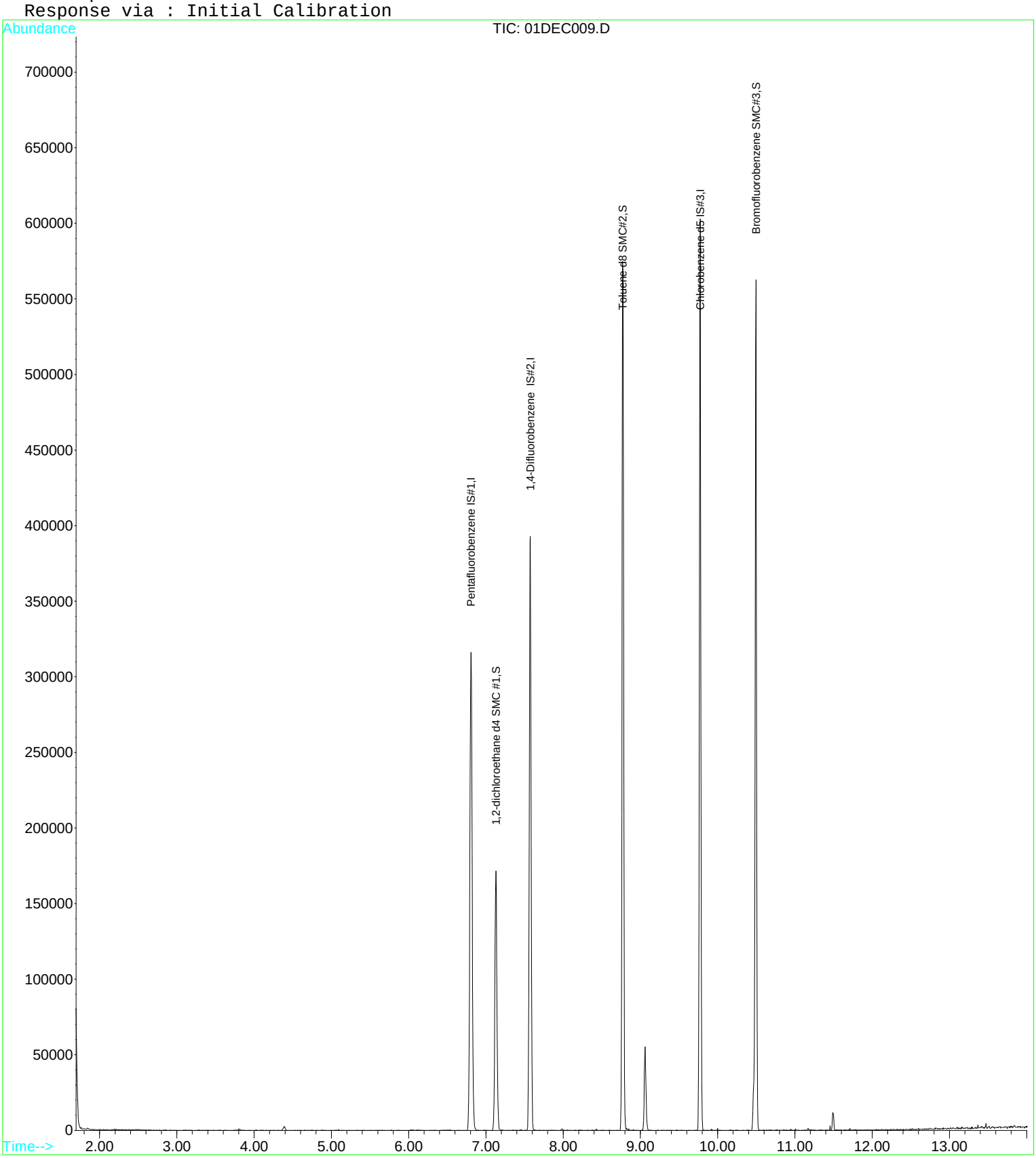
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:12 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:13 2020 Quant Results File: 8260TPPH.RES

Quant Method : C:\HPCHEM\1...\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) PENTAFLUOROBENZENE IS1	6.81	168	185209	50.00	ug/kg	0.11
System Monitoring Compounds						
2) PENTAFLUOROBENZENE S 1	6.81	TIC	633019m	44.91	ug/kg	0.11
3) 1,2-DICHLOROETHANE d4 S 2	7.13	TIC	316067m	51.32	ug/kg	0.10
4) 1,4-DIFLUOROBENZENE S 3	7.58	TIC	643153m	41.86	ug/kg	0.09
5) TOLUENE d8 S 4	8.77	TIC	823677m	46.52	ug/kg	0.08
6) CHLOROBENZENE d5 S 5	9.77	TIC	791773m	46.46	ug/kg	0.08
7) BROMOFLUOROBENZENE S 6	10.50	TIC	736800m	48.62	ug/kg	0.08

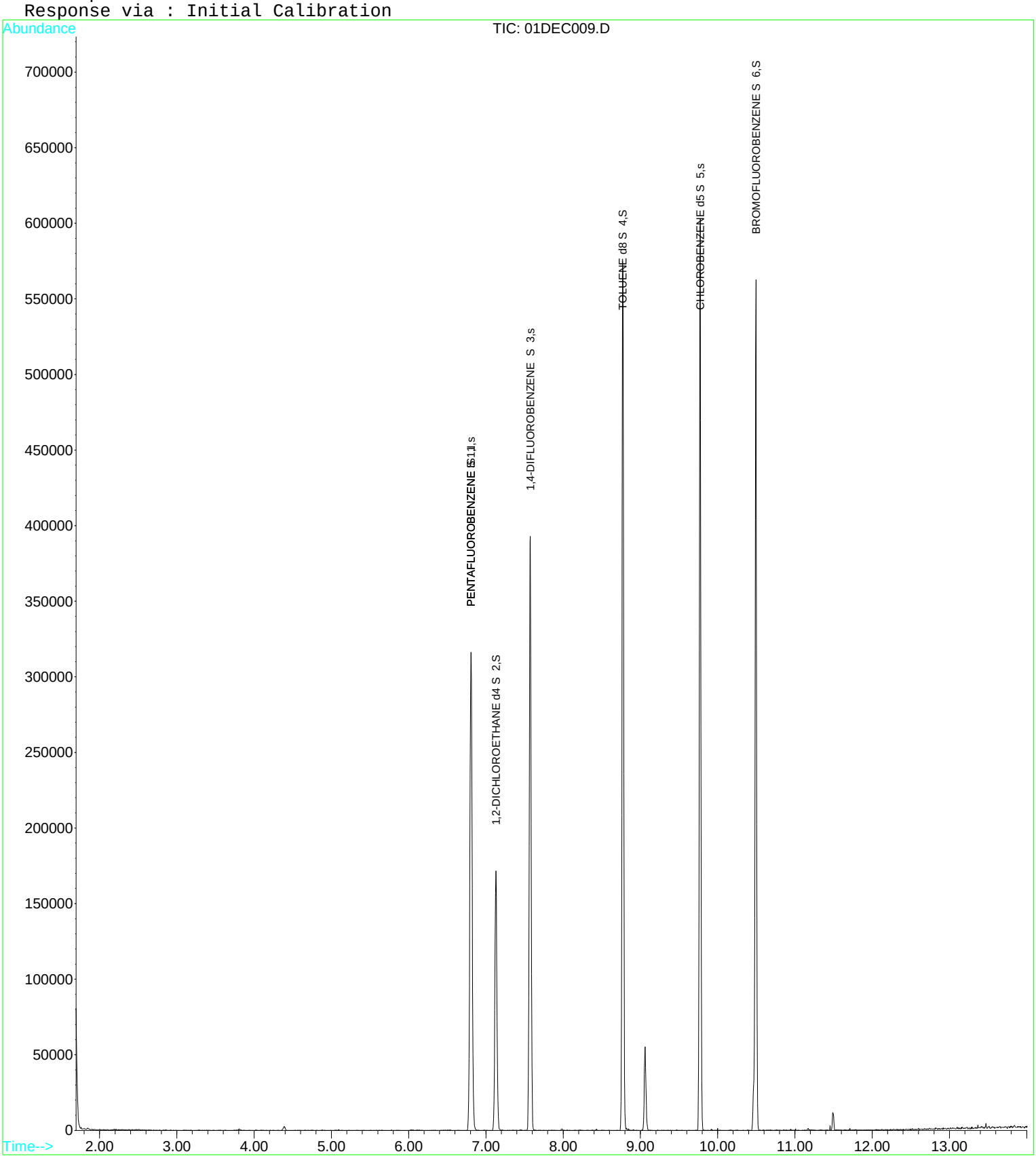
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:13 2020 Quant Results File: 8260TPPH.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202010\13-2141\8260TPPH.M (RTE Integrator)
Title : EPA Method TPPH Gasoline
Last Update : Wed Oct 14 09:24:11 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:12 2020 Quant Results File: 8260XTRA.RES

Quant Method : C:\HPCHEM\1...\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	185209	50.00	ug\kg	0.00
25) 1,4-Difluorobenzene IS#2	7.58	114	220645	50.00	ug\kg	0.00
32) Chlorobenzene d5 IS#3	9.77	119	65767	50.00	ug\kg	0.00

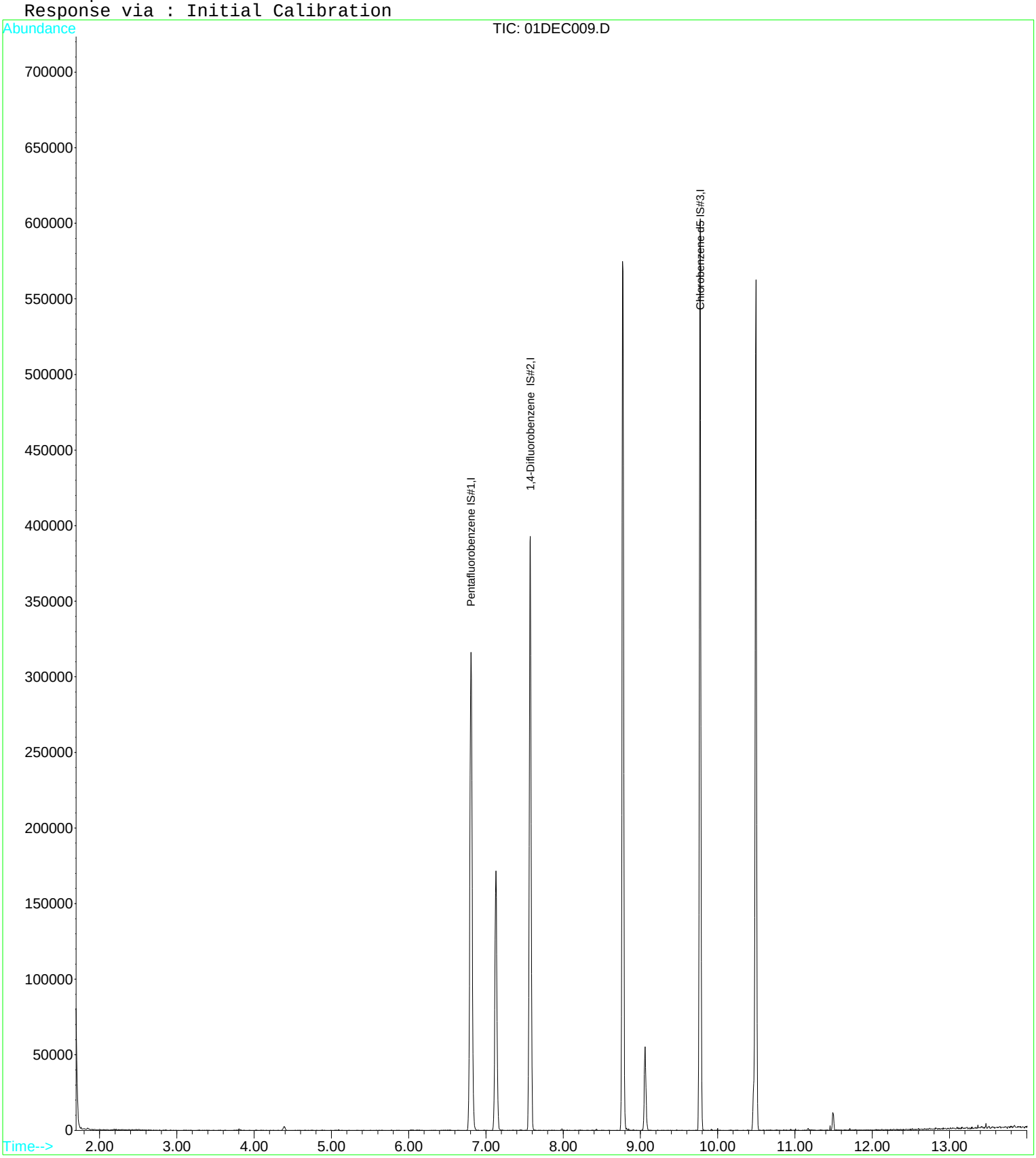
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC009.D Vial: 9
Acq On : 1 Dec 2020 11:37 am Operator: RCC
Sample : B093879-BLK1 Inst : MS-V17
Misc : RXT; VRL-17-6526; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:12 2020 Quant Results File: 8260XTRA.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\12-1431\8260XTRA.M (RTE Integrator)
Title : EPA Method 8260 Soil
Last Update : Fri Nov 13 07:02:29 2020
Response via : Initial Calibration



Raw Data - Matrix Spike

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC012.D Vial: 12
Acq On : 1 Dec 2020 12:39 pm Operator: RCC
Sample : B093879-MS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	183683	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	222005	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	67301	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	153059	45.74	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.48%			
30) Toluene d8 SMC#2	8.77	98	273410	49.66	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.32%			
48) Bromofluorobenzene SMC#3	10.49	95	136282	46.30	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.60%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	283297	132.44	ug/kg	98
3) Chloromethane	2.09	50	138616	141.69	ug/kg#	95
4) Vinyl chloride	2.22	62	141890	147.26	ug/kg#	99
5) Bromomethane	2.61	94	88723	129.96	ug/kg#	81
6) Chloroethane	2.75	64	75187	123.92	ug/kg#	82
7) Trichlorofluoromethane	3.07	101	465404	123.59	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.76	101	163636	132.11	ug/kg	93
9) 1,1-Dichloroethene	3.74	61	277999	130.25	ug/kg#	76
10) Methylene chloride	4.39	84	107724	136.85	ug/kg#	61
11) MTBE	4.72	73	431945	136.42	ug/kg#	83
12) T-1,2-dichloroethene	4.73	96	117341	140.44	ug/kg#	71
13) 1,1-Dichloroethane	5.30	63	267556	135.57	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	373543	127.18	ug/kg#	46
15) Cis-1,2-dichloroethene	6.13	96	127016	142.21	ug/kg#	58
16) Bromochloromethane	6.44	128	56647	144.02	ug/kg#	79
17) Chloroform	6.58	83	341038	131.95	ug/kg	99
18) 1,1,1-Trichloroethane	6.76	97	412788	128.65	ug/kg#	98
19) 1,1-Dichloropropene	6.94	75	232335	133.48	ug/kg	96
20) Carbon tetrachloride	6.93	119	335136	127.09	ug/kg	96
22) 1,2-Dichloroethane	7.21	62	330830	123.16	ug/kg#	94
23) Benzene	7.15	78	439121	141.80	ug/kg#	76
25) Trichloroethene	7.79	130	140266	132.41	ug/kg	97
26) 1,2-Dichloropropane	8.01	63	104017	137.72	ug/kg#	34
27) Dibromomethane	8.08	93	78502	129.77	ug/kg	92
28) Bromodichloromethane	8.23	83	262368	129.32	ug/kg#	97
29) Cis-1,3-dichloropropene	8.57	75	219116	135.56	ug/kg#	85
31) Toluene	8.82	92	302803	132.82	ug/kg#	94
32) Trans-1,3-dichloropropene	8.99	75	247295	133.69	ug/kg#	96
33) 1,1,2-Trichloroethane	9.13	97	91860	132.74	ug/kg#	77
34) Tetrachloroethene (PCE)	9.19	166	176435	128.36	ug/kg#	93
35) 1,3-Dichloropropane	9.24	76	178259	132.37	ug/kg	100
36) Dibromochloromethane	9.39	129	151257	127.31	ug/kg#	98
37) 1,2-Dibromoethane	9.48	107	108002	135.40	ug/kg	97
39) Chlorobenzene	9.79	112	339203	136.49	ug/kg	91
40) 1,1,1,2-Tetrachloroethane	9.85	131	173638	131.15	ug/kg#	85
41) Ethylbenzene	9.85	106	211121	130.50	ug/kg	90
42) P+m-Xylene	9.92	106	510835	262.84	ug/kg	80
43) O-Xylene	10.16	106	244291	131.84	ug/kg#	55
44) Styrene	10.17	104	403437	134.66	ug/kg#	69
45) Bromoform	10.30	173	91837	127.19	ug/kg	96
46) Isopropylbenzene	10.38	105	778554	133.61	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	98120	134.58	ug/kg#	87
49) 1,2,3-Trichloropropane	10.60	110	52498	124.34	ug/kg	92
50) n-propylbenzene	10.62	91	814311	130.82	ug/kg	98
51) bromobenzene	10.59	156	160364	133.38	ug/kg	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC012.D Vial: 12
Acq On : 1 Dec 2020 12:39 pm Operator: RCC
Sample : B093879-MS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

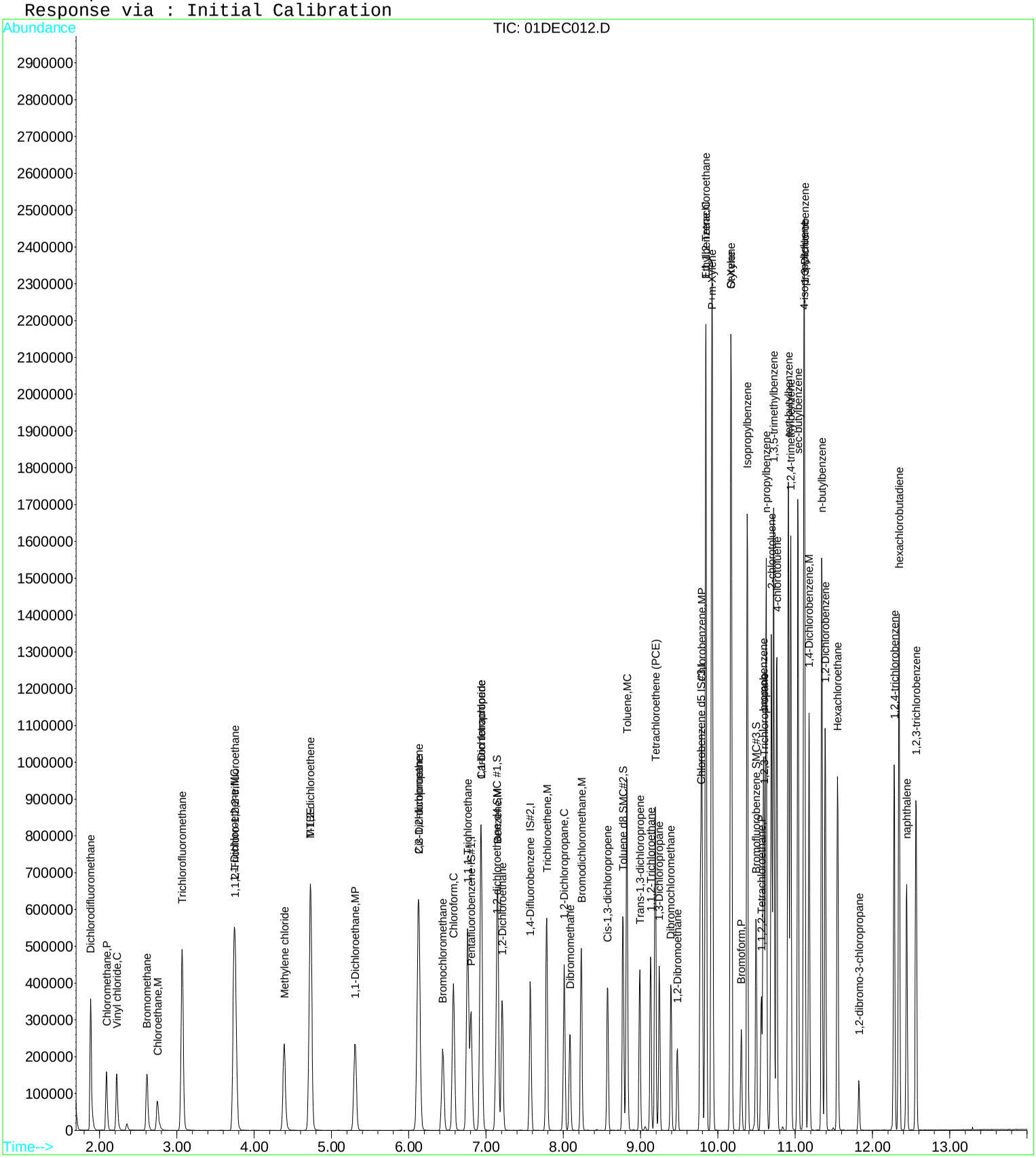
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	720723	131.46	ug/kg	87
53)	2-chlorotoluene	10.69	91	641758m	128.35	ug/kg	
54)	4-chlorotoluene	10.76	91	577868	127.55	ug/kg	91
55)	tert-butylbenzene	10.91	119	624301	138.19	ug/kg	95
56)	1,2,4-trimethylbenzene	10.94	105	699107	132.04	ug/kg	87
57)	sec-butylbenzene	11.03	105	784682	133.35	ug/kg	100
58)	4-isopropyltoluene	11.11	119	697764	130.87	ug/kg#	90
59)	1,3-Dichlorobenzene	11.13	146	307529	128.14	ug/kg#	77
60)	1,4-Dichlorobenzene	11.18	146	300841	128.34	ug/kg#	82
61)	n-butylbenzene	11.34	91	591036	126.49	ug/kg	97
62)	1,2-Dichlorobenzene	11.39	146	282009	131.82	ug/kg#	78
63)	Hexachloroethane	11.55	117	122751	119.94	ug/kg#	90
64)	1,2-dibromo-3-chloropropan	11.82	75	36126	126.41	ug/kg	86
65)	1,2,4-trichlorobenzene	12.28	180	216167	125.53	ug/kg	99
66)	hexachlorobutadiene	12.35	225	247763	128.73	ug/kg	98
67)	naphthalene	12.44	128	364041	135.79	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	203367	130.77	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC012.D Vial: 12
Acq On : 1 Dec 2020 12:39 pm Operator: RCC
Sample : B093879-MS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

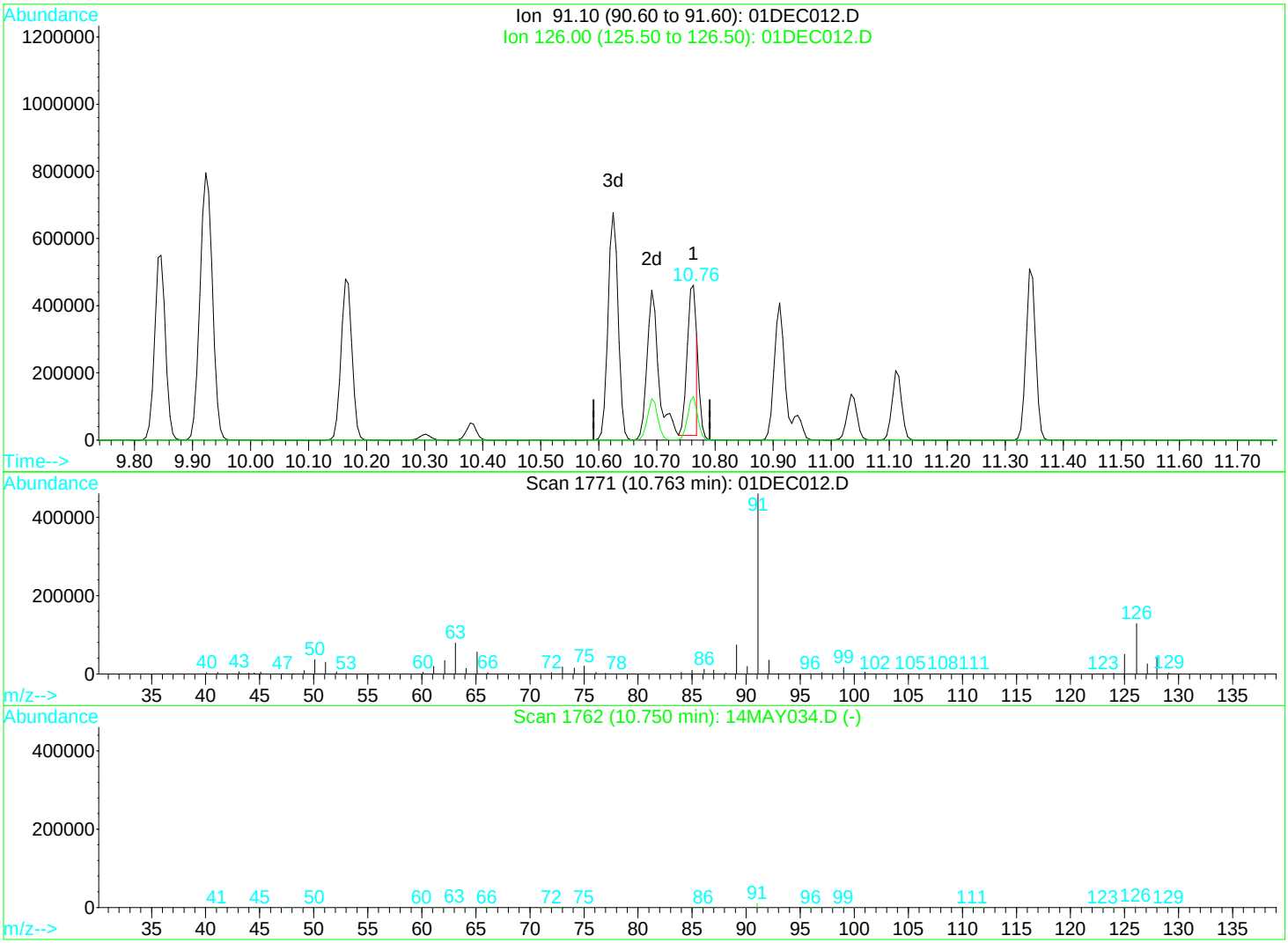
Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC012.D Vial: 12
Acq On : 1 Dec 2020 12:39 pm Operator: RCC
Sample : B093879-MS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 12:53 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC012.D

(53) 2-chlorotoluene

10.76min 98.06ug/kg

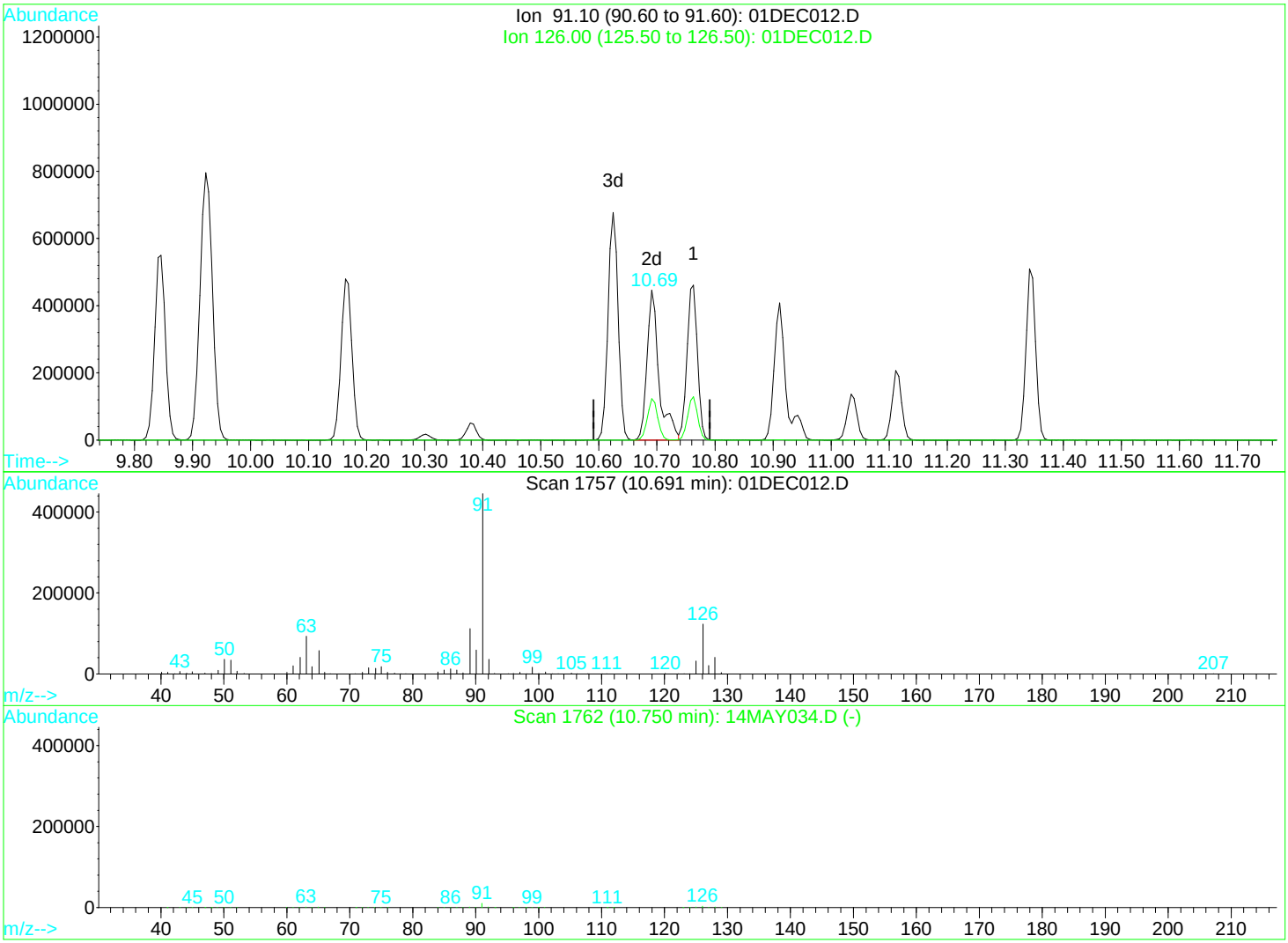
response 490305

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC012.D Vial: 12
Acq On : 1 Dec 2020 12:39 pm Operator: RCC
Sample : B093879-MS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC012.D

(53) 2-chlorotoluene

10.69min 128.35ug/kg m

response 641758

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	21.08#
0.00	0.00	0.00
0.00	0.00	0.00

Raw Data - Matrix Spike Duplicate

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC013.D Vial: 13
Acq On : 1 Dec 2020 1:00 pm Operator: RCC
Sample : B093879-MSD1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	188289	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.58	114	228907	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	68312	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	150698	43.94	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.88%			
30) Toluene d8 SMC#2	8.77	98	284080	50.04	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%			
48) Bromofluorobenzene SMC#3	10.49	95	139826	46.81	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.62%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	282939	129.03	ug/kg	98
3) Chloromethane	2.09	50	145195	144.79	ug/kg#	95
4) Vinyl chloride	2.22	62	148072	149.92	ug/kg#	99
5) Bromomethane	2.61	94	91734	130.99	ug/kg#	83
6) Chloroethane	2.74	64	78637	126.08	ug/kg#	82
7) Trichlorofluoromethane	3.07	101	471978	122.27	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	167113	131.61	ug/kg	93
9) 1,1-Dichloroethene	3.74	61	282472	129.10	ug/kg#	77
10) Methylene chloride	4.39	84	111032	137.60	ug/kg#	63
11) MTBE	4.72	73	444128	136.84	ug/kg#	83
12) T-1,2-dichloroethene	4.73	96	121892	142.32	ug/kg#	72
13) 1,1-Dichloroethane	5.31	63	275488	136.17	ug/kg	98
14) 2,2-Dichloropropane	6.13	77	378554	125.73	ug/kg#	47
15) Cis-1,2-dichloroethene	6.13	96	131690	143.84	ug/kg#	59
16) Bromochloromethane	6.44	128	59628	147.89	ug/kg#	82
17) Chloroform	6.58	83	350337	132.23	ug/kg	100
18) 1,1,1-Trichloroethane	6.76	97	420367	127.81	ug/kg#	98
19) 1,1-Dichloropropene	6.94	75	237612	133.17	ug/kg	97
20) Carbon tetrachloride	6.93	119	340952	126.13	ug/kg	97
22) 1,2-Dichloroethane	7.21	62	335569	121.87	ug/kg	94
23) Benzene	7.15	78	452917	142.68	ug/kg#	76
25) Trichloroethene	7.78	130	144237	132.05	ug/kg	96
26) 1,2-Dichloropropane	8.01	63	108604	139.46	ug/kg#	37
27) Dibromomethane	8.08	93	79348	127.21	ug/kg	89
28) Bromodichloromethane	8.23	83	268516	128.36	ug/kg#	98
29) Cis-1,3-dichloropropene	8.57	75	225632	135.38	ug/kg#	85
31) Toluene	8.82	92	317225	134.95	ug/kg#	95
32) Trans-1,3-dichloropropene	8.99	75	251247	131.74	ug/kg#	95
33) 1,1,2-Trichloroethane	9.13	97	97197	136.22	ug/kg#	76
34) Tetrachloroethene (PCE)	9.19	166	185898	131.16	ug/kg#	94
35) 1,3-Dichloropropane	9.24	76	182754	131.62	ug/kg	98
36) Dibromochloromethane	9.39	129	154290	125.98	ug/kg	98
37) 1,2-Dibromoethane	9.48	107	113048	137.46	ug/kg	99
39) Chlorobenzene	9.79	112	349593	138.59	ug/kg	90
40) 1,1,1,2-Tetrachloroethane	9.85	131	175752	130.78	ug/kg#	85
41) Ethylbenzene	9.85	106	217761	132.61	ug/kg	90
42) P+m-Xylene	9.92	106	522723	264.98	ug/kg	77
43) O-Xylene	10.16	106	251614	133.79	ug/kg#	56
44) Styrene	10.17	104	425765	140.01	ug/kg#	70
45) Bromoform	10.30	173	93722	127.85	ug/kg	96
46) Isopropylbenzene	10.38	105	803464	135.84	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	98433	133.01	ug/kg#	86
49) 1,2,3-Trichloropropane	10.60	110	54804	127.88	ug/kg	88
50) n-propylbenzene	10.62	91	854744	135.28	ug/kg	99
51) bromobenzene	10.59	156	168653	138.20	ug/kg	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC013.D Vial: 13
Acq On : 1 Dec 2020 1:00 pm Operator: RCC
Sample : B093879-MSD1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

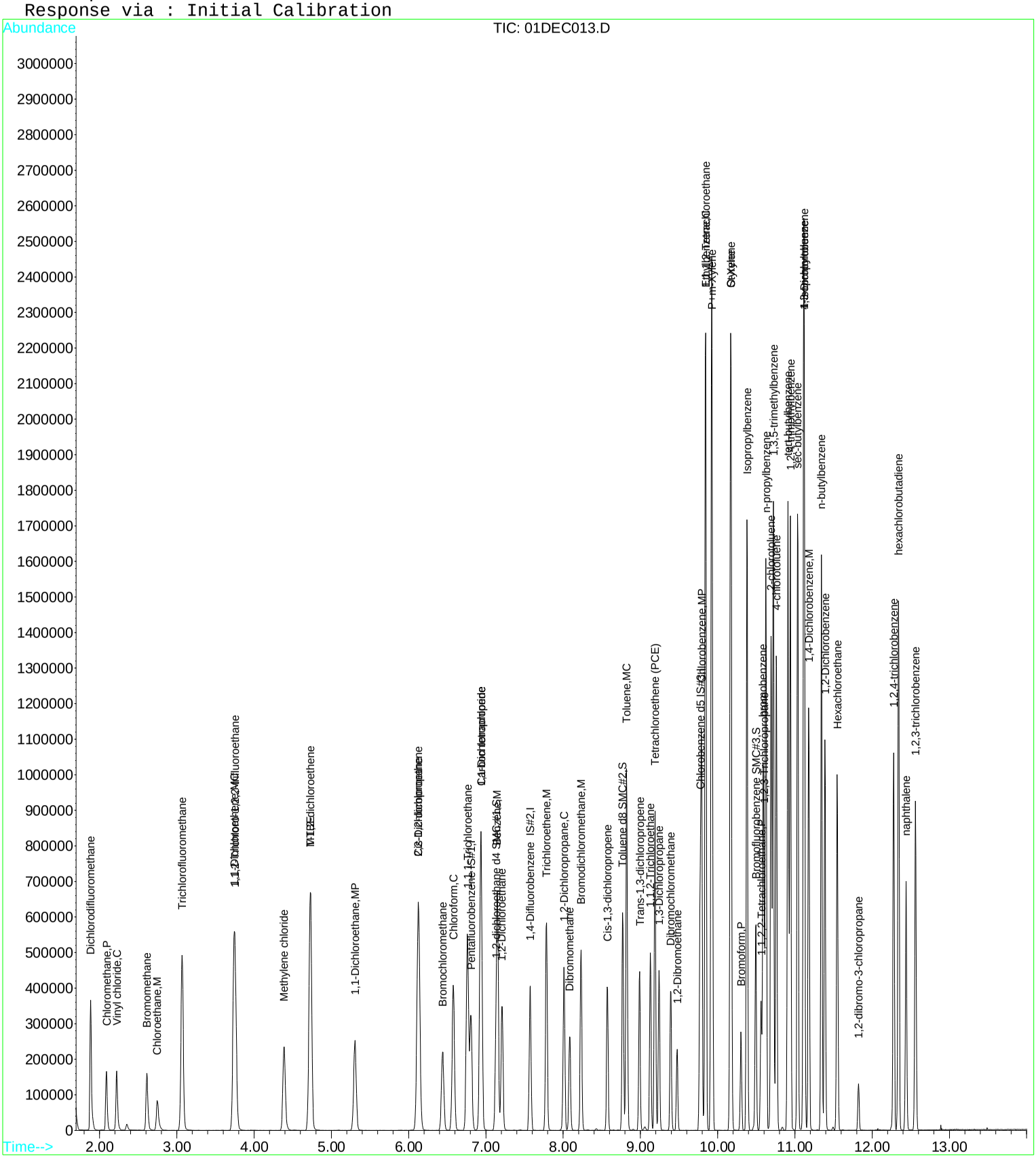
Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	742586	133.45	ug/kg	88
53)	2-chlorotoluene	10.69	91	665642m	131.15	ug/kg	
54)	4-chlorotoluene	10.76	91	600651	130.62	ug/kg	90
55)	tert-butylbenzene	10.91	119	640530	139.68	ug/kg	96
56)	1,2,4-trimethylbenzene	10.94	105	721841	134.31	ug/kg	87
57)	sec-butylbenzene	11.03	105	803292	134.49	ug/kg	99
58)	4-isopropyltoluene	11.12	119	714214	131.98	ug/kg#	91
59)	1,3-Dichlorobenzene	11.12	146	315843	129.66	ug/kg#	77
60)	1,4-Dichlorobenzene	11.18	146	318562	133.89	ug/kg#	84
61)	n-butylbenzene	11.34	91	608878	128.38	ug/kg	97
62)	1,2-Dichlorobenzene	11.39	146	289329	133.24	ug/kg#	80
63)	Hexachloroethane	11.55	117	123529	118.94	ug/kg#	89
64)	1,2-dibromo-3-chloropropan	11.82	75	37330	128.69	ug/kg	85
65)	1,2,4-trichlorobenzene	12.28	180	229792	131.47	ug/kg	96
66)	hexachlorobutadiene	12.34	225	249764	127.85	ug/kg	97
67)	naphthalene	12.44	128	375362	137.94	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	208634	132.18	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC013.D Vial: 13
Acq On : 1 Dec 2020 1:00 pm Operator: RCC
Sample : B093879-MSD1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration



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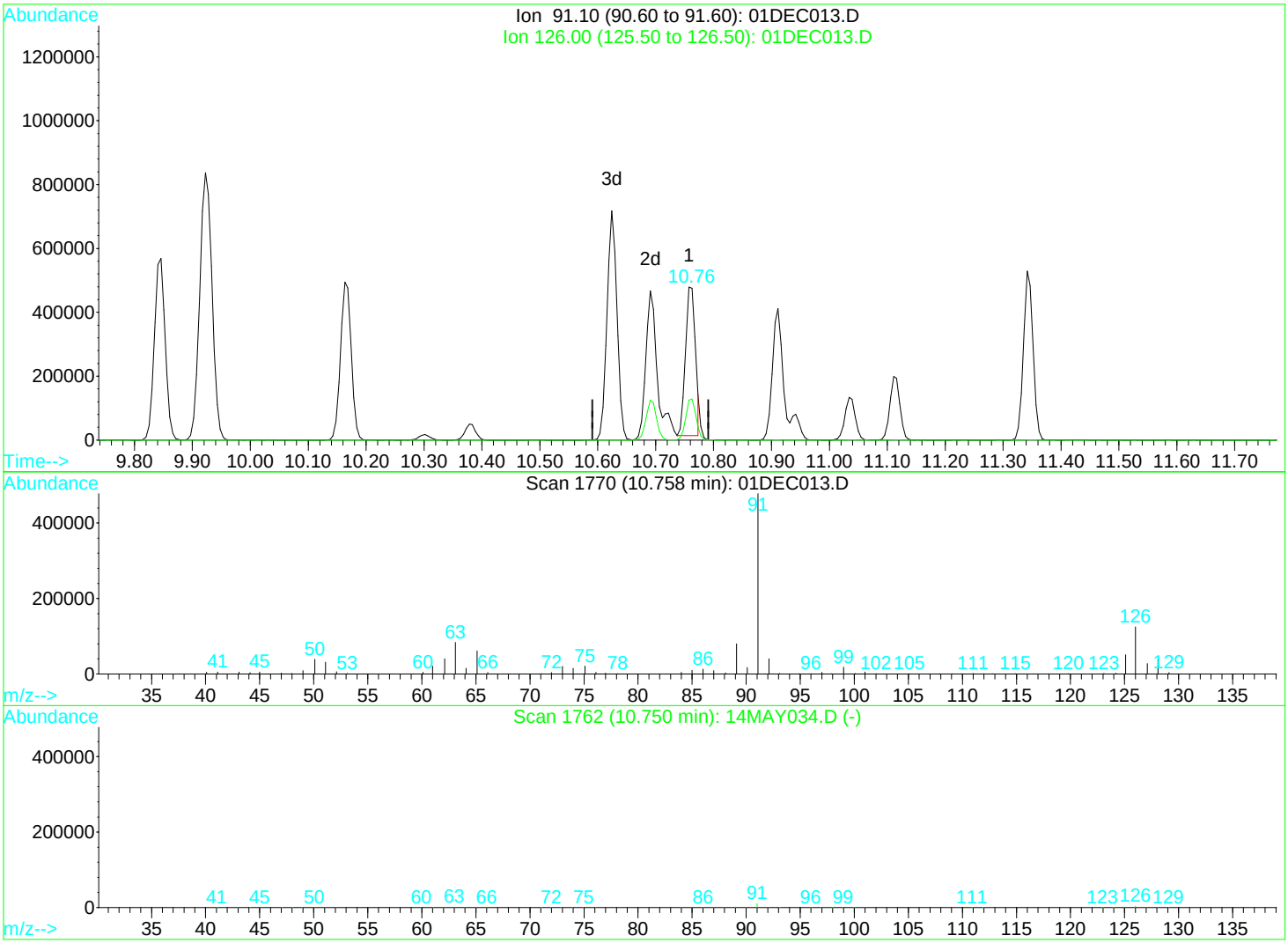
Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC013.D Vial: 13
Acq On : 1 Dec 2020 1:00 pm Operator: RCC
Sample : B093879-MSD1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 13:14 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC013.D

(53) 2-chlorotoluene

10.76min 109.05ug/kg

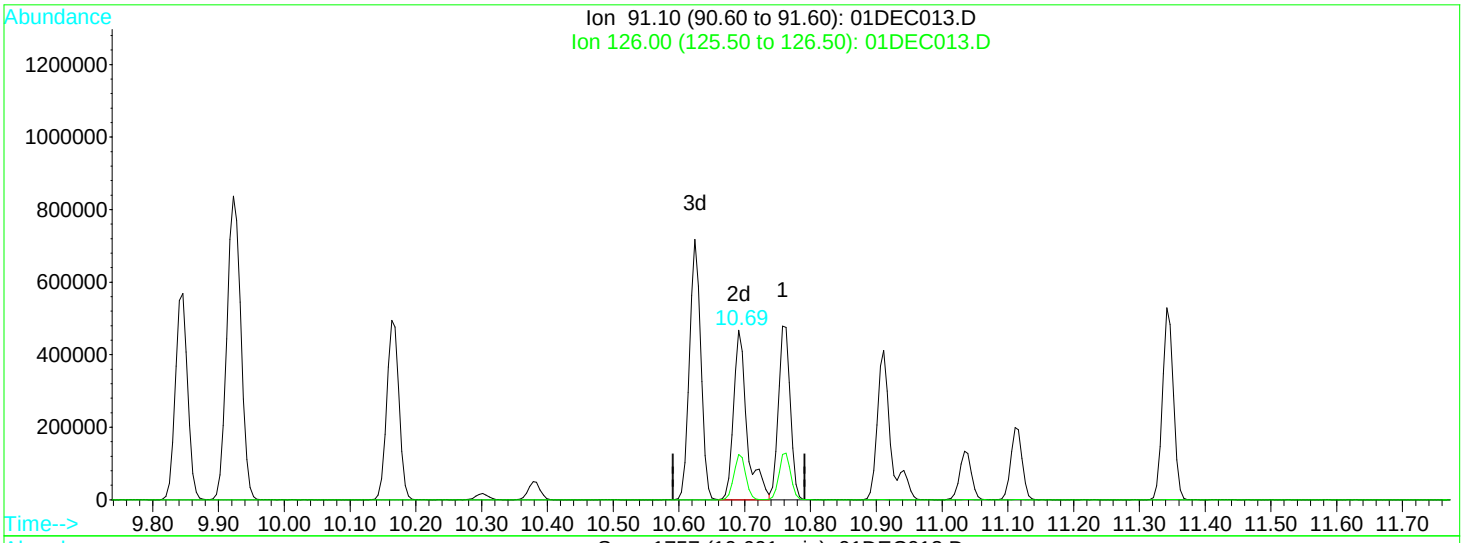
response 553471

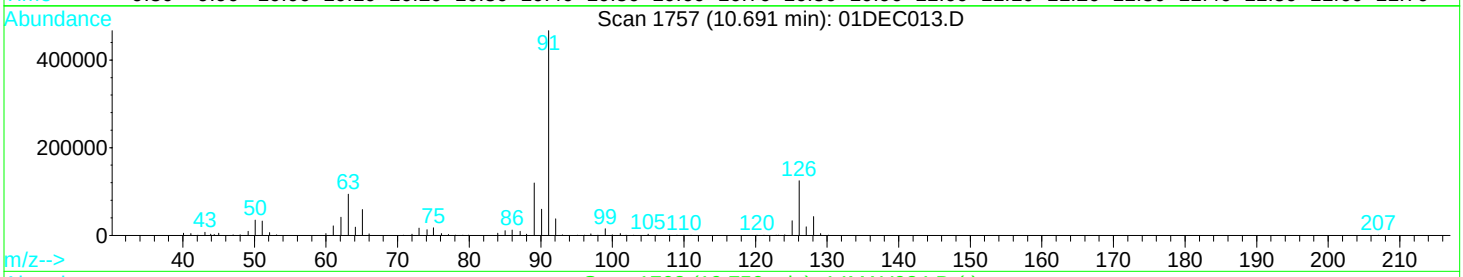
Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.52
0.00	0.00	0.00
0.00	0.00	0.00

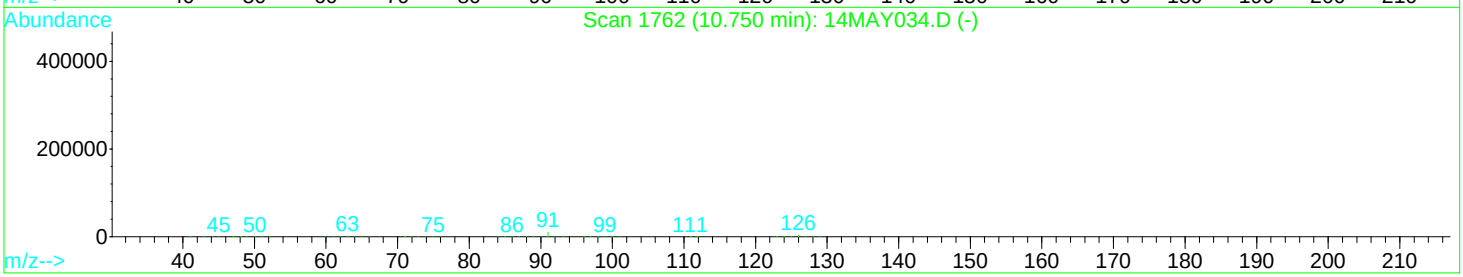
Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC013.D Vial: 13
Acq On : 1 Dec 2020 1:00 pm Operator: RCC
Sample : B093879-MSD1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:15 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration







TIC: 01DEC013.D

(53) 2-chlorotoluene

10.69min 131.15ug/kg m

response 665642

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.88#
0.00	0.00	0.00
0.00	0.00	0.00

Raw Data - Lab Control Sample

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC011.D Vial: 11
Acq On : 1 Dec 2020 12:19 pm Operator: RCC
Sample : B093879-BS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:14 2020 Quant Results File: 8260REG.RES

Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene IS#1	6.81	168	177279	50.00	ug/kg	0.00
24) 1,4-Difluorobenzene IS#2	7.57	114	210057	50.00	ug/kg	0.00
38) Chlorobenzene d5 IS#3	9.77	119	63970	50.00	ug/kg	0.00
System Monitoring Compounds						
21) 1,2-dichloroethane d4 SMC	7.13	65	146006	45.21	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.42%			
30) Toluene d8 SMC#2	8.77	98	260754	50.05	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.10%			
48) Bromofluorobenzene SMC#3	10.49	95	130523	46.66	ug/kg	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.32%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.88	85	276870	134.11	ug/kg	97
3) Chloromethane	2.09	50	133723	141.63	ug/kg#	95
4) Vinyl chloride	2.22	62	139420	149.93	ug/kg#	98
5) Bromomethane	2.61	94	82477	125.56	ug/kg#	84
6) Chloroethane	2.75	64	71688	122.63	ug/kg#	80
7) Trichlorofluoromethane	3.07	101	453521	124.79	ug/kg#	97
8) 1,1,2-Trichloro-1,2,2-trif	3.75	101	160690	134.41	ug/kg	94
9) 1,1-Dichloroethene	3.74	61	266833	129.53	ug/kg#	77
10) Methylene chloride	4.39	84	101194	133.20	ug/kg#	61
11) MTBE	4.73	73	400705	131.13	ug/kg#	82
12) T-1,2-dichloroethene	4.74	96	111554	138.34	ug/kg#	69
13) 1,1-Dichloroethane	5.30	63	256437	134.63	ug/kg	97
14) 2,2-Dichloropropane	6.13	77	357145	125.99	ug/kg#	46
15) Cis-1,2-dichloroethene	6.13	96	118833	137.85	ug/kg#	55
16) Bromochloromethane	6.44	128	53956	142.13	ug/kg#	79
17) Chloroform	6.58	83	320666	128.55	ug/kg	98
18) 1,1,1-Trichloroethane	6.76	97	397082	128.23	ug/kg#	96
19) 1,1-Dichloropropene	6.94	75	220130	131.04	ug/kg	95
20) Carbon tetrachloride	6.93	119	321508	126.33	ug/kg	97
22) 1,2-Dichloroethane	7.21	62	315822	121.82	ug/kg#	93
23) Benzene	7.15	78	413962	138.51	ug/kg#	75
25) Trichloroethene	7.78	130	130230	129.93	ug/kg	94
26) 1,2-Dichloropropane	8.01	63	96559	135.12	ug/kg#	33
27) Dibromomethane	8.09	93	72536	126.72	ug/kg	92
28) Bromodichloromethane	8.23	83	244063	127.14	ug/kg#	96
29) Cis-1,3-dichloropropene	8.57	75	204775	133.89	ug/kg#	86
31) Toluene	8.82	92	282729	131.07	ug/kg#	92
32) Trans-1,3-dichloropropene	8.99	75	228264	130.43	ug/kg	96
33) 1,1,2-Trichloroethane	9.13	97	88818	135.64	ug/kg#	76
34) Tetrachloroethene (PCE)	9.19	166	172598	132.71	ug/kg#	93
35) 1,3-Dichloropropane	9.24	76	164422	129.04	ug/kg	99
36) Dibromochloromethane	9.39	129	137867	122.75	ug/kg#	98
37) 1,2-Dibromoethane	9.48	107	101268	134.18	ug/kg	99
39) Chlorobenzene	9.79	112	319722	135.35	ug/kg	91
40) 1,1,1,2-Tetrachloroethane	9.84	131	162310	128.98	ug/kg#	84
41) Ethylbenzene	9.84	106	200515	130.40	ug/kg	89
42) P+m-Xylene	9.93	106	478277	258.90	ug/kg	76
43) O-Xylene	10.17	106	231256	131.31	ug/kg#	53
44) Styrene	10.18	104	381126	133.84	ug/kg#	66
45) Bromoform	10.30	173	82316	120.16	ug/kg	97
46) Isopropylbenzene	10.38	105	745979	134.68	ug/kg	96
47) 1,1,2,2-Tetrachloroethane	10.56	83	89844	129.65	ug/kg#	86
49) 1,2,3-Trichloropropane	10.60	110	50034	124.68	ug/kg	91
50) n-propylbenzene	10.62	91	788287	133.23	ug/kg	98
51) bromobenzene	10.59	156	152520	133.46	ug/kg	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC011.D Vial: 11
Acq On : 1 Dec 2020 12:19 pm Operator: RCC
Sample : B093879-BS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:14 2020 Quant Results File: 8260REG.RES

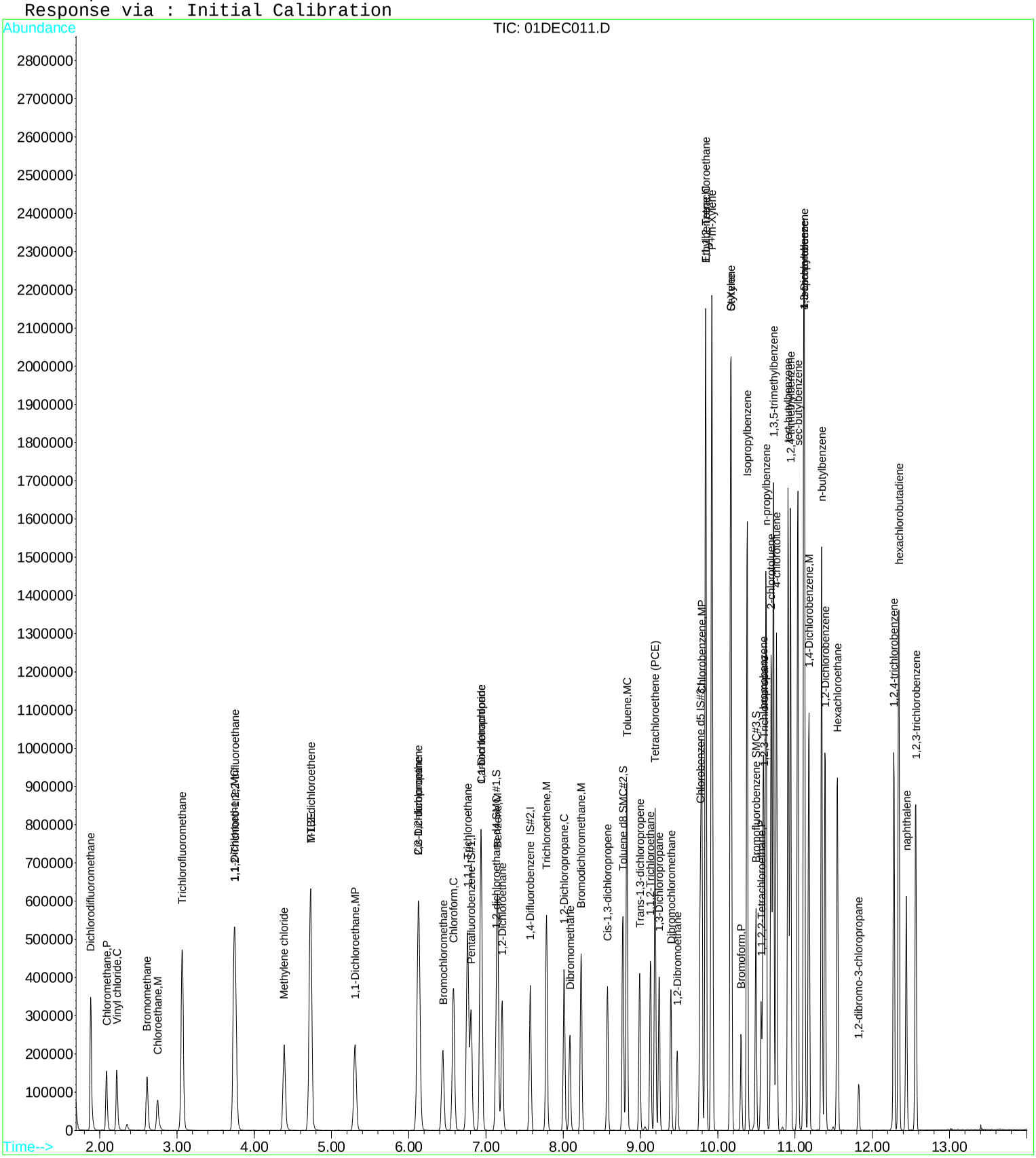
Quant Method : C:\HPCHEM\1...\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration
DataAcq Meth : 8260REG

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	1,3,5-trimethylbenzene	10.72	105	694048	133.19	ug/kg	87
53)	2-chlorotoluene	10.69	91	614729m	129.34	ug/kg	
54)	4-chlorotoluene	10.76	91	557492	129.46	ug/kg	90
55)	tert-butylbenzene	10.91	119	547476	127.49	ug/kg	87
56)	1,2,4-trimethylbenzene	10.94	105	668541	132.84	ug/kg	87
57)	sec-butylbenzene	11.04	105	745763	133.33	ug/kg	100
58)	4-isopropyltoluene	11.11	119	673025	132.81	ug/kg#	90
59)	1,3-Dichlorobenzene	11.12	146	287173	125.89	ug/kg#	75
60)	1,4-Dichlorobenzene	11.18	146	288715	129.58	ug/kg#	81
61)	n-butylbenzene	11.35	91	577711	130.08	ug/kg	97
62)	1,2-Dichlorobenzene	11.39	146	265458	130.55	ug/kg#	78
63)	Hexachloroethane	11.55	117	115740	119.00	ug/kg#	89
64)	1,2-dibromo-3-chloropropan	11.82	75	33260	122.44	ug/kg	87
65)	1,2,4-trichlorobenzene	12.28	180	208923	127.64	ug/kg	100
66)	hexachlorobutadiene	12.34	225	236951	129.52	ug/kg	97
67)	naphthalene	12.44	128	338503	132.84	ug/kg	100
68)	1,2,3-trichlorobenzene	12.56	180	193458	130.88	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC011.D Vial: 11
Acq On : 1 Dec 2020 12:19 pm Operator: RCC
Sample : B093879-BS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:14 2020 Quant Results File: 8260REG.RES

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Initial Calibration

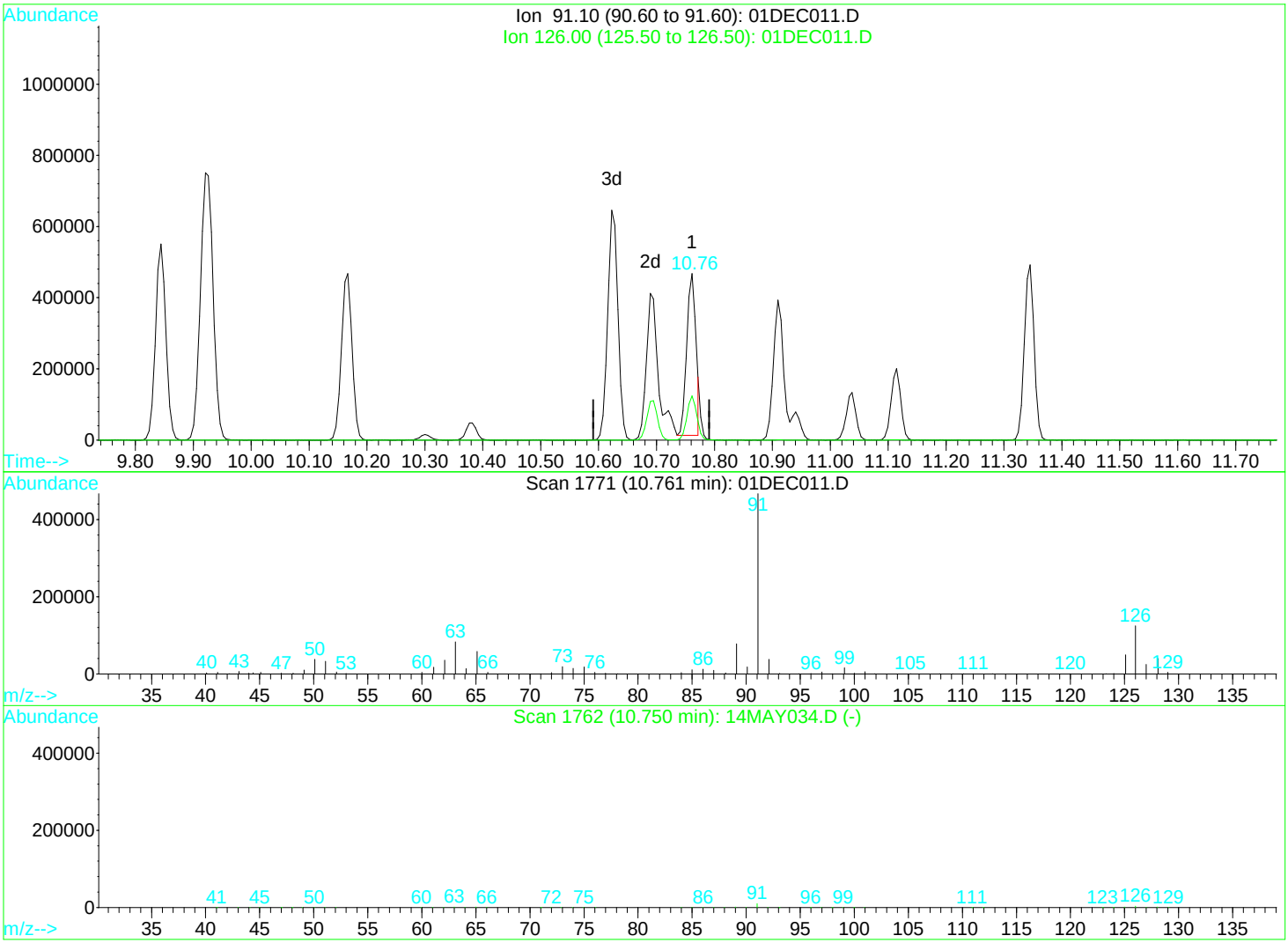


BC Laboratories, Inc. Page 208 of 218

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC011.D Vial: 11
Acq On : 1 Dec 2020 12:19 pm Operator: RCC
Sample : B093879-BS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 1 12:33 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC011.D

(53) 2-chlorotoluene

10.76min 105.91ug/kg

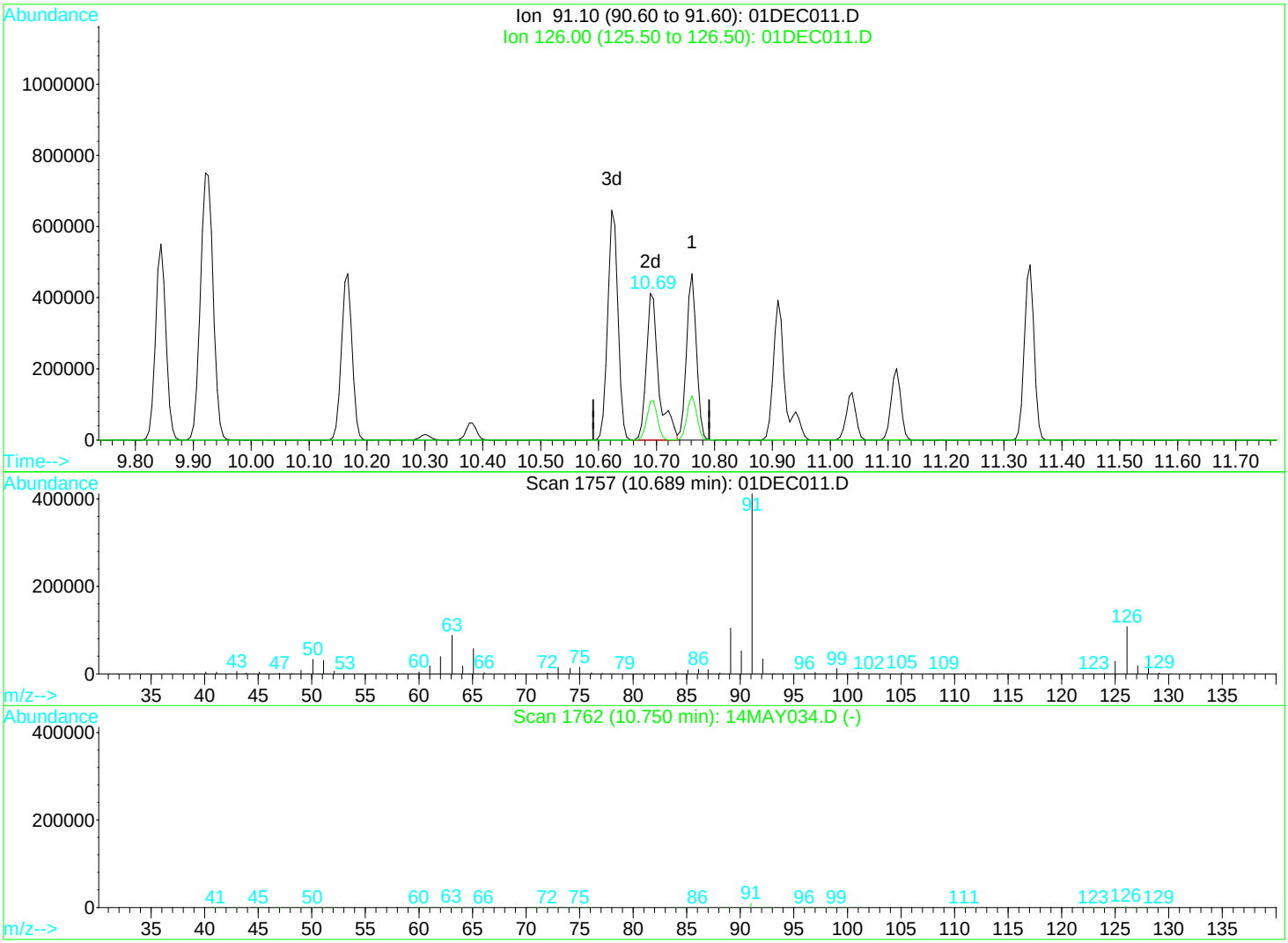
response 503378

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	27.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\GC-17\2020\DEC20\DEC01\01DEC011.D Vial: 11
Acq On : 1 Dec 2020 12:19 pm Operator: RCC
Sample : B093879-BS1 Inst : MS-V17
Misc : REG; 0J06009; 5mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 2 11:14 2020 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\MSV-17\202011\30-1235\8260REG.M (RTE Integrator)
Title : EPA Method 8260B Soil
Last Update : Mon Nov 30 15:01:33 2020
Response via : Multiple Level Calibration



TIC: 01DEC011.D

(53) 2-chlorotoluene

10.69min 129.34ug/kg m

response 614729

Ion	Exp%	Act%
91.10	100	100
126.00	31.90	22.58#
0.00	0.00	0.00
0.00	0.00	0.00

Raw Data - Batch Information

PREPARATION BENCH SHEET

B093879

BC Laboratories

Printed: 3/31/2021 4:48:58PM

Matrix: Solids | Prepared using: Volatiles - GC/MS - EPA 5030 Soil MS | SurrogateUsed: 0K12017

Lab Number	Analysis	Prepared	By	Initial (g)	Final (ml)	Spike ID	Source ID	ul Spike	ul Surrogate	% Solids
2034585-01 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034585-02 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034722-50 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034722-50 A	g8260s Full2	12/1/2020 9:27AM		5	5				5	
2034727-01 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034727-02 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034727-03 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-01 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-02 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-03 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-04 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-05 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-06 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034798-07 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034800-01 A	g8260s Full	12/1/2020 9:27AM	RCC	5	5				5	
2034817-02 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-03 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-05 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-06 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-07 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-07RE1 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
2034817-08 A	g8260s Full2	12/1/2020 9:27AM	RCC	5	5				5	
B093879-BLK1	QC	12/1/2020 9:27AM	RCC	5	5				5	
B093879-BS1	QC	12/1/2020 9:27AM	RCC	5	5	0J23025		12.5	5	
B093879-MS1	QC	12/1/2020 9:27AM	RCC	5	5	0J23025	2034722-50	12.5	5	

PREPARATION BENCH SHEET

B093879

BC Laboratories

Printed: 3/31/2021 4:48:58PM

Matrix: Solids | Prepared using: Volatiles - GC/MS - EPA 5030 Soil MS | SurrogateUsed: 0K12017

Lab Number	Analysis	Prepared	By	Initial (g)	Final (ml)	Spike ID	Source ID	ul Spike	ul Surrogate	% Solids
B093879-MSD1	QC	12/1/2020 9:27AM	RCC	5	5	0J23025	2034722-50	12.5	5	

Spike Mixes	Description	Solvent	Prepared	Expires
0J23025	8260 V14/17 QC SPIKE COMBO	P/T Methanol	10/23/2020 by Roxanne Cantorı	1/5/2021
0K12017	8260 V17 IS\SURR WORKING STD	MeOH;VRL-16-6498	11/12/2020 by Roxanne Cantorı	2/12/2021

Raw Data - Sequence Information

ANALYSIS SEQUENCE

2021261

Instrument: MS-V17
Calibration ID: 2103021 Sequence Date: 12/01/2020 Printed: 3/31/2021 4:48:58PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
2021261-ICV1	QC		1		0L05007		
2021261-ICB1	QC		2		0K12021		
2021261-ICV2	QC		3		1C08022		
2021261-ICB2	QC		4		0K12021		
2021261-TUN1	QC		5		0J21008		
2021261-CCV1	QC		6		0K12018		
2021261-CCV2	QC		7		0K12019		
2021261-CCV3	QC		8		0K12020		
2021261-CCB1	QC		9		0K12021		
B093879-BLK1	QC		10				
2034722-50	g8260s Full	A	11				
2034722-50	g8260s Full2	A	12				
B093879-BS1	QC		13				
B093879-MS1	QC		14				
B093879-MSD1	QC		15				
2034727-01	g8260s Full	A	16				
2034727-02	g8260s Full	A	17				
2034727-03	g8260s Full	A	18				
2034585-01	g8260s Full	A	19				
2034585-02	g8260s Full	A	20				
2034798-01	g8260s Full	A	21				
2034798-02	g8260s Full	A	22				
2034798-03	g8260s Full	A	23				
2034798-04	g8260s Full	A	24				
2034798-05	g8260s Full	A	25				
2034798-06	g8260s Full	A	26				
2034798-07	g8260s Full	A	27				
2034817-02	g8260s Full2	A	28				
2034817-05	g8260s Full2	A	29				
2034817-06	g8260s Full2	A	30				
2034817-07	g8260s Full2	A	31				
2034817-08	g8260s Full2	A	32				
2021261-TUN2	QC		33		0J21008		
2021261-CCV4	QC		34		0K12018		
2021261-CCV5	QC		35		0K12019		
2021261-CCV6	QC		36		0K12020		
2021261-CCB2	QC		37		0K12021		
B093880-BLK1	QC		38				
2034722-49	g8260s Full	A	39				

ANALYSIS SEQUENCE

2021261

Instrument: MS-V17
Calibration ID: 2103021 Sequence Date: 12/01/2020 Printed: 3/31/2021 4:48:58PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
2034722-49	g8260s Full2	A	40				
B093880-BS1	QC		41				
B093880-MS1	QC		42				
B093880-MSD1	QC		43				
2034817-09	g8260s Full2	A	44				
2034817-11	g8260s Full2	A	45				
2034817-12	g8260s Full2	A	46				
2034817-13	g8260s Full2	A	47				
2034817-14	g8260s Full2	A	48				
2034817-16	g8260s Full2	A	49				
2034817-18	g8260s Full2	A	50				
2034817-20	g8260s Full2	A	51				
2034817-21	g8260s Full2	A	52				
2034817-22	g8260s Full2	A	53				
2034817-23	g8260s Full2	A	54				
2034817-24	g8260s Full2	A	55				
2034817-25	g8260s Full2	A	56				
2034817-29	g8260s Full2	A	57				
2034817-30	g8260s Full2	A	58				
2034817-31	g8260s Full2	A	59				
2034817-32	g8260s Full2	A	60				
2034817-33	g8260s Full2	A	61				
2034817-34	g8260s Full2	A	62				

ANALYSIS SEQUENCE

2104552

Instrument: MS-V17
Calibration ID: 2103021 Sequence Date: 11/12/2020 Printed: 3/31/2021 4:48:58PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
2104552-TUN1	QC		1		0J21008		
2104552-CALD	QC		2		1C08016		
2104552-CALE	QC		3		1C08017		
2104552-CALF	QC		4		1C08018		
2104552-CALG	QC		5		1C08019		
2104552-CALH	QC		6		1C08020		
2104552-CALI	QC		7		1C08021		
2104552-TUN2	QC		8		0J21008		
2104552-CAL1	QC		9		0L05001		
2104552-CAL2	QC		10		0L05002		
2104552-CAL3	QC		11		0L05003		
2104552-CAL4	QC		12		0L05004		
2104552-CAL5	QC		13		0L05005		
2104552-CAL6	QC		14		0L05006		

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 3/31/2021 4:48:58PM
Project: SMUD Soil Samples-CLP
Project Number: 60632793.6 SMUD SVM
Project Manager: Keegan George

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

Date of Report: 12/04/2020

Keegan George

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Client Project:	60632793 SMUD 59th St.
BCL Project:	SMUD Soil Samples
BCL Work Order:	2034758
Invoice ID:	B399909

Enclosed are the results of analyses for samples received by the laboratory on 11/25/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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Volatile Organic Analysis (EPA Method 8260B)

Method Blank Analysis..... 26
Laboratory Control Sample..... 28
Precision and Accuracy..... 29

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Method Blank Analysis..... 30
Laboratory Control Sample..... 33
Precision and Accuracy..... 34

Total Petroleum Hydrocarbons

Method Blank Analysis..... 36
Laboratory Control Sample..... 37
Precision and Accuracy..... 38

Total Concentrations (TTLC)

Method Blank Analysis..... 39
Laboratory Control Sample..... 40
Precision and Accuracy..... 41

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Case Narrative

Sample Receipt

COC Number:

Samples received refrigerated to 3.7 °C

Sample List

Lab Number	Date/Time Sampled	Sample Name
2034758-01	11/24/2020 13:45	VW-38-2

Requested Analysis

EPA-6020 (TTLC), EPA-7471A (TTLC), EPA-8015B/FFP, EPA-8082, EPA-8260B, EPA-8270C

Sample	Analyte	Flag

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Case Narrative

Sample Qualifier Summary

Sample		Analyte	Flag
2034758-01	EPA-8015B/FFP	TPH - Diesel (FFP)	A52
2034758-01	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil	A57
2034758-01	EPA-8082	Decachlorobiphenyl (Surrogate)	A20
2034758-01	EPA-8270C	Acenaphthene	A10
2034758-01	EPA-8270C	Acenaphthylene	A10
2034758-01	EPA-8270C	Aldrin	A10
2034758-01	EPA-8270C	Aniline	A10
2034758-01	EPA-8270C	Anthracene	A10
2034758-01	EPA-8270C	Benzidine	A10
2034758-01	EPA-8270C	Benzo[a]anthracene	A10
2034758-01	EPA-8270C	Benzo[b]fluoranthene	A10
2034758-01	EPA-8270C	Benzo[k]fluoranthene	A10
2034758-01	EPA-8270C	Benzo[a]pyrene	A10
2034758-01	EPA-8270C	Benzo[g,h,i]perylene	A10
2034758-01	EPA-8270C	Benzoic acid	A10
2034758-01	EPA-8270C	Benzyl alcohol	A10
2034758-01	EPA-8270C	Benzyl butyl phthalate	A10
2034758-01	EPA-8270C	alpha-BHC	A10
2034758-01	EPA-8270C	beta-BHC	A10
2034758-01	EPA-8270C	delta-BHC	A10
2034758-01	EPA-8270C	gamma-BHC (Lindane)	A10
2034758-01	EPA-8270C	bis(2-Chloroethoxy)methane	A10
2034758-01	EPA-8270C	bis(2-Chloroethyl) ether	A10
2034758-01	EPA-8270C	bis(2-Chloroisopropyl)ether	A10
2034758-01	EPA-8270C	bis(2-Ethylhexyl)phthalate	A10
2034758-01	EPA-8270C	4-Bromophenyl phenyl ether	A10
2034758-01	EPA-8270C	4-Chloroaniline	A10
2034758-01	EPA-8270C	2-Chloronaphthalene	A10
2034758-01	EPA-8270C	4-Chlorophenyl phenyl ether	A10
2034758-01	EPA-8270C	Chrysene	A10
2034758-01	EPA-8270C	4,4'-DDD	A10
2034758-01	EPA-8270C	4,4'-DDE	A10
2034758-01	EPA-8270C	4,4'-DDT	A10
2034758-01	EPA-8270C	Dibenzo[a,h]anthracene	A10
2034758-01	EPA-8270C	Dibenzofuran	A10
2034758-01	EPA-8270C	1,2-Dichlorobenzene	A10
2034758-01	EPA-8270C	1,3-Dichlorobenzene	A10
2034758-01	EPA-8270C	1,4-Dichlorobenzene	A10
2034758-01	EPA-8270C	3,3-Dichlorobenzidine	A10

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Case Narrative

Sample Qualifier Summary

Sample		Analyte	Flag
2034758-01	EPA-8270C	Dieldrin	A10
2034758-01	EPA-8270C	Diethyl phthalate	A10
2034758-01	EPA-8270C	Dimethyl phthalate	A10
2034758-01	EPA-8270C	Di-n-butyl phthalate	A10
2034758-01	EPA-8270C	2,4-Dinitrotoluene	A10
2034758-01	EPA-8270C	2,6-Dinitrotoluene	A10
2034758-01	EPA-8270C	Di-n-octyl phthalate	A10
2034758-01	EPA-8270C	1,2-Diphenylhydrazine	A10
2034758-01	EPA-8270C	Endosulfan I	A10
2034758-01	EPA-8270C	Endosulfan II	A10
2034758-01	EPA-8270C	Endosulfan sulfate	A10
2034758-01	EPA-8270C	Endrin	A10
2034758-01	EPA-8270C	Endrin aldehyde	A10
2034758-01	EPA-8270C	Fluoranthene	A10
2034758-01	EPA-8270C	Fluorene	A10
2034758-01	EPA-8270C	Heptachlor	A10
2034758-01	EPA-8270C	Heptachlor epoxide	A10
2034758-01	EPA-8270C	Hexachlorobenzene	A10
2034758-01	EPA-8270C	Hexachlorobutadiene	A10
2034758-01	EPA-8270C	Hexachlorocyclopentadiene	A10
2034758-01	EPA-8270C	Hexachloroethane	A10
2034758-01	EPA-8270C	Indeno[1,2,3-cd]pyrene	A10
2034758-01	EPA-8270C	Isophorone	A10
2034758-01	EPA-8270C	2-Methylnaphthalene	A10
2034758-01	EPA-8270C	Naphthalene	A10
2034758-01	EPA-8270C	2-Naphthylamine	A10
2034758-01	EPA-8270C	2-Nitroaniline	A10
2034758-01	EPA-8270C	3-Nitroaniline	A10
2034758-01	EPA-8270C	4-Nitroaniline	A10
2034758-01	EPA-8270C	Nitrobenzene	A10
2034758-01	EPA-8270C	N-Nitrosodimethylamine	A10
2034758-01	EPA-8270C	N-Nitrosodi-N-propylamine	A10
2034758-01	EPA-8270C	N-Nitrosodiphenylamine	A10
2034758-01	EPA-8270C	Phenanthrene	A10
2034758-01	EPA-8270C	Pyrene	A10
2034758-01	EPA-8270C	1,2,4-Trichlorobenzene	A10
2034758-01	EPA-8270C	4-Chloro-3-methylphenol	A10
2034758-01	EPA-8270C	2-Chlorophenol	A10
2034758-01	EPA-8270C	2,4-Dichlorophenol	A10

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Case Narrative

Sample		Analyte	Flag
Sample Qualifier Summary			
2034758-01	EPA-8270C	2,4-Dimethylphenol	A10
2034758-01	EPA-8270C	4,6-Dinitro-2-methylphenol	A10
2034758-01	EPA-8270C	2,4-Dinitrophenol	A10
2034758-01	EPA-8270C	2-Methylphenol	A10
2034758-01	EPA-8270C	3- & 4-Methylphenol	A10
2034758-01	EPA-8270C	2-Nitrophenol	A10
2034758-01	EPA-8270C	4-Nitrophenol	A10
2034758-01	EPA-8270C	Pentachlorophenol	A10
2034758-01	EPA-8270C	Phenol	A10
2034758-01	EPA-8270C	2,4,5-Trichlorophenol	A10
2034758-01	EPA-8270C	2,4,6-Trichlorophenol	A10
2034758-01	EPA-8270C	2-Fluorophenol (Surrogate)	A10
2034758-01	EPA-8270C	Phenol-d5 (Surrogate)	A10
2034758-01	EPA-8270C	Nitrobenzene-d5 (Surrogate)	A10
2034758-01	EPA-8270C	2-Fluorobiphenyl (Surrogate)	A10
2034758-01	EPA-8270C	2,4,6-Tribromophenol (Surrogate)	A10
2034758-01	EPA-8270C	p-Terphenyl-d14 (Surrogate)	A10

Holding Times

All holding time requirements were met.

Method Blanks

B093972-BLK1	EPA-6020 (TTLC)	Zinc	0.61125 mg/kg

Matrix Spikes

B093972-DUP1	EPA-6020 (TTLC)	Beryllium	A02
B093972-DUP1	EPA-6020 (TTLC)	Molybdenum	A02
B093972-MSD1	EPA-6020 (TTLC)	Barium	A03
B093972-MSD1	EPA-6020 (TTLC)	Chromium	Q03

LCS

The LCS recoveries are within QC limits.

Discussion

Client advised sampler indicated wrong company on coc, should be under SMUD reporting to Keegan George. Email notice saved under Misc Docs in report.

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Case Narrative

Summary of Flags

A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration was more than 4 times the spike level.
A10	Detection and quantitation limits were raised due to matrix interference.
A20	Surrogate is low due to matrix interference. Interference verified through second extraction/analysis.
A52	Chromatogram not typical of diesel.
A57	Chromatogram not typical of motor oil.
Q03	Matrix spike recovery(s) was(were) not within the control limits.

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Chain of Custody and Cooler Receipt Form for 2034758 Page 1 of 2

BC LABORATORIES, INC.

Chain of Custody Form

Page 1 of 1

Report To:
Client: AECOM
Attn: Robert Kohlhardt
Street Address: 2020 L. St. Suite 400
City, State, Zip: Sacramento, CA 95811
Phone: 916-414-5800 Fax: 916-414-5860
Email: robert.kohlhardt@aecom.com
Work Order #: N/A 20-34758

Project #: 60632793
Project Name: SMUD 59th St.
Sampler(s): AV

Comments: RUSH!

Analysis Requested

Sample #	Description	Date Sampled	Time Sampled	TPH by SW8015MFFP	VOCs by SW8260B	SVOCs by SW8270	PCBs by SW8082-PCBs	CAM 17 by SW6020	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Result Request **Surcharge: ☐ STD (10 Days) ☐ 5 Day** ☐ 2 Day** ☐ 1 Day** 6 day TOT — Notes
VW-38-2	16 oz glass jar.	11/24/20	1345	X	X	X	X	X	X						

CHK BY: MM
DISTRIBUTION: SUB OUT

Billing ☑ Same as above
Client:
Address:
City: State Zip
Attn:
P.O. #:

EDF Required? Geotracker ☐ Yes ☑ No
Send Copy to State of CA? (EDT) ☐ Yes ☑ No

Global ID (Needed for EDF)
System # (Needed for EDT)

	Date	Time		Date	Time
1. Relinquished By: [signature] AECOM	11/24/20	1440	1. Received By: [signature]	11/24/2020	1440
2. Relinquished By: [signature]	11/24/2020	1500	2. Received By: [signature]	11-25-20	950
3. Relinquished By			3. Received By		

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

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Chain of Custody and Cooler Receipt Form for 2034758 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-34758

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: glass Thermometer ID: 274 Date/Time 11-25-20 950

Temperature: (A) 4.1 °C / (C) 3.7 °C Analyst Init TKS

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMR Date/Time: 11/25/20 1020

A = Actual / C = Corrected

Rev 21 05/23/2016

[S:\WPDocs\WordPerfect\LAB_COC\FORMS\SAMREC rev 20]

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2034758-01	**COC Number:**	---	**Receive Date:**	11/25/2020 09:50
	Project Number:	---	**Sampling Date:**	11/24/2020 13:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	VW-38-2	**Lab Matrix:**	Solids
	Sampled By:	AV	**Sample Type:**	Soil

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Natalie Serda

From: Kohlhardt, Robert < Robert.Kohlhardt@aecom.com>
Sent: Monday, November 30, 2020 1:36 PM
To: Natalie Serda
Subject: RE: CLP 2034758

Natalie,

No CLP is necessary. This work is being performed for SMUD. The sampler incorrectly listed AECOM as the client. The client should be SMUD. Keegan George is the SMUD project manager. Please send invoice to SMUD.

Thanks,

Robert Kohlhardt
Senior Environmental Scientist
Environmental Remediation
D +1-916-361-6419
M +1-916-215-7935
robert.kohlhardt@aecom.com

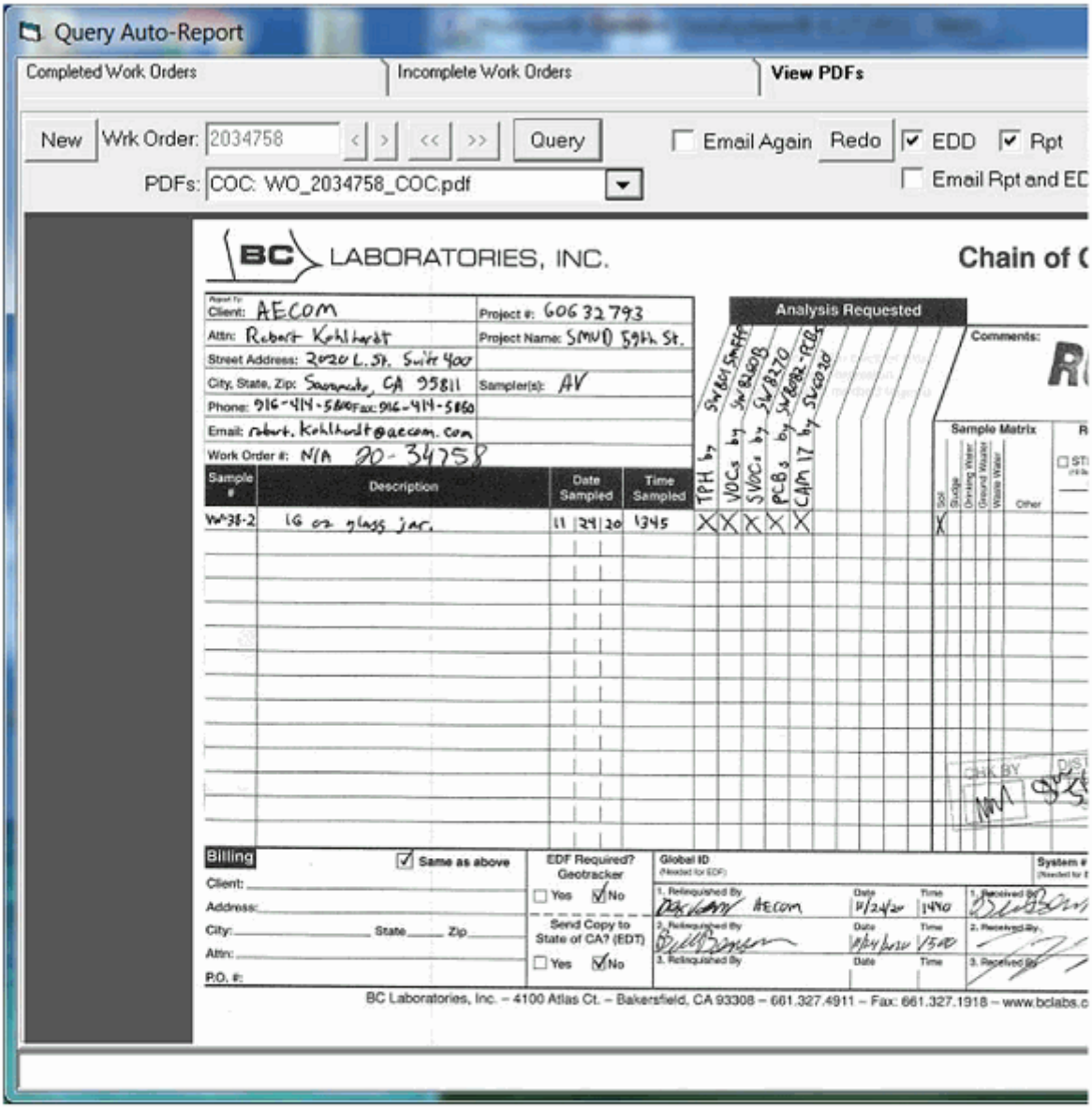
AECOM
2020 L Street, Suite 400
Sacramento, CA 95811, USA
T +1-916-414-5800
aecom.com

From: Natalie Serda <natalie.serda@bclabs.com>
Sent: Monday, November 30, 2020 12:38 PM
To: Kohlhardt, Robert <Robert.Kohlhardt@aecom.com>
Subject: [EXTERNAL] CLP 2034758
Importance: High

Hi Robert,

Does this need a CLP?

1



Best Regards,

Natalie Serda
Project Manager

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
Office: (661) 327-4911 | Mobile: (661) 912-4694
www.bclabs.com

2

BC LABORATORIES, INC.

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3

SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

PCB Analysis (EPA Method 8082)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
PCB-1016	ND	mg/kg	0.010	0.0023	EPA-8082	50		1
PCB-1221	ND	mg/kg	0.010	0.0033	EPA-8082	50		1
PCB-1232	ND	mg/kg	0.010	0.0026	EPA-8082	50		1
PCB-1242	ND	mg/kg	0.010	0.0015	EPA-8082	50		1
PCB-1248	ND	mg/kg	0.010	0.0021	EPA-8082	50		1
PCB-1254	ND	mg/kg	0.010	0.0016	EPA-8082	50		1
PCB-1260	**0.0023**	**mg/kg**	**0.010**	**0.0018**	**EPA-8082**	50	**J**	1
Total PCB's (Summation)	ND	mg/kg	0.010	0.0050	EPA-8082	50		1
Decachlorobiphenyl (Surrogate)	13.3	%	40 - 120 (LCL - UCL)		EPA-8082		A20	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8082	12/02/20 13:00	12/03/20 14:58	HKS	GC-14	0.993	B094172	EPA 3550B

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
Bromobenzene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.0050	0.00081	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Bromoform	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Bromomethane	ND	mg/kg	0.0050	0.0017	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.0050	0.00076	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.0050	0.00085	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.0050	0.00077	EPA-8260B			1
Chloroethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
Chloroform	ND	mg/kg	0.0050	0.00090	EPA-8260B			1
Chloromethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0050	0.00096	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.0050	0.00082	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.0050	0.00064	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	0.00054	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	0.0037	EPA-8260B			1
Total 1,2-Dichloroethene	ND	mg/kg	0.010	0.0043	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
1,1-Dichloropropene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00058	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Total 1,3-Dichloropropene	ND	mg/kg	0.010	0.0013	EPA-8260B			1
Ethylbenzene	ND	mg/kg	0.0050	0.00069	EPA-8260B			1
Hexachlorobutadiene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.010	0.0011	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00056	EPA-8260B			1
Naphthalene	ND	mg/kg	0.0050	0.00099	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
Styrene	ND	mg/kg	0.0050	0.00062	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00095	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00084	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.0050	0.00097	EPA-8260B			1
Toluene	ND	mg/kg	0.0050	0.00069	EPA-8260B			1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.0050	0.00094	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.0050	0.00074	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.0050	0.0019	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0050	0.0010	EPA-8260B			1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.010	0.0025	EPA-8260B			1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.058	Luft-GC/MS			1
1,2-Dichloroethane-d4 (Surrogate)	107	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.4	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	11/30/20 14:37	11/30/20 17:31	BYM	MS-V3	1	B093845	EPA 5030 Soil MS

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Acenaphthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Acenaphthylene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Aldrin	ND	mg/kg	1.0	0.067	EPA-8270C	1.4	A10	1
Aniline	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
Anthracene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzidine	ND	mg/kg	30	0.093	EPA-8270C		A10	1
Benzo[a]anthracene	ND	mg/kg	1.0	0.077	EPA-8270C		A10	1
Benzo[b]fluoranthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzo[k]fluoranthene	ND	mg/kg	1.0	0.082	EPA-8270C		A10	1
Benzo[a]pyrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzo[g,h,i]perylene	ND	mg/kg	1.0	0.13	EPA-8270C		A10	1
Benzoic acid	ND	mg/kg	5.0	0.14	EPA-8270C		A10	1
Benzyl alcohol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzyl butyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
alpha-BHC	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
beta-BHC	ND	mg/kg	1.0	0.075	EPA-8270C		A10	1
delta-BHC	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
gamma-BHC (Lindane)	ND	mg/kg	1.0	0.067	EPA-8270C	4.0	A10	1
bis(2-Chloroethoxy)methane	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
bis(2-Chloroethyl) ether	ND	mg/kg	1.0	0.097	EPA-8270C		A10	1
bis(2-Chloroisopropyl)ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
bis(2-Ethylhexyl)phthalate	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
4-Bromophenyl phenyl ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chloroaniline	ND	mg/kg	1.0	0.15	EPA-8270C		A10	1
2-Chloronaphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chlorophenyl phenyl ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Chrysene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4,4'-DDD	ND	mg/kg	1.0	0.067	EPA-8270C	1.0	A10	1
4,4'-DDE	ND	mg/kg	1.0	0.068	EPA-8270C	1.0	A10	1
4,4'-DDT	ND	mg/kg	1.0	0.067	EPA-8270C	1.0	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Dibenzofuran	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
1,3-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,4-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3,3-Dichlorobenzidine	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
Dieldrin	ND	mg/kg	1.0	0.077	EPA-8270C	8.0	A10	1
Diethyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Dimethyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Di-n-butyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dinitrotoluene	ND	mg/kg	1.0	0.085	EPA-8270C		A10	1
2,6-Dinitrotoluene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Di-n-octyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2-Diphenylhydrazine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Endosulfan I	ND	mg/kg	2.0	0.088	EPA-8270C		A10	1
Endosulfan II	ND	mg/kg	2.0	0.088	EPA-8270C		A10	1
Endosulfan sulfate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Endrin	ND	mg/kg	2.0	0.086	EPA-8270C	0.2	A10	1
Endrin aldehyde	ND	mg/kg	5.0	0.070	EPA-8270C		A10	1
Fluoranthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Fluorene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Heptachlor	ND	mg/kg	1.0	0.067	EPA-8270C	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	1.0	0.13	EPA-8270C		A10	1
Hexachlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Hexachlorobutadiene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Hexachlorocyclopentadiene	ND	mg/kg	1.0	0.15	EPA-8270C		A10	1
Hexachloroethane	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	1.0	0.069	EPA-8270C		A10	1
Isophorone	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2-Methylnaphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Naphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2-Naphthylamine	ND	mg/kg	30	0.36	EPA-8270C		A10	1
2-Nitroaniline	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3-Nitroaniline	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
4-Nitroaniline	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
Nitrobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1

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6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
N-Nitrosodimethylamine	ND	mg/kg	1.0	0.40	EPA-8270C		A10	1
N-Nitrosodi-N-propylamine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
N-Nitrosodiphenylamine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Phenanthrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Pyrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2,4-Trichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chloro-3-methylphenol	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
2-Chlorophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dichlorophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dimethylphenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4,6-Dinitro-2-methylphenol	ND	mg/kg	5.0	0.067	EPA-8270C		A10	1
2,4-Dinitrophenol	ND	mg/kg	5.0	0.067	EPA-8270C		A10	1
2-Methylphenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3- & 4-Methylphenol	ND	mg/kg	2.0	0.14	EPA-8270C		A10	1
2-Nitrophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Nitrophenol	ND	mg/kg	2.0	0.18	EPA-8270C		A10	1
Pentachlorophenol	ND	mg/kg	2.0	0.17	EPA-8270C	17	A10	1
Phenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4,5-Trichlorophenol	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
2,4,6-Trichlorophenol	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
2-Fluorophenol (Surrogate)	61.6	%	20 - 130 (LCL - UCL)		EPA-8270C		A10	1
Phenol-d5 (Surrogate)	61.6	%	30 - 130 (LCL - UCL)		EPA-8270C		A10	1
Nitrobenzene-d5 (Surrogate)	55.7	%	30 - 130 (LCL - UCL)		EPA-8270C		A10	1
2-Fluorobiphenyl (Surrogate)	53.2	%	30 - 140 (LCL - UCL)		EPA-8270C		A10	1
2,4,6-Tribromophenol (Surrogate)	140	%	20 - 150 (LCL - UCL)		EPA-8270C		A10	1
p-Terphenyl-d14 (Surrogate)	43.6	%	30 - 150 (LCL - UCL)		EPA-8270C		A10	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C	12/01/20 09:30	12/03/20 05:36	MK1	MS-B2	10	B094056	EPA 3550B

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Petroleum Hydrocarbons

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Light Naptha	ND	mg/kg	50	20	EPA-8015B/FFP	ND		1
TPH - Aviation Gas	ND	mg/kg	50	20	EPA-8015B/FFP	ND		1
TPH - Stoddard Solvent	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND		1
TPH - Heavy Naptha	ND	mg/kg	10	5.0	EPA-8015B/FFP	ND		1
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND		1
TPH - Jet Fuel (JP4)	ND	mg/kg	10	5.0	EPA-8015B/FFP	ND		1
TPH - Jet Fuel (JP5)	ND	mg/kg	10	4.6	EPA-8015B/FFP	ND		1
TPH - Jet Fuel (JP8)	ND	mg/kg	10	5.0	EPA-8015B/FFP	ND		1
TPH - Kerosene	ND	mg/kg	10	1.4	EPA-8015B/FFP	ND		1
TPH - Diesel (FFP)	**10**	**mg/kg**	**10**	**2.2**	**EPA-8015B/FFP**	ND	**A52**	1
TPH - Fuel Oil #6	ND	mg/kg	10	5.0	EPA-8015B/FFP	ND		1
TPH - Crude Oil	ND	mg/kg	20	2.8	EPA-8015B/FFP	ND		1
TPH - Hydraulic Oil / Motor Oil	**36**	**mg/kg**	**20**	**7.0**	**EPA-8015B/FFP**	ND	**A57**	1
TPH - WD-40	ND	mg/kg	10	5.0	EPA-8015B/FFP	ND		1
Tetracosane (Surrogate)	40.1	%	30 - 130 (LCL - UCL)		EPA-8015B/FFP			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	12/01/20 12:15	12/02/20 18:25	RSM	GC-19	0.993	B094055	EPA 3550B

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Concentrations (TTLC)

BCL Sample ID: 2034758-01 | **Client Sample Name:** VW-38-2, 11/24/2020 1:45:00PM, AV

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Antimony	**0.34**	**mg/kg**	**0.50**	**0.080**	**EPA-6020**	500	**J**	1
Arsenic	**17**	**mg/kg**	**0.50**	**0.17**	**EPA-6020**	500		1
Barium	**110**	**mg/kg**	**0.25**	**0.054**	**EPA-6020**	10000		1
Beryllium	**0.27**	**mg/kg**	**0.25**	**0.041**	**EPA-6020**	75		1
Cadmium	ND	mg/kg	0.25	0.048	EPA-6020	100		1
Chromium	**34**	**mg/kg**	**0.75**	**0.25**	**EPA-6020**	2500		1
Cobalt	**7.6**	**mg/kg**	**0.25**	**0.049**	**EPA-6020**	8000		1
Copper	**29**	**mg/kg**	**0.50**	**0.099**	**EPA-6020**	2500		1
Lead	**19**	**mg/kg**	**0.25**	**0.12**	**EPA-6020**	1000		1
Mercury	**0.052**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**0.28**	**mg/kg**	**0.25**	**0.045**	**EPA-6020**	3500		1
Nickel	**29**	**mg/kg**	**0.50**	**0.11**	**EPA-6020**	2000		1
Selenium	ND	mg/kg	0.50	0.11	EPA-6020	100		1
Silver	**0.059**	**mg/kg**	**0.25**	**0.051**	**EPA-6020**	500	**J**	1
Thallium	**0.10**	**mg/kg**	**0.25**	**0.049**	**EPA-6020**	700	**J**	1
Vanadium	**41**	**mg/kg**	**0.75**	**0.27**	**EPA-6020**	2400		1
Zinc	**49**	**mg/kg**	**2.5**	**0.50**	**EPA-6020**	5000		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6020	12/01/20 17:10	12/02/20 11:22	ARD	PE-EL2	1	B093972	EPA 3050B
2	EPA-7471A	12/02/20 09:35	12/02/20 15:28	TMT	CETAC3	0.962	B093993	EPA 7471A

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

PCB Analysis (EPA Method 8082)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094172						
PCB-1016	B094172-BLK1	ND	mg/kg	0.010	0.0023	
PCB-1221	B094172-BLK1	ND	mg/kg	0.010	0.0033	
PCB-1232	B094172-BLK1	ND	mg/kg	0.010	0.0026	
PCB-1242	B094172-BLK1	ND	mg/kg	0.010	0.0015	
PCB-1248	B094172-BLK1	ND	mg/kg	0.010	0.0021	
PCB-1254	B094172-BLK1	ND	mg/kg	0.010	0.0016	
PCB-1260	B094172-BLK1	ND	mg/kg	0.010	0.0018	
Total PCB's (Summation)	B094172-BLK1	ND	mg/kg	0.010	0.0050	
Decachlorobiphenyl (Surrogate)	**B094172-BLK1**	**88.3**	%	**40 - 120 (LCL - UCL)**		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

PCB Analysis (EPA Method 8082)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B094172										
PCB-1016	B094172-BS1	LCS	0.067114	0.083893	mg/kg	80.0		60 - 120		
PCB-1260	B094172-BS1	LCS	0.066443	0.083893	mg/kg	79.2		60 - 120		
Decachlorobiphenyl (Surrogate)	B094172-BS1	LCS	0.013087	0.020134	mg/kg	65.0		40 - 120		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

PCB Analysis (EPA Method 8082)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B094172	Used client sample: N										
PCB-1016	MS	2032744-97	ND	0.070903	0.083612	mg/kg		84.8		60 - 120	
	MSD	2032744-97	ND	0.068350	0.084175	mg/kg	3.7	81.2	30	60 - 120	
PCB-1260	MS	2032744-97	ND	0.069900	0.083612	mg/kg		83.6		60 - 120	
	MSD	2032744-97	ND	0.072391	0.084175	mg/kg	3.5	86.0	30	60 - 120	
Decachlorobiphenyl (Surrogate)	MS	2032744-97	ND	0.014047	0.020067	mg/kg		70.0		40 - 120	
	MSD	2032744-97	ND	0.014141	0.020202	mg/kg	0.7	70.0		40 - 120	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B093845						
Benzene	B093845-BLK1	ND	mg/kg	0.0050	0.00067	
Bromobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00087	
Bromochloromethane	B093845-BLK1	ND	mg/kg	0.0050	0.00081	
Bromodichloromethane	B093845-BLK1	ND	mg/kg	0.0050	0.00078	
Bromoform	B093845-BLK1	ND	mg/kg	0.0050	0.00070	
Bromomethane	B093845-BLK1	ND	mg/kg	0.0050	0.0017	
n-Butylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00076	
sec-Butylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00071	
tert-Butylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00085	
Carbon tetrachloride	B093845-BLK1	ND	mg/kg	0.0050	0.00078	
Chlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00077	
Chloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.0011	
Chloroform	B093845-BLK1	ND	mg/kg	0.0050	0.00090	
Chloromethane	B093845-BLK1	ND	mg/kg	0.0050	0.0011	
2-Chlorotoluene	B093845-BLK1	ND	mg/kg	0.0050	0.00087	
4-Chlorotoluene	B093845-BLK1	ND	mg/kg	0.0050	0.00070	
Dibromochloromethane	B093845-BLK1	ND	mg/kg	0.0050	0.00080	
1,2-Dibromo-3-chloropropane	B093845-BLK1	ND	mg/kg	0.0050	0.00096	
1,2-Dibromoethane	B093845-BLK1	ND	mg/kg	0.0050	0.00082	
Dibromomethane	B093845-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00079	
1,3-Dichlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00073	
1,4-Dichlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00073	
Dichlorodifluoromethane	B093845-BLK1	ND	mg/kg	0.0050	0.00079	
1,1-Dichloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00064	
1,2-Dichloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00073	
1,1-Dichloroethene	B093845-BLK1	ND	mg/kg	0.0050	0.0011	
cis-1,2-Dichloroethene	B093845-BLK1	ND	mg/kg	0.0050	0.00054	
trans-1,2-Dichloroethene	B093845-BLK1	ND	mg/kg	0.0050	0.0037	
Total 1,2-Dichloroethene	B093845-BLK1	ND	mg/kg	0.010	0.0043	
1,2-Dichloropropane	B093845-BLK1	ND	mg/kg	0.0050	0.00080	
1,3-Dichloropropane	B093845-BLK1	ND	mg/kg	0.0050	0.00067	
2,2-Dichloropropane	B093845-BLK1	ND	mg/kg	0.0050	0.00067	
1,1-Dichloropropene	B093845-BLK1	ND	mg/kg	0.0050	0.00067	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B093845						
cis-1,3-Dichloropropene	B093845-BLK1	ND	mg/kg	0.0050	0.00058	
trans-1,3-Dichloropropene	B093845-BLK1	ND	mg/kg	0.0050	0.00066	
Total 1,3-Dichloropropene	B093845-BLK1	ND	mg/kg	0.010	0.0013	
Ethylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00069	
Hexachlorobutadiene	B093845-BLK1	ND	mg/kg	0.0050	0.00067	
Isopropylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00080	
p-Isopropyltoluene	B093845-BLK1	ND	mg/kg	0.0050	0.00059	
Methylene chloride	B093845-BLK1	ND	mg/kg	0.010	0.0011	
Methyl t-butyl ether	B093845-BLK1	ND	mg/kg	0.0050	0.00056	
Naphthalene	B093845-BLK1	ND	mg/kg	0.0050	0.00099	
n-Propylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00071	
Styrene	B093845-BLK1	ND	mg/kg	0.0050	0.00062	
1,1,1,2-Tetrachloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00095	
1,1,2,2-Tetrachloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00084	
Tetrachloroethene	B093845-BLK1	ND	mg/kg	0.0050	0.00097	
Toluene	B093845-BLK1	ND	mg/kg	0.0050	0.00069	
1,2,3-Trichlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.0015	
1,2,4-Trichlorobenzene	B093845-BLK1	ND	mg/kg	0.0050	0.0014	
1,1,1-Trichloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00067	
1,1,2-Trichloroethane	B093845-BLK1	ND	mg/kg	0.0050	0.00094	
Trichloroethene	B093845-BLK1	ND	mg/kg	0.0050	0.00074	
Trichlorofluoromethane	B093845-BLK1	ND	mg/kg	0.0050	0.0015	
1,2,3-Trichloropropane	B093845-BLK1	ND	mg/kg	0.0050	0.0019	
1,1,2-Trichloro-1,2,2-trifluoroethane	B093845-BLK1	ND	mg/kg	0.0050	0.0010	
1,2,4-Trimethylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00080	
1,3,5-Trimethylbenzene	B093845-BLK1	ND	mg/kg	0.0050	0.00066	
Vinyl chloride	B093845-BLK1	ND	mg/kg	0.0050	0.00059	
Total Xylenes	B093845-BLK1	ND	mg/kg	0.010	0.0025	
Total Purgeable Petroleum Hydrocarbons	B093845-BLK1	ND	mg/kg	0.20	0.058	
1,2-Dichloroethane-d4 (Surrogate)	**B093845-BLK1**	**109**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B093845-BLK1**	**100**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B093845-BLK1**	**102**	%	**74 - 121 (LCL - UCL)**		

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B093845										
Benzene	B093845-BS1	LCS	0.11393	0.12500	mg/kg	91.1		70 - 130		
Bromodichloromethane	B093845-BS1	LCS	0.10804	0.12500	mg/kg	86.4		70 - 130		
Chlorobenzene	B093845-BS1	LCS	0.10888	0.12500	mg/kg	87.1		70 - 130		
Chloroethane	B093845-BS1	LCS	0.10429	0.12500	mg/kg	83.4		70 - 130		
1,4-Dichlorobenzene	B093845-BS1	LCS	0.10780	0.12500	mg/kg	86.2		70 - 130		
1,1-Dichloroethane	B093845-BS1	LCS	0.10581	0.12500	mg/kg	84.6		70 - 130		
1,1-Dichloroethene	B093845-BS1	LCS	0.11303	0.12500	mg/kg	90.4		70 - 130		
Toluene	B093845-BS1	LCS	0.11153	0.12500	mg/kg	89.2		70 - 130		
Trichloroethene	B093845-BS1	LCS	0.099830	0.12500	mg/kg	79.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B093845-BS1	LCS	0.051810	0.050000	mg/kg	104		70 - 121		
Toluene-d8 (Surrogate)	B093845-BS1	LCS	0.050370	0.050000	mg/kg	101		81 - 117		
4-Bromofluorobenzene (Surrogate)	B093845-BS1	LCS	0.049910	0.050000	mg/kg	99.8		74 - 121		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B093845	Used client sample: N										
Benzene	MS	2032744-93	ND	0.12193	0.12500	mg/kg		97.5		70 - 130	
	MSD	2032744-93	ND	0.12449	0.12500	mg/kg	2.1	99.6	20	70 - 130	
Bromodichloromethane	MS	2032744-93	ND	0.11953	0.12500	mg/kg		95.6		70 - 130	
	MSD	2032744-93	ND	0.12440	0.12500	mg/kg	4.0	99.5	20	70 - 130	
Chlorobenzene	MS	2032744-93	ND	0.11761	0.12500	mg/kg		94.1		70 - 130	
	MSD	2032744-93	ND	0.12428	0.12500	mg/kg	5.5	99.4	20	70 - 130	
Chloroethane	MS	2032744-93	ND	0.11435	0.12500	mg/kg		91.5		70 - 130	
	MSD	2032744-93	ND	0.11810	0.12500	mg/kg	3.2	94.5	20	70 - 130	
1,4-Dichlorobenzene	MS	2032744-93	ND	0.11714	0.12500	mg/kg		93.7		70 - 130	
	MSD	2032744-93	ND	0.12371	0.12500	mg/kg	5.5	99.0	20	70 - 130	
1,1-Dichloroethane	MS	2032744-93	ND	0.11157	0.12500	mg/kg		89.3		70 - 130	
	MSD	2032744-93	ND	0.11575	0.12500	mg/kg	3.7	92.6	20	70 - 130	
1,1-Dichloroethene	MS	2032744-93	ND	0.11958	0.12500	mg/kg		95.7		70 - 130	
	MSD	2032744-93	ND	0.12198	0.12500	mg/kg	2.0	97.6	20	70 - 130	
Toluene	MS	2032744-93	ND	0.11801	0.12500	mg/kg		94.4		70 - 130	
	MSD	2032744-93	ND	0.12672	0.12500	mg/kg	7.1	101	20	70 - 130	
Trichloroethene	MS	2032744-93	ND	0.10913	0.12500	mg/kg		87.3		70 - 130	
	MSD	2032744-93	ND	0.11126	0.12500	mg/kg	1.9	89.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2032744-93	ND	0.050290	0.050000	mg/kg		101		70 - 121	
	MSD	2032744-93	ND	0.050170	0.050000	mg/kg	0.2	100		70 - 121	
Toluene-d8 (Surrogate)	MS	2032744-93	ND	0.049730	0.050000	mg/kg		99.5		81 - 117	
	MSD	2032744-93	ND	0.050560	0.050000	mg/kg	1.7	101		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	2032744-93	ND	0.049570	0.050000	mg/kg		99.1		74 - 121	
	MSD	2032744-93	ND	0.051320	0.050000	mg/kg	3.5	103		74 - 121	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094056						
Acenaphthene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Acenaphthylene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Aldrin	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Aniline	B094056-BLK1	ND	mg/kg	0.20	0.011	
Anthracene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Benzidine	B094056-BLK1	ND	mg/kg	3.0	0.0093	
Benzo[a]anthracene	B094056-BLK1	ND	mg/kg	0.10	0.0077	
Benzo[b]fluoranthene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Benzo[k]fluoranthene	B094056-BLK1	ND	mg/kg	0.10	0.0082	
Benzo[a]pyrene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Benzo[g,h,i]perylene	B094056-BLK1	ND	mg/kg	0.10	0.013	
Benzoic acid	B094056-BLK1	ND	mg/kg	0.50	0.014	
Benzyl alcohol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Benzyl butyl phthalate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
alpha-BHC	B094056-BLK1	ND	mg/kg	0.10	0.0067	
beta-BHC	B094056-BLK1	ND	mg/kg	0.10	0.0075	
delta-BHC	B094056-BLK1	ND	mg/kg	0.10	0.0067	
gamma-BHC (Lindane)	B094056-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Chloroethoxy)methane	B094056-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Chloroethyl) ether	B094056-BLK1	ND	mg/kg	0.10	0.0097	
bis(2-Chloroisopropyl)ether	B094056-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Ethylhexyl)phthalate	B094056-BLK1	ND	mg/kg	0.20	0.0067	
4-Bromophenyl phenyl ether	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4-Chloroaniline	B094056-BLK1	ND	mg/kg	0.10	0.015	
2-Chloronaphthalene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4-Chlorophenyl phenyl ether	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Chrysene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4,4'-DDD	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4,4'-DDE	B094056-BLK1	ND	mg/kg	0.10	0.0068	
4,4'-DDT	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Dibenzo[a,h]anthracene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Dibenzofuran	B094056-BLK1	ND	mg/kg	0.10	0.0067	
1,2-Dichlorobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
1,3-Dichlorobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094056						
1,4-Dichlorobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
3,3-Dichlorobenzidine	B094056-BLK1	ND	mg/kg	0.20	0.0067	
Dieldrin	B094056-BLK1	ND	mg/kg	0.10	0.0077	
Diethyl phthalate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Dimethyl phthalate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Di-n-butyl phthalate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dinitrotoluene	B094056-BLK1	ND	mg/kg	0.10	0.0085	
2,6-Dinitrotoluene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Di-n-octyl phthalate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
1,2-Diphenylhydrazine	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Endosulfan I	B094056-BLK1	ND	mg/kg	0.20	0.0088	
Endosulfan II	B094056-BLK1	ND	mg/kg	0.20	0.0088	
Endosulfan sulfate	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Endrin	B094056-BLK1	ND	mg/kg	0.20	0.0086	
Endrin aldehyde	B094056-BLK1	ND	mg/kg	0.50	0.0070	
Fluoranthene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Fluorene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Heptachlor	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Heptachlor epoxide	B094056-BLK1	ND	mg/kg	0.10	0.013	
Hexachlorobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Hexachlorobutadiene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Hexachlorocyclopentadiene	B094056-BLK1	ND	mg/kg	0.10	0.015	
Hexachloroethane	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Indeno[1,2,3-cd]pyrene	B094056-BLK1	ND	mg/kg	0.10	0.0069	
Isophorone	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2-Methylnaphthalene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Naphthalene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2-Naphthylamine	B094056-BLK1	ND	mg/kg	3.0	0.036	
2-Nitroaniline	B094056-BLK1	ND	mg/kg	0.10	0.0067	
3-Nitroaniline	B094056-BLK1	ND	mg/kg	0.20	0.0067	
4-Nitroaniline	B094056-BLK1	ND	mg/kg	0.20	0.011	
Nitrobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
N-Nitrosodimethylamine	B094056-BLK1	ND	mg/kg	0.10	0.040	
N-Nitrosodi-N-propylamine	B094056-BLK1	ND	mg/kg	0.10	0.0067	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094056						
N-Nitrosodiphenylamine	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Phenanthrene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
Pyrene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
1,2,4-Trichlorobenzene	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4-Chloro-3-methylphenol	B094056-BLK1	ND	mg/kg	0.20	0.0067	
2-Chlorophenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dichlorophenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dimethylphenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4,6-Dinitro-2-methylphenol	B094056-BLK1	ND	mg/kg	0.50	0.0067	
2,4-Dinitrophenol	B094056-BLK1	ND	mg/kg	0.50	0.0067	
2-Methylphenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
3- & 4-Methylphenol	B094056-BLK1	ND	mg/kg	0.20	0.014	
2-Nitrophenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
4-Nitrophenol	B094056-BLK1	ND	mg/kg	0.20	0.018	
Pentachlorophenol	B094056-BLK1	ND	mg/kg	0.20	0.017	
Phenol	B094056-BLK1	ND	mg/kg	0.10	0.0067	
2,4,5-Trichlorophenol	B094056-BLK1	ND	mg/kg	0.20	0.011	
2,4,6-Trichlorophenol	B094056-BLK1	ND	mg/kg	0.20	0.0067	
2-Fluorophenol (Surrogate)	**B094056-BLK1**	**82.7**	%	**20 - 130 (LCL - UCL)**		
Phenol-d5 (Surrogate)	**B094056-BLK1**	**80.7**	%	**30 - 130 (LCL - UCL)**		
Nitrobenzene-d5 (Surrogate)	**B094056-BLK1**	**82.1**	%	**30 - 130 (LCL - UCL)**		
2-Fluorobiphenyl (Surrogate)	**B094056-BLK1**	**87.5**	%	**30 - 140 (LCL - UCL)**		
2,4,6-Tribromophenol (Surrogate)	**B094056-BLK1**	**112**	%	**20 - 150 (LCL - UCL)**		
p-Terphenyl-d14 (Surrogate)	**B094056-BLK1**	**69.9**	%	**30 - 150 (LCL - UCL)**		

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Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B094056										
Acenaphthene	B094056-BS1	LCS	1.2672	1.6611	mg/kg	76.3		50 - 130		
1,4-Dichlorobenzene	B094056-BS1	LCS	1.2871	1.6611	mg/kg	77.5		50 - 130		
2,4-Dinitrotoluene	B094056-BS1	LCS	1.6137	1.6611	mg/kg	97.1		50 - 130		
Hexachlorobenzene	B094056-BS1	LCS	1.4995	1.6611	mg/kg	90.3		40 - 130		
Hexachlorobutadiene	B094056-BS1	LCS	1.1747	1.6611	mg/kg	70.7		50 - 130		
Hexachloroethane	B094056-BS1	LCS	1.3672	1.6611	mg/kg	82.3		50 - 130		
Nitrobenzene	B094056-BS1	LCS	1.4872	1.6611	mg/kg	89.5		50 - 130		
N-Nitrosodi-N-propylamine	B094056-BS1	LCS	1.1249	1.6611	mg/kg	67.7		40 - 120		
Pyrene	B094056-BS1	LCS	1.2347	1.6611	mg/kg	74.3		40 - 150		
1,2,4-Trichlorobenzene	B094056-BS1	LCS	1.3994	1.6611	mg/kg	84.2		50 - 120		
4-Chloro-3-methylphenol	B094056-BS1	LCS	1.4020	1.6611	mg/kg	84.4		50 - 130		
2-Chlorophenol	B094056-BS1	LCS	1.2019	1.6611	mg/kg	72.4		50 - 130		
2-Methylphenol	B094056-BS1	LCS	1.2694	1.6611	mg/kg	76.4		50 - 130		
3- & 4-Methylphenol	B094056-BS1	LCS	2.5508	3.3223	mg/kg	76.8		50 - 130		
4-Nitrophenol	B094056-BS1	LCS	1.4502	1.6611	mg/kg	87.3		30 - 130		
Pentachlorophenol	B094056-BS1	LCS	0.96231	1.6611	mg/kg	57.9		20 - 130		
Phenol	B094056-BS1	LCS	1.1753	1.6611	mg/kg	70.8		40 - 120		
2,4,6-Trichlorophenol	B094056-BS1	LCS	1.2012	1.6611	mg/kg	72.3		50 - 130		
2-Fluorophenol (Surrogate)	B094056-BS1	LCS	0.94400	1.3289	mg/kg	71.0		20 - 130		
Phenol-d5 (Surrogate)	B094056-BS1	LCS	0.97841	1.3289	mg/kg	73.6		30 - 130		
Nitrobenzene-d5 (Surrogate)	B094056-BS1	LCS	0.98219	1.3289	mg/kg	73.9		30 - 130		
2-Fluorobiphenyl (Surrogate)	B094056-BS1	LCS	1.0027	1.3289	mg/kg	75.5		30 - 140		
2,4,6-Tribromophenol (Surrogate)	B094056-BS1	LCS	1.2846	1.3289	mg/kg	96.7		20 - 150		
p-Terphenyl-d14 (Surrogate)	B094056-BS1	LCS	0.40935	0.66445	mg/kg	61.6		30 - 150		

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Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B094056	Used client sample: N										
Acenaphthene	MS	2034773-06	ND	0.93906	1.6835	mg/kg		55.8		30 - 140	
	MSD	2034773-06	ND	0.95711	1.6447	mg/kg	1.9	58.2	30	30 - 140	
1,4-Dichlorobenzene	MS	2034773-06	ND	1.0519	1.6835	mg/kg		62.5		50 - 130	
	MSD	2034773-06	ND	1.0142	1.6447	mg/kg	3.6	61.7	30	50 - 130	
2,4-Dinitrotoluene	MS	2034773-06	ND	1.3933	1.6835	mg/kg		82.8		50 - 130	
	MSD	2034773-06	ND	1.3855	1.6447	mg/kg	0.6	84.2	30	50 - 130	
Hexachlorobenzene	MS	2034773-06	ND	0.90875	1.6835	mg/kg		54.0		50 - 130	
	MSD	2034773-06	ND	0.93938	1.6447	mg/kg	3.3	57.1	30	50 - 130	
Hexachlorobutadiene	MS	2034773-06	ND	0.86296	1.6835	mg/kg		51.3		50 - 130	
	MSD	2034773-06	ND	0.84267	1.6447	mg/kg	2.4	51.2	30	50 - 130	
Hexachloroethane	MS	2034773-06	ND	0.98485	1.6835	mg/kg		58.5		50 - 130	
	MSD	2034773-06	ND	0.96936	1.6447	mg/kg	1.6	58.9	30	50 - 130	
Nitrobenzene	MS	2034773-06	ND	1.4535	1.6835	mg/kg		86.3		30 - 120	
	MSD	2034773-06	ND	1.3965	1.6447	mg/kg	4.0	84.9	30	30 - 120	
N-Nitrosodi-N-propylamine	MS	2034773-06	ND	1.0636	1.6835	mg/kg		63.2		20 - 130	
	MSD	2034773-06	ND	1.0567	1.6447	mg/kg	0.7	64.2	30	20 - 130	
Pyrene	MS	2034773-06	ND	0.94141	1.6835	mg/kg		55.9		40 - 140	
	MSD	2034773-06	ND	1.0193	1.6447	mg/kg	7.9	62.0	30	40 - 140	
1,2,4-Trichlorobenzene	MS	2034773-06	ND	1.0801	1.6835	mg/kg		64.2		50 - 130	
	MSD	2034773-06	ND	1.0693	1.6447	mg/kg	1.0	65.0	30	50 - 130	
4-Chloro-3-methylphenol	MS	2034773-06	ND	1.4438	1.6835	mg/kg		85.8		50 - 130	
	MSD	2034773-06	ND	1.4245	1.6447	mg/kg	1.3	86.6	30	50 - 130	
2-Chlorophenol	MS	2034773-06	ND	1.2545	1.6835	mg/kg		74.5		50 - 130	
	MSD	2034773-06	ND	1.2150	1.6447	mg/kg	3.2	73.9	30	50 - 130	
2-Methylphenol	MS	2034773-06	ND	1.2808	1.6835	mg/kg		76.1		50 - 130	
	MSD	2034773-06	ND	1.2782	1.6447	mg/kg	0.2	77.7	30	50 - 130	
3- & 4-Methylphenol	MS	2034773-06	ND	2.5875	3.3670	mg/kg		76.8		50 - 130	
	MSD	2034773-06	ND	2.5802	3.2895	mg/kg	0.3	78.4	30	50 - 130	
4-Nitrophenol	MS	2034773-06	ND	1.9367	1.6835	mg/kg		115		30 - 140	
	MSD	2034773-06	ND	1.6363	1.6447	mg/kg	16.8	99.5	30	30 - 140	
Pentachlorophenol	MS	2034773-06	ND	1.3444	1.6835	mg/kg		79.9		30 - 130	
	MSD	2034773-06	ND	1.1882	1.6447	mg/kg	12.3	72.2	30	30 - 130	
Phenol	MS	2034773-06	ND	1.2582	1.6835	mg/kg		74.7		40 - 150	
	MSD	2034773-06	ND	1.2411	1.6447	mg/kg	1.4	75.5	30	40 - 150	
2,4,6-Trichlorophenol	MS	2034773-06	ND	1.3286	1.6835	mg/kg		78.9		50 - 130	
	MSD	2034773-06	ND	1.3227	1.6447	mg/kg	0.4	80.4	30	50 - 130	

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SMUD - Kleinfelder
6201 S Street/P.O. Box 15830
Sacramento, CA 95852-0830

Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B094056	Used client sample: N										
2-Fluorophenol (Surrogate)	MS	2034773-06	ND	1.0424	1.3468	mg/kg		77.4		20 - 130	
	MSD	2034773-06	ND	1.0032	1.3158	mg/kg	3.8	76.2		20 - 130	
Phenol-d5 (Surrogate)	MS	2034773-06	ND	1.0596	1.3468	mg/kg		78.7		30 - 130	
	MSD	2034773-06	ND	1.0342	1.3158	mg/kg	2.4	78.6		30 - 130	
Nitrobenzene-d5 (Surrogate)	MS	2034773-06	ND	0.95051	1.3468	mg/kg		70.6		30 - 130	
	MSD	2034773-06	ND	0.92874	1.3158	mg/kg	2.3	70.6		30 - 130	
2-Fluorobiphenyl (Surrogate)	MS	2034773-06	ND	0.76970	1.3468	mg/kg		57.2		30 - 140	
	MSD	2034773-06	ND	0.76885	1.3158	mg/kg	0.1	58.4		30 - 140	
2,4,6-Tribromophenol (Surrogate)	MS	2034773-06	ND	1.4872	1.3468	mg/kg		110		20 - 150	
	MSD	2034773-06	ND	1.4345	1.3158	mg/kg	3.6	109		20 - 150	
p-Terphenyl-d14 (Surrogate)	MS	2034773-06	ND	0.32963	0.67340	mg/kg		49.0		30 - 150	
	MSD	2034773-06	ND	0.34042	0.65789	mg/kg	3.2	51.7		30 - 150	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B094055						
TPH - Light Naptha	B094055-BLK1	ND	mg/kg	50	20	
TPH - Aviation Gas	B094055-BLK1	ND	mg/kg	50	20	
TPH - Stoddard Solvent	B094055-BLK1	ND	mg/kg	20	5.0	
TPH - Heavy Naptha	B094055-BLK1	ND	mg/kg	10	5.0	
TPH - Gasoline	B094055-BLK1	ND	mg/kg	20	5.0	
TPH - Jet Fuel (JP4)	B094055-BLK1	ND	mg/kg	10	5.0	
TPH - Jet Fuel (JP5)	B094055-BLK1	ND	mg/kg	10	4.6	
TPH - Jet Fuel (JP8)	B094055-BLK1	ND	mg/kg	10	5.0	
TPH - Kerosene	B094055-BLK1	ND	mg/kg	10	1.4	
TPH - Diesel (FFP)	B094055-BLK1	ND	mg/kg	10	2.2	
TPH - Fuel Oil #6	B094055-BLK1	ND	mg/kg	10	5.0	
TPH - Crude Oil	B094055-BLK1	ND	mg/kg	20	2.8	
TPH - Hydraulic Oil / Motor Oil	B094055-BLK1	ND	mg/kg	20	7.0	
TPH - WD-40	B094055-BLK1	ND	mg/kg	10	5.0	
Tetracosane (Surrogate)	**B094055-BLK1**	**107**	%	**30 - 130 (LCL - UCL)**		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B094055										
TPH - Diesel (FFP)	B094055-BS1	LCS	77.981	84.459	mg/kg	92.3		64 - 124		
Tetracosane (Surrogate)	B094055-BS1	LCS	3.6591	3.3784	mg/kg	108		30 - 130		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B094055	Used client sample: N										
TPH - Diesel (FFP)	MS	2034773-04	ND	58.452	83.056	mg/kg		70.4		52 - 131	
	MSD	2034773-04	ND	70.551	83.333	mg/kg	18.8	84.7	30	52 - 131	
Tetracosane (Surrogate)	MS	2034773-04	ND	2.9570	3.3223	mg/kg		89.0		30 - 130	
	MSD	2034773-04	ND	3.6685	3.3333	mg/kg	21.5	110		30 - 130	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B093972						
Antimony	B093972-BLK1	ND	mg/kg	0.50	0.080	
Arsenic	B093972-BLK1	ND	mg/kg	0.50	0.17	
Barium	B093972-BLK1	ND	mg/kg	0.25	0.054	
Beryllium	B093972-BLK1	ND	mg/kg	0.25	0.041	
Cadmium	B093972-BLK1	ND	mg/kg	0.25	0.048	
Chromium	B093972-BLK1	ND	mg/kg	0.75	0.25	
Cobalt	B093972-BLK1	ND	mg/kg	0.25	0.049	
Copper	B093972-BLK1	ND	mg/kg	0.50	0.099	
Lead	B093972-BLK1	ND	mg/kg	0.25	0.12	
Molybdenum	B093972-BLK1	ND	mg/kg	0.25	0.045	
Nickel	B093972-BLK1	ND	mg/kg	0.50	0.11	
Selenium	B093972-BLK1	ND	mg/kg	0.50	0.11	
Silver	B093972-BLK1	ND	mg/kg	0.25	0.051	
Thallium	B093972-BLK1	ND	mg/kg	0.25	0.049	
Vanadium	B093972-BLK1	ND	mg/kg	0.75	0.27	
Zinc	**B093972-BLK1**	**0.61125**	**mg/kg**	**2.5**	**0.50**	**J**
QC Batch ID: B093993						
Mercury	B093993-BLK1	ND	mg/kg	0.16	0.016	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B093972										
Antimony	B093972-BS1	LCS	9.8698	10.000	mg/kg	98.7		75 - 125		
Arsenic	B093972-BS1	LCS	26.498	25.000	mg/kg	106		75 - 125		
Barium	B093972-BS1	LCS	10.504	10.000	mg/kg	105		75 - 125		
Beryllium	B093972-BS1	LCS	10.529	10.000	mg/kg	105		75 - 125		
Cadmium	B093972-BS1	LCS	10.452	10.000	mg/kg	105		75 - 125		
Chromium	B093972-BS1	LCS	10.512	10.000	mg/kg	105		75 - 125		
Cobalt	B093972-BS1	LCS	10.370	10.000	mg/kg	104		75 - 125		
Copper	B093972-BS1	LCS	25.902	25.000	mg/kg	104		75 - 125		
Lead	B093972-BS1	LCS	26.188	25.000	mg/kg	105		75 - 125		
Molybdenum	B093972-BS1	LCS	8.9778	10.000	mg/kg	89.8		75 - 125		
Nickel	B093972-BS1	LCS	26.574	25.000	mg/kg	106		75 - 125		
Selenium	B093972-BS1	LCS	27.737	25.000	mg/kg	111		75 - 125		
Silver	B093972-BS1	LCS	10.123	10.000	mg/kg	101		75 - 125		
Thallium	B093972-BS1	LCS	10.323	10.000	mg/kg	103		75 - 125		
Vanadium	B093972-BS1	LCS	10.041	10.000	mg/kg	100		75 - 125		
Zinc	B093972-BS1	LCS	27.502	25.000	mg/kg	110		75 - 125		
QC Batch ID: B093993										
Mercury	B093993-BS1	LCS	0.76480	0.80000	mg/kg	95.6		80 - 120		

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B093972	Used client sample: N										
Antimony	DUP	2034920-02	0.43150	0.39200		mg/kg	9.6		20		J
	MS	2034920-02	0.43150	7.4320	10.000	mg/kg		70.0		16 - 119	
	MSD	2034920-02	0.43150	7.0570	10.000	mg/kg	5.2	66.3	20	16 - 119	
Arsenic	DUP	2034920-02	6.1262	6.0280		mg/kg	1.6		20		
	MS	2034920-02	6.1262	30.428	25.000	mg/kg		97.2		75 - 125	
	MSD	2034920-02	6.1262	30.962	25.000	mg/kg	1.7	99.3	20	75 - 125	
Barium	DUP	**2034920-02**	**123.32**	**148.11**		**mg/kg**	**18.3**		**20**		
	MS	**2034920-02**	**123.32**	**134.49**	**10.000**	**mg/kg**		**112**		**75 - 125**	
	MSD	**2034920-02**	**123.32**	**122.38**	**10.000**	**mg/kg**	**9.4**	**-9.4**	**20**	**75 - 125**	**A03**
Beryllium	DUP	**2034920-02**	**0.27225**	**0.36025**		**mg/kg**	**27.8**		**20**		**A02**
	MS	**2034920-02**	**0.27225**	**8.8372**	**10.000**	**mg/kg**		**85.6**		**75 - 125**	
	MSD	**2034920-02**	**0.27225**	**9.1085**	**10.000**	**mg/kg**	**3.0**	**88.4**	**20**	**75 - 125**	
Cadmium	DUP	2034920-02	ND	ND		mg/kg			20		
	MS	2034920-02	ND	10.070	10.000	mg/kg		101		75 - 125	
	MSD	2034920-02	ND	10.362	10.000	mg/kg	2.9	104	20	75 - 125	
Chromium	DUP	**2034920-02**	**36.802**	**38.486**		**mg/kg**	**4.5**		**20**		
	MS	**2034920-02**	**36.802**	**44.864**	**10.000**	**mg/kg**		**80.6**		**75 - 125**	
	MSD	**2034920-02**	**36.802**	**43.775**	**10.000**	**mg/kg**	**2.5**	**69.7**	**20**	**75 - 125**	**Q03**
Cobalt	DUP	2034920-02	7.9240	8.0350		mg/kg	1.4		20		
	MS	2034920-02	7.9240	16.590	10.000	mg/kg		86.7		75 - 125	
	MSD	2034920-02	7.9240	16.228	10.000	mg/kg	2.2	83.0	20	75 - 125	
Copper	DUP	2034920-02	30.120	30.907		mg/kg	2.6		20		
	MS	2034920-02	30.120	53.703	25.000	mg/kg		94.3		75 - 125	
	MSD	2034920-02	30.120	54.429	25.000	mg/kg	1.3	97.2	20	75 - 125	
Lead	DUP	2034920-02	52.277	52.283		mg/kg	0.0		20		
	MS	2034920-02	52.277	77.682	25.000	mg/kg		102		75 - 125	
	MSD	2034920-02	52.277	76.597	25.000	mg/kg	1.4	97.3	20	75 - 125	
Molybdenum	DUP	**2034920-02**	**0.71500**	**0.87825**		**mg/kg**	**20.5**		**20**		**A02**
	MS	**2034920-02**	**0.71500**	**9.2858**	**10.000**	**mg/kg**		**85.7**		**75 - 125**	
	MSD	**2034920-02**	**0.71500**	**9.7518**	**10.000**	**mg/kg**	**4.9**	**90.4**	**20**	**75 - 125**	
Nickel	DUP	2034920-02	33.916	35.642		mg/kg	5.0		20		
	MS	2034920-02	33.916	54.420	25.000	mg/kg		82.0		75 - 125	
	MSD	2034920-02	33.916	53.398	25.000	mg/kg	1.9	77.9	20	75 - 125	
Selenium	DUP	2034920-02	0.18800	ND		mg/kg			20		
	MS	2034920-02	0.18800	25.418	25.000	mg/kg		101		75 - 125	
	MSD	2034920-02	0.18800	27.408	25.000	mg/kg	7.5	109	20	75 - 125	
Silver	DUP	2034920-02	0.14675	0.15125		mg/kg	3.0		20		J
	MS	2034920-02	0.14675	9.8810	10.000	mg/kg		97.3		75 - 125	
	MSD	2034920-02	0.14675	10.422	10.000	mg/kg	5.3	103	20	75 - 125	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B093972	Used client sample: N										
Thallium	DUP	2034920-02	0.10175	0.087250		mg/kg	15.3		20		J
	MS	2034920-02	0.10175	9.9242	10.000	mg/kg		98.2		75 - 125	
	MSD	2034920-02	0.10175	10.032	10.000	mg/kg	1.1	99.3	20	75 - 125	
Vanadium	DUP	2034920-02	38.447	39.486		mg/kg	2.7		20		
	MS	2034920-02	38.447	47.985	10.000	mg/kg		95.4		75 - 125	
	MSD	2034920-02	38.447	46.306	10.000	mg/kg	3.6	78.6	20	75 - 125	
Zinc	DUP	2034920-02	76.734	74.554		mg/kg	2.9		20		
	MS	2034920-02	76.734	98.128	25.000	mg/kg		85.6		75 - 125	
	MSD	2034920-02	76.734	98.863	25.000	mg/kg	0.7	88.5	20	75 - 125	
QC Batch ID: B093993	Used client sample: N										
Mercury	DUP	2034727-01	0.060317	0.051111		mg/kg	16.5		20		J
	MS	2034727-01	0.060317	0.92857	0.79365	mg/kg		109		80 - 120	
	MSD	2034727-01	0.060317	0.87460	0.79365	mg/kg	6.0	103	20	80 - 120	

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Reported: 12/04/2020 16:12
Project: SMUD Soil Samples
Project Number: 60632793 SMUD 59th St.
Project Manager: Keegan George

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration was more than 4 times the spike level.
A10	Detection and quantitation limits were raised due to matrix interference.
A20	Surrogate is low due to matrix interference. Interference verified through second extraction/analysis.
A52	Chromatogram not typical of diesel.
A57	Chromatogram not typical of motor oil.
Q03	Matrix spike recovery(s) was(were) not within the control limits.

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Date of Report: 12/28/2020

Andy Shepard

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Client Project:	[none]
BCL Project:	SMUD- No CLP
BCL Work Order:	2037036
Invoice ID:	B402113

Enclosed are the results of analyses for samples received by the laboratory on 12/17/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

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Chain of Custody and Cooler Receipt Form for 2037036 Page 1 of 2

AECOM
2020 L Street, Suite 400
Sacramento, California 95811, United States
T +1-916-414-5800
F +1-916-414-5850
aecom.com

20-37036

CHAIN OF CUSTODY RECORD
100802

6-day TAT

RUSH!

Task or Subtask (one per form)

Laboratory Name and Location: BC Labs Bakersfield, CA

Contract Name: SMUD

~~Charge Number~~: PM - Keegan George (916) 732-5548

Sample Number	Collection Date	Collection Time	Sampler's Initials	Number of Units	Container Type	Matrix	Preservative	Field Prep	Type of Analysis	QC Requested	Location	Sample Depth Beg - End	Sample Type
~~VW-15~~ JJC	~~12.15.20~~	~~1500 JR~~		~~1~~	~~16 oz jar~~	~~SO~~	~~n/a~~				~~VW-15~~		
-1 SO-VW15-01	12/15/20	1500 JR		1	16oz jar	SO	n/a		8260/8270/8015M/8082/~~8010/7471~~ JJC 6020CAM metals			2' bgs	N

CHK BY [signature]
DISTRIBUTION JKR JLM MM MLP RM RAE
SUB OUT

Released By:	Date	Time	Cooler ID: 12/16/20-01			Sampling Comments:
[signature]	12/16/20	07:26				
Received By:	**Date**	**Time**	**Relinquished By:**	**Date**	**Time**	
[signature]	12/16/2020	0726	[signature]	12/16/2020	1000	
[signature]	12/17/20	945				
	/ /	:				
	/ /	:				
	/ /	:				
Disposal Confirmed By:	**Date**	**Time**	**Chain of Custody Returned By:**	**Date**	**Time**	
	/ /	:				

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Chain of Custody and Cooler Receipt Form for 2037036 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 20-37036

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)

FREE LIQUID
YES ☐ NO ☐
W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: glass Thermometer ID: 274 Date/Time 12-17-20 9:45

Temperature: (A) 2.6 °C / (C) 2.6 °C Analyst Init TKS

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz (16oz) 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAAS Date/Time: 12/17/20 1950

A = Actual / C = Corrected

Rev 21 05/23/2016

S:\WPDocsWordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2037036-01	**COC Number:**	---	**Receive Date:**	12/17/2020 09:45
	Project Number:	---	**Sampling Date:**	12/15/2020 15:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SO-VW15-01	**Lab Matrix:**	Solids
	Sampled By:	---	**Sample Type:**	Soil

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

PCB Analysis (EPA Method 8082)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
PCB-1016	ND	mg/kg	0.050	0.012	EPA-8082	50	A10	1
PCB-1221	ND	mg/kg	0.050	0.016	EPA-8082	50	A10	1
PCB-1232	ND	mg/kg	0.050	0.013	EPA-8082	50	A10	1
PCB-1242	ND	mg/kg	0.050	0.0075	EPA-8082	50	A10	1
PCB-1248	ND	mg/kg	0.050	0.010	EPA-8082	50	A10	1
PCB-1254	ND	mg/kg	0.050	0.0080	EPA-8082	50	A10	1
PCB-1260	**0.010**	**mg/kg**	**0.050**	**0.0090**	**EPA-8082**	50	**J,A10**	1
Total PCB's (Summation)	ND	mg/kg	0.050	0.025	EPA-8082	50	A10	1
Decachlorobiphenyl (Surrogate)	25.0	%	40 - 120 (LCL - UCL)		EPA-8082		A10,A20	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8082	12/22/20 10:00	12/22/20 15:25	HKS	GC-14	5.017	B095815	EPA 3550B

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
Bromobenzene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.0050	0.00081	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Bromoform	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Bromomethane	ND	mg/kg	0.0050	0.0017	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.0050	0.00076	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.0050	0.00085	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.0050	0.00077	EPA-8260B			1
Chloroethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
Chloroform	ND	mg/kg	0.0050	0.00090	EPA-8260B			1
Chloromethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0050	0.00096	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.0050	0.00082	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.0050	0.00064	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	0.00054	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	0.0037	EPA-8260B			1
Total 1,2-Dichloroethene	ND	mg/kg	0.010	0.0043	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
1,1-Dichloropropene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00058	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Total 1,3-Dichloropropene	ND	mg/kg	0.010	0.0013	EPA-8260B			1
Ethylbenzene	ND	mg/kg	0.0050	0.00069	EPA-8260B			1
Hexachlorobutadiene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.010	0.0011	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00056	EPA-8260B			1
Naphthalene	ND	mg/kg	0.0050	0.00099	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
Styrene	ND	mg/kg	0.0050	0.00062	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00095	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00084	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.0050	0.00097	EPA-8260B			1
Toluene	ND	mg/kg	0.0050	0.00069	EPA-8260B			1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.0050	0.00094	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.0050	0.00074	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.0050	0.0019	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0050	0.0010	EPA-8260B			1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.010	0.0025	EPA-8260B			1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.058	Luft-GC/MS			1
1,2-Dichloroethane-d4 (Surrogate)	98.7	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.7	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.7	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	12/18/20 14:10	12/18/20 18:12	RCC	MS-V17	1	B095052	EPA 5030 Soil MS

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Acenaphthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Acenaphthylene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Aldrin	ND	mg/kg	1.0	0.067	EPA-8270C	1.4	A10	1
Aniline	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
Anthracene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzidine	ND	mg/kg	30	0.093	EPA-8270C		A10	1
Benzo[a]anthracene	ND	mg/kg	1.0	0.077	EPA-8270C		A10	1
Benzo[b]fluoranthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzo[k]fluoranthene	ND	mg/kg	1.0	0.082	EPA-8270C		A10	1
Benzo[a]pyrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzo[g,h,i]perylene	ND	mg/kg	1.0	0.13	EPA-8270C		A10	1
Benzoic acid	ND	mg/kg	5.0	0.14	EPA-8270C		A10	1
Benzyl alcohol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Benzyl butyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
alpha-BHC	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
beta-BHC	ND	mg/kg	1.0	0.075	EPA-8270C		A10	1
delta-BHC	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
gamma-BHC (Lindane)	ND	mg/kg	1.0	0.067	EPA-8270C	4.0	A10	1
bis(2-Chloroethoxy)methane	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
bis(2-Chloroethyl) ether	ND	mg/kg	1.0	0.097	EPA-8270C		A10	1
bis(2-Chloroisopropyl)ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
bis(2-Ethylhexyl)phthalate	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
4-Bromophenyl phenyl ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chloroaniline	ND	mg/kg	1.0	0.15	EPA-8270C		A10	1
2-Chloronaphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chlorophenyl phenyl ether	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Chrysene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4,4'-DDD	ND	mg/kg	1.0	0.067	EPA-8270C	1.0	A10	1
4,4'-DDE	ND	mg/kg	1.0	0.068	EPA-8270C	1.0	A10	1
4,4'-DDT	ND	mg/kg	1.0	0.067	EPA-8270C	1.0	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Dibenzofuran	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
1,3-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,4-Dichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3,3-Dichlorobenzidine	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
Dieldrin	ND	mg/kg	1.0	0.077	EPA-8270C	8.0	A10	1
Diethyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Dimethyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Di-n-butyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dinitrotoluene	ND	mg/kg	1.0	0.085	EPA-8270C		A10	1
2,6-Dinitrotoluene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Di-n-octyl phthalate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2-Diphenylhydrazine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Endosulfan I	ND	mg/kg	2.0	0.088	EPA-8270C		A10	1
Endosulfan II	ND	mg/kg	2.0	0.088	EPA-8270C		A10	1
Endosulfan sulfate	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Endrin	ND	mg/kg	2.0	0.086	EPA-8270C	0.2	A10	1
Endrin aldehyde	ND	mg/kg	5.0	0.070	EPA-8270C		A10	1
Fluoranthene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Fluorene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Heptachlor	ND	mg/kg	1.0	0.067	EPA-8270C	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	1.0	0.13	EPA-8270C		A10	1
Hexachlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Hexachlorobutadiene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Hexachlorocyclopentadiene	ND	mg/kg	1.0	0.15	EPA-8270C		A10	1
Hexachloroethane	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	1.0	0.069	EPA-8270C		A10	1
Isophorone	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2-Methylnaphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Naphthalene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2-Naphthylamine	ND	mg/kg	30	0.36	EPA-8270C		A10	1
2-Nitroaniline	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3-Nitroaniline	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
4-Nitroaniline	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
Nitrobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
N-Nitrosodimethylamine	ND	mg/kg	1.0	0.40	EPA-8270C		A10	1
N-Nitrosodi-N-propylamine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
N-Nitrosodiphenylamine	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Phenanthrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
Pyrene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
1,2,4-Trichlorobenzene	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Chloro-3-methylphenol	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
2-Chlorophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dichlorophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4-Dimethylphenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4,6-Dinitro-2-methylphenol	ND	mg/kg	5.0	0.067	EPA-8270C		A10	1
2,4-Dinitrophenol	ND	mg/kg	5.0	0.067	EPA-8270C		A10	1
2-Methylphenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
3- & 4-Methylphenol	ND	mg/kg	2.0	0.14	EPA-8270C		A10	1
2-Nitrophenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
4-Nitrophenol	ND	mg/kg	2.0	0.18	EPA-8270C		A10	1
Pentachlorophenol	ND	mg/kg	2.0	0.17	EPA-8270C	17	A10	1
Phenol	ND	mg/kg	1.0	0.067	EPA-8270C		A10	1
2,4,5-Trichlorophenol	ND	mg/kg	2.0	0.11	EPA-8270C		A10	1
2,4,6-Trichlorophenol	ND	mg/kg	2.0	0.067	EPA-8270C		A10	1
2-Fluorophenol (Surrogate)	43.5	%	20 - 130 (LCL - UCL)		EPA-8270C		A10	1
Phenol-d5 (Surrogate)	44.4	%	30 - 130 (LCL - UCL)		EPA-8270C		A10	1
Nitrobenzene-d5 (Surrogate)	32.8	%	30 - 130 (LCL - UCL)		EPA-8270C		A10	1
2-Fluorobiphenyl (Surrogate)	22.3	%	30 - 140 (LCL - UCL)		EPA-8270C		A10,S09	1
2,4,6-Tribromophenol (Surrogate)	27.6	%	20 - 150 (LCL - UCL)		EPA-8270C		A10	1
p-Terphenyl-d14 (Surrogate)	25.7	%	30 - 150 (LCL - UCL)		EPA-8270C		A10,S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C	12/22/20 11:30	12/23/20 03:37	MK1	MS-B8	9.437	B095811	EPA 3550B

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Petroleum Hydrocarbons

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Light Naptha	ND	mg/kg	100	40	EPA-8015B/FFP	ND	A01	1
TPH - Aviation Gas	ND	mg/kg	100	40	EPA-8015B/FFP	ND	A01	1
TPH - Stoddard Solvent	ND	mg/kg	40	10	EPA-8015B/FFP	ND	A01	1
TPH - Heavy Naptha	ND	mg/kg	20	10	EPA-8015B/FFP	ND	A01	1
TPH - Gasoline	ND	mg/kg	40	10	EPA-8015B/FFP	ND	A01	1
TPH - Jet Fuel (JP4)	ND	mg/kg	20	10	EPA-8015B/FFP	ND	A01	1
TPH - Jet Fuel (JP5)	ND	mg/kg	20	9.2	EPA-8015B/FFP	ND	A01	1
TPH - Jet Fuel (JP8)	ND	mg/kg	20	10	EPA-8015B/FFP	ND	A01	1
TPH - Kerosene	ND	mg/kg	20	2.8	EPA-8015B/FFP	ND	A01	1
TPH - Diesel (FFP)	**40**	**mg/kg**	**20**	**4.4**	**EPA-8015B/FFP**	ND	**A01,A52**	1
TPH - Fuel Oil #6	ND	mg/kg	20	10	EPA-8015B/FFP	ND	A01	1
TPH - Crude Oil	ND	mg/kg	40	5.6	EPA-8015B/FFP	ND	A01	1
TPH - Hydraulic Oil / Motor Oil	**510**	**mg/kg**	**40**	**14**	**EPA-8015B/FFP**	ND	**A01,A57**	1
TPH - WD-40	ND	mg/kg	20	10	EPA-8015B/FFP	ND	A01	1
Tetracosane (Surrogate)	26.8	%	30 - 130 (LCL - UCL)		EPA-8015B/FFP		A01,A20	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	12/22/20 14:30	12/22/20 16:38	BUP	GC-13	2	B095810	EPA 3550B

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

BCL Sample ID: 2037036-01 | **Client Sample Name:** SO-VW15-01, 12/15/2020 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Antimony	**0.26**	**mg/kg**	**0.50**	**0.080**	**EPA-6020**	500	**J**	1
Arsenic	**7.3**	**mg/kg**	**0.50**	**0.17**	**EPA-6020**	500		1
Barium	**130**	**mg/kg**	**0.25**	**0.054**	**EPA-6020**	10000		1
Beryllium	**0.19**	**mg/kg**	**0.25**	**0.041**	**EPA-6020**	75	**J**	1
Cadmium	**0.32**	**mg/kg**	**0.25**	**0.048**	**EPA-6020**	100		2
Chromium	**27**	**mg/kg**	**0.75**	**0.25**	**EPA-6020**	2500		1
Cobalt	**4.8**	**mg/kg**	**0.25**	**0.049**	**EPA-6020**	8000		1
Copper	**70**	**mg/kg**	**0.50**	**0.099**	**EPA-6020**	2500		1
Lead	**9.2**	**mg/kg**	**0.25**	**0.12**	**EPA-6020**	1000		2
Mercury	ND	mg/kg	0.050	0.021	EPA-6020A	20		3
Molybdenum	**1.4**	**mg/kg**	**0.25**	**0.045**	**EPA-6020**	3500		1
Nickel	**27**	**mg/kg**	**0.50**	**0.11**	**EPA-6020**	2000		1
Selenium	**0.55**	**mg/kg**	**0.50**	**0.11**	**EPA-6020**	100		2
Silver	**0.11**	**mg/kg**	**0.25**	**0.051**	**EPA-6020**	500	**J**	1
Thallium	**0.14**	**mg/kg**	**0.25**	**0.049**	**EPA-6020**	700	**J**	4
Vanadium	**37**	**mg/kg**	**0.75**	**0.27**	**EPA-6020**	2400		1
Zinc	**44**	**mg/kg**	**2.5**	**0.50**	**EPA-6020**	5000		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6020	12/18/20 09:01	12/21/20 15:47	EAR	PE-EL4	0.935	B095430	EPA 3050B
2	EPA-6020	12/18/20 09:01	12/21/20 22:05	ARD	PE-EL4	0.935	B095430	EPA 3050B
3	EPA-6020A	12/18/20 09:01	12/21/20 15:47	EAR	PE-EL4	0.935	B095430	EPA 3050B
4	EPA-6020	12/18/20 09:01	12/22/20 11:57	ARD	PE-EL4	0.935	B095430	EPA 3050B

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

PCB Analysis (EPA Method 8082)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095815						
PCB-1016	B095815-BLK1	ND	mg/kg	0.010	0.0023	
PCB-1221	B095815-BLK1	ND	mg/kg	0.010	0.0033	
PCB-1232	B095815-BLK1	ND	mg/kg	0.010	0.0026	
PCB-1242	B095815-BLK1	ND	mg/kg	0.010	0.0015	
PCB-1248	B095815-BLK1	ND	mg/kg	0.010	0.0021	
PCB-1254	B095815-BLK1	ND	mg/kg	0.010	0.0016	
PCB-1260	B095815-BLK1	ND	mg/kg	0.010	0.0018	
Total PCB's (Summation)	B095815-BLK1	ND	mg/kg	0.010	0.0050	
Decachlorobiphenyl (Surrogate)	**B095815-BLK1**	**90.0**	%	**40 - 120 (LCL - UCL)**		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

PCB Analysis (EPA Method 8082)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B095815										
PCB-1016	B095815-BS1	LCS	0.050502	0.083612	mg/kg	60.4		60 - 120		
PCB-1260	B095815-BS1	LCS	0.052508	0.083612	mg/kg	62.8		60 - 120		
Decachlorobiphenyl (Surrogate)	B095815-BS1	LCS	0.012709	0.020067	mg/kg	63.3		40 - 120		

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Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

PCB Analysis (EPA Method 8082)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095815	Used client sample: N										
PCB-1016	MS	2034722-86	ND	0.051351	0.084459	mg/kg		60.8		60 - 120	
	MSD	2034722-86	ND	0.049834	0.083056	mg/kg	3.0	60.0	30	60 - 120	
PCB-1260	MS	2034722-86	ND	0.052365	0.084459	mg/kg		62.0		60 - 120	
	MSD	2034722-86	ND	0.049834	0.083056	mg/kg	5.0	60.0	30	60 - 120	
Decachlorobiphenyl (Surrogate)	MS	2034722-86	ND	0.012162	0.020270	mg/kg		60.0		40 - 120	
	MSD	2034722-86	ND	0.011628	0.019934	mg/kg	4.5	58.3		40 - 120	

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Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

PCB Analysis (EPA Method 8082)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2023073-1									
PCB-1016	2023073-CCV1	CCV, Beginning	12/22/2020 14:21	219.00	250.00	ug/kg	87.6	85 - 115	
	2023073-CCV2	CCV, Ending	12/22/2020 16:18	223.00	250.00	ug/kg	89.2	85 - 115	
PCB-1260	2023073-CCV1	CCV, Beginning	12/22/2020 14:21	232.00	250.00	ug/kg	92.8	85 - 115	
	2023073-CCV2	CCV, Ending	12/22/2020 16:18	214.00	250.00	ug/kg	85.6	85 - 115	
Decachlorobiphenyl (Surrogate)	2023073-CCV1	CCV, Beginning	12/22/2020 14:21	64.000	60.000	ug/kg	107	85 - 115	
	2023073-CCV2	CCV, Ending	12/22/2020 16:18	62.000	60.000	ug/kg	103	85 - 115	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095052						
Benzene	B095052-BLK1	ND	mg/kg	0.0050	0.00067	
Bromobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00087	
Bromochloromethane	B095052-BLK1	ND	mg/kg	0.0050	0.00081	
Bromodichloromethane	B095052-BLK1	ND	mg/kg	0.0050	0.00078	
Bromoform	B095052-BLK1	ND	mg/kg	0.0050	0.00070	
Bromomethane	B095052-BLK1	ND	mg/kg	0.0050	0.0017	
n-Butylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00076	
sec-Butylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00071	
tert-Butylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00085	
Carbon tetrachloride	B095052-BLK1	ND	mg/kg	0.0050	0.00078	
Chlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00077	
Chloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.0011	
Chloroform	B095052-BLK1	ND	mg/kg	0.0050	0.00090	
Chloromethane	B095052-BLK1	ND	mg/kg	0.0050	0.0011	
2-Chlorotoluene	B095052-BLK1	ND	mg/kg	0.0050	0.00087	
4-Chlorotoluene	B095052-BLK1	ND	mg/kg	0.0050	0.00070	
Dibromochloromethane	B095052-BLK1	ND	mg/kg	0.0050	0.00080	
1,2-Dibromo-3-chloropropane	B095052-BLK1	ND	mg/kg	0.0050	0.00096	
1,2-Dibromoethane	B095052-BLK1	ND	mg/kg	0.0050	0.00082	
Dibromomethane	B095052-BLK1	ND	mg/kg	0.0050	0.0014	
1,2-Dichlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00079	
1,3-Dichlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00073	
1,4-Dichlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00073	
Dichlorodifluoromethane	B095052-BLK1	ND	mg/kg	0.0050	0.00079	
1,1-Dichloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00064	
1,2-Dichloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00073	
1,1-Dichloroethene	B095052-BLK1	ND	mg/kg	0.0050	0.0011	
cis-1,2-Dichloroethene	B095052-BLK1	ND	mg/kg	0.0050	0.00054	
trans-1,2-Dichloroethene	B095052-BLK1	ND	mg/kg	0.0050	0.0037	
Total 1,2-Dichloroethene	B095052-BLK1	ND	mg/kg	0.010	0.0043	
1,2-Dichloropropane	B095052-BLK1	ND	mg/kg	0.0050	0.00080	
1,3-Dichloropropane	B095052-BLK1	ND	mg/kg	0.0050	0.00067	
2,2-Dichloropropane	B095052-BLK1	ND	mg/kg	0.0050	0.00067	
1,1-Dichloropropene	B095052-BLK1	ND	mg/kg	0.0050	0.00067	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095052						
cis-1,3-Dichloropropene	B095052-BLK1	ND	mg/kg	0.0050	0.00058	
trans-1,3-Dichloropropene	B095052-BLK1	ND	mg/kg	0.0050	0.00066	
Total 1,3-Dichloropropene	B095052-BLK1	ND	mg/kg	0.010	0.0013	
Ethylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00069	
Hexachlorobutadiene	B095052-BLK1	ND	mg/kg	0.0050	0.00067	
Isopropylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00080	
p-Isopropyltoluene	B095052-BLK1	ND	mg/kg	0.0050	0.00059	
Methylene chloride	B095052-BLK1	ND	mg/kg	0.010	0.0011	
Methyl t-butyl ether	B095052-BLK1	ND	mg/kg	0.0050	0.00056	
Naphthalene	B095052-BLK1	ND	mg/kg	0.0050	0.00099	
n-Propylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00071	
Styrene	B095052-BLK1	ND	mg/kg	0.0050	0.00062	
1,1,1,2-Tetrachloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00095	
1,1,2,2-Tetrachloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00084	
Tetrachloroethene	B095052-BLK1	ND	mg/kg	0.0050	0.00097	
Toluene	B095052-BLK1	ND	mg/kg	0.0050	0.00069	
1,2,3-Trichlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.0015	
1,2,4-Trichlorobenzene	B095052-BLK1	ND	mg/kg	0.0050	0.0014	
1,1,1-Trichloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00067	
1,1,2-Trichloroethane	B095052-BLK1	ND	mg/kg	0.0050	0.00094	
Trichloroethene	B095052-BLK1	ND	mg/kg	0.0050	0.00074	
Trichlorofluoromethane	B095052-BLK1	ND	mg/kg	0.0050	0.0015	
1,2,3-Trichloropropane	B095052-BLK1	ND	mg/kg	0.0050	0.0019	
1,1,2-Trichloro-1,2,2-trifluoroethane	B095052-BLK1	ND	mg/kg	0.0050	0.0010	
1,2,4-Trimethylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00080	
1,3,5-Trimethylbenzene	B095052-BLK1	ND	mg/kg	0.0050	0.00066	
Vinyl chloride	B095052-BLK1	ND	mg/kg	0.0050	0.00059	
Total Xylenes	B095052-BLK1	ND	mg/kg	0.010	0.0025	
Total Purgeable Petroleum Hydrocarbons	B095052-BLK1	ND	mg/kg	0.20	0.058	
1,2-Dichloroethane-d4 (Surrogate)	**B095052-BLK1**	**109**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B095052-BLK1**	**102**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B095052-BLK1**	**95.1**	%	**74 - 121 (LCL - UCL)**		

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AECOM - Sacramento
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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B095052										
Benzene	B095052-BS1	LCS	0.12258	0.12500	mg/kg	98.1		70 - 130		
Bromodichloromethane	B095052-BS1	LCS	0.10140	0.12500	mg/kg	81.1		70 - 130		
Chlorobenzene	B095052-BS1	LCS	0.11557	0.12500	mg/kg	92.5		70 - 130		
Chloroethane	B095052-BS1	LCS	0.14620	0.12500	mg/kg	117		70 - 130		
1,4-Dichlorobenzene	B095052-BS1	LCS	0.10890	0.12500	mg/kg	87.1		70 - 130		
1,1-Dichloroethane	B095052-BS1	LCS	0.12472	0.12500	mg/kg	99.8		70 - 130		
1,1-Dichloroethene	B095052-BS1	LCS	0.14366	0.12500	mg/kg	115		70 - 130		
Toluene	B095052-BS1	LCS	0.12371	0.12500	mg/kg	99.0		70 - 130		
Trichloroethene	B095052-BS1	LCS	0.12077	0.12500	mg/kg	96.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B095052-BS1	LCS	0.053860	0.050000	mg/kg	108		70 - 121		
Toluene-d8 (Surrogate)	B095052-BS1	LCS	0.050810	0.050000	mg/kg	102		81 - 117		
4-Bromofluorobenzene (Surrogate)	B095052-BS1	LCS	0.050010	0.050000	mg/kg	100		74 - 121		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095052	Used client sample: N										
Benzene	MS	2034722-88	ND	0.13349	0.12500	mg/kg		107		70 - 130	
	MSD	2034722-88	ND	0.12294	0.12500	mg/kg	8.2	98.4	20	70 - 130	
Bromodichloromethane	MS	2034722-88	ND	0.11877	0.12500	mg/kg		95.0		70 - 130	
	MSD	2034722-88	ND	0.10952	0.12500	mg/kg	8.1	87.6	20	70 - 130	
Chlorobenzene	MS	2034722-88	ND	0.12580	0.12500	mg/kg		101		70 - 130	
	MSD	2034722-88	ND	0.11494	0.12500	mg/kg	9.0	92.0	20	70 - 130	
Chloroethane	MS	2034722-88	ND	0.15593	0.12500	mg/kg		125		70 - 130	
	MSD	2034722-88	ND	0.13433	0.12500	mg/kg	14.9	107	20	70 - 130	
1,4-Dichlorobenzene	MS	2034722-88	ND	0.11944	0.12500	mg/kg		95.6		70 - 130	
	MSD	2034722-88	ND	0.10726	0.12500	mg/kg	10.7	85.8	20	70 - 130	
1,1-Dichloroethane	MS	2034722-88	ND	0.13744	0.12500	mg/kg		110		70 - 130	
	MSD	2034722-88	ND	0.12547	0.12500	mg/kg	9.1	100	20	70 - 130	
1,1-Dichloroethene	MS	2034722-88	ND	0.15525	0.12500	mg/kg		124		70 - 130	
	MSD	2034722-88	ND	0.14050	0.12500	mg/kg	10.0	112	20	70 - 130	
Toluene	MS	2034722-88	ND	0.13548	0.12500	mg/kg		108		70 - 130	
	MSD	2034722-88	ND	0.12290	0.12500	mg/kg	9.7	98.3	20	70 - 130	
Trichloroethene	MS	2034722-88	ND	0.13375	0.12500	mg/kg		107		70 - 130	
	MSD	2034722-88	ND	0.12043	0.12500	mg/kg	10.5	96.3	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2034722-88	ND	0.051910	0.050000	mg/kg		104		70 - 121	
	MSD	2034722-88	ND	0.050790	0.050000	mg/kg	2.2	102		70 - 121	
Toluene-d8 (Surrogate)	MS	2034722-88	ND	0.051320	0.050000	mg/kg		103		81 - 117	
	MSD	2034722-88	ND	0.050650	0.050000	mg/kg	1.3	101		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	2034722-88	ND	0.049410	0.050000	mg/kg		98.8		74 - 121	
	MSD	2034722-88	ND	0.048930	0.050000	mg/kg	1.0	97.9		74 - 121	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022552-1									
Benzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12631	0.12500	mg/kg	101	80 - 120	
Bromobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11538	0.12500	mg/kg	92.3	80 - 120	
Bromochloromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12186	0.12500	mg/kg	97.5	80 - 120	
Bromodichloromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11220	0.12500	mg/kg	89.8	80 - 120	
Bromoform	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.082860	0.12500	mg/kg	66.3	80 - 120	
Bromomethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11868	0.12500	mg/kg	94.9	80 - 120	
n-Butylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12652	0.12500	mg/kg	101	80 - 120	
sec-Butylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12883	0.12500	mg/kg	103	80 - 120	
tert-Butylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12893	0.12500	mg/kg	103	80 - 120	
Carbon tetrachloride	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.10006	0.12500	mg/kg	80.0	80 - 120	
Chlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11879	0.12500	mg/kg	95.0	80 - 120	
Chloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11526	0.12500	mg/kg	92.2	80 - 120	
Chloroform	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12288	0.12500	mg/kg	98.3	80 - 120	
Chloromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.13820	0.12500	mg/kg	111	80 - 120	
2-Chlorotoluene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12019	0.12500	mg/kg	96.2	80 - 120	
4-Chlorotoluene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12095	0.12500	mg/kg	96.8	80 - 120	
Dibromochloromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.096690	0.12500	mg/kg	77.4	80 - 120	
1,2-Dibromo-3-chloropropane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.098000	0.12500	mg/kg	78.4	80 - 120	
1,2-Dibromoethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11534	0.12500	mg/kg	92.3	80 - 120	
Dibromomethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11602	0.12500	mg/kg	92.8	80 - 120	
1,2-Dichlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11455	0.12500	mg/kg	91.6	80 - 120	
1,3-Dichlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11892	0.12500	mg/kg	95.1	80 - 120	
1,4-Dichlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11578	0.12500	mg/kg	92.6	80 - 120	
Dichlorodifluoromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.13502	0.12500	mg/kg	108	80 - 120	
1,1-Dichloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12462	0.12500	mg/kg	99.7	80 - 120	
1,2-Dichloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11820	0.12500	mg/kg	94.6	80 - 120	
1,1-Dichloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12906	0.12500	mg/kg	103	80 - 120	
cis-1,2-Dichloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12489	0.12500	mg/kg	99.9	80 - 120	
trans-1,2-Dichloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12765	0.12500	mg/kg	102	80 - 120	
Total 1,2-Dichloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.25254	0.25000	mg/kg	101	80 - 120	
1,2-Dichloropropane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12137	0.12500	mg/kg	97.1	80 - 120	
1,3-Dichloropropane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11642	0.12500	mg/kg	93.1	80 - 120	
2,2-Dichloropropane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.10797	0.12500	mg/kg	86.4	80 - 120	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022552-1									
1,1-Dichloropropene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12734	0.12500	mg/kg	102	80 - 120	
cis-1,3-Dichloropropene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11558	0.12500	mg/kg	92.5	80 - 120	
trans-1,3-Dichloropropene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.10902	0.12500	mg/kg	87.2	80 - 120	
Total 1,3-Dichloropropene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.22460	0.25000	mg/kg	89.8	80 - 120	
Ethylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12240	0.12500	mg/kg	97.9	80 - 120	
Hexachlorobutadiene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12045	0.12500	mg/kg	96.4	80 - 120	
Isopropylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12571	0.12500	mg/kg	101	80 - 120	
p-Isopropyltoluene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12805	0.12500	mg/kg	102	80 - 120	
Methylene chloride	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11685	0.12500	mg/kg	93.5	80 - 120	
Methyl t-butyl ether	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11736	0.12500	mg/kg	93.9	80 - 120	
Naphthalene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11374	0.12500	mg/kg	91.0	80 - 120	
n-Propylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12820	0.12500	mg/kg	103	80 - 120	
Styrene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12839	0.12500	mg/kg	103	80 - 120	
1,1,1,2-Tetrachloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.10736	0.12500	mg/kg	85.9	80 - 120	
1,1,2,2-Tetrachloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11016	0.12500	mg/kg	88.1	80 - 120	
Tetrachloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11899	0.12500	mg/kg	95.2	80 - 120	
Toluene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12230	0.12500	mg/kg	97.8	80 - 120	
1,2,3-Trichlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11372	0.12500	mg/kg	91.0	80 - 120	
1,2,4-Trichlorobenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11535	0.12500	mg/kg	92.3	80 - 120	
1,1,1-Trichloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11554	0.12500	mg/kg	92.4	80 - 120	
1,1,2-Trichloroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11615	0.12500	mg/kg	92.9	80 - 120	
Trichloroethene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12116	0.12500	mg/kg	96.9	80 - 120	
Trichlorofluoromethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12884	0.12500	mg/kg	103	80 - 120	
1,2,3-Trichloropropane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.11132	0.12500	mg/kg	89.1	80 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12848	0.12500	mg/kg	103	80 - 120	
1,2,4-Trimethylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12385	0.12500	mg/kg	99.1	80 - 120	
1,3,5-Trimethylbenzene	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.12469	0.12500	mg/kg	99.8	80 - 120	
Vinyl chloride	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.14083	0.12500	mg/kg	113	80 - 120	
Total Xylenes	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.37026	0.37500	mg/kg	98.7	80 - 120	
Total Purgeable Petroleum Hydrocarbons	2022552-CCV3	CCV, Beginning	12/18/2020 17:09	0.90507	1.0000	mg/kg	90.5	80 - 120	
1,2-Dichloroethane-d4 (Surrogate)	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.049080	0.050000	mg/kg	98.2	80 - 120	
Toluene-d8 (Surrogate)	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.050340	0.050000	mg/kg	101	81 - 117	
4-Bromofluorobenzene (Surrogate)	2022552-CCV1	CCV, Beginning	12/18/2020 16:28	0.050520	0.050000	mg/kg	101	80 - 120	

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095811						
Acenaphthene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Acenaphthylene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Aldrin	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Aniline	B095811-BLK1	ND	mg/kg	0.20	0.011	
Anthracene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Benzidine	B095811-BLK1	ND	mg/kg	3.0	0.0093	
Benzo[a]anthracene	B095811-BLK1	ND	mg/kg	0.10	0.0077	
Benzo[b]fluoranthene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Benzo[k]fluoranthene	B095811-BLK1	ND	mg/kg	0.10	0.0082	
Benzo[a]pyrene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Benzo[g,h,i]perylene	B095811-BLK1	ND	mg/kg	0.10	0.013	
Benzoic acid	B095811-BLK1	ND	mg/kg	0.50	0.014	
Benzyl alcohol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Benzyl butyl phthalate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
alpha-BHC	B095811-BLK1	ND	mg/kg	0.10	0.0067	
beta-BHC	B095811-BLK1	ND	mg/kg	0.10	0.0075	
delta-BHC	B095811-BLK1	ND	mg/kg	0.10	0.0067	
gamma-BHC (Lindane)	B095811-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Chloroethoxy)methane	B095811-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Chloroethyl) ether	B095811-BLK1	ND	mg/kg	0.10	0.0097	
bis(2-Chloroisopropyl)ether	B095811-BLK1	ND	mg/kg	0.10	0.0067	
bis(2-Ethylhexyl)phthalate	B095811-BLK1	ND	mg/kg	0.20	0.0067	
4-Bromophenyl phenyl ether	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4-Chloroaniline	B095811-BLK1	ND	mg/kg	0.10	0.015	
2-Chloronaphthalene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4-Chlorophenyl phenyl ether	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Chrysene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4,4'-DDD	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4,4'-DDE	B095811-BLK1	ND	mg/kg	0.10	0.0068	
4,4'-DDT	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Dibenzo[a,h]anthracene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Dibenzofuran	B095811-BLK1	ND	mg/kg	0.10	0.0067	
1,2-Dichlorobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
1,3-Dichlorobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095811						
1,4-Dichlorobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
3,3-Dichlorobenzidine	B095811-BLK1	ND	mg/kg	0.20	0.0067	
Dieldrin	B095811-BLK1	ND	mg/kg	0.10	0.0077	
Diethyl phthalate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Dimethyl phthalate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Di-n-butyl phthalate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dinitrotoluene	B095811-BLK1	ND	mg/kg	0.10	0.0085	
2,6-Dinitrotoluene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Di-n-octyl phthalate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
1,2-Diphenylhydrazine	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Endosulfan I	B095811-BLK1	ND	mg/kg	0.20	0.0088	
Endosulfan II	B095811-BLK1	ND	mg/kg	0.20	0.0088	
Endosulfan sulfate	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Endrin	B095811-BLK1	ND	mg/kg	0.20	0.0086	
Endrin aldehyde	B095811-BLK1	ND	mg/kg	0.50	0.0070	
Fluoranthene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Fluorene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Heptachlor	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Heptachlor epoxide	B095811-BLK1	ND	mg/kg	0.10	0.013	
Hexachlorobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Hexachlorobutadiene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Hexachlorocyclopentadiene	B095811-BLK1	ND	mg/kg	0.10	0.015	
Hexachloroethane	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Indeno[1,2,3-cd]pyrene	B095811-BLK1	ND	mg/kg	0.10	0.0069	
Isophorone	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2-Methylnaphthalene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Naphthalene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2-Naphthylamine	B095811-BLK1	ND	mg/kg	3.0	0.036	
2-Nitroaniline	B095811-BLK1	ND	mg/kg	0.10	0.0067	
3-Nitroaniline	B095811-BLK1	ND	mg/kg	0.20	0.0067	
4-Nitroaniline	B095811-BLK1	ND	mg/kg	0.20	0.011	
Nitrobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
N-Nitrosodimethylamine	B095811-BLK1	ND	mg/kg	0.10	0.040	
N-Nitrosodi-N-propylamine	B095811-BLK1	ND	mg/kg	0.10	0.0067	

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095811						
N-Nitrosodiphenylamine	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Phenanthrene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
Pyrene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
1,2,4-Trichlorobenzene	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4-Chloro-3-methylphenol	B095811-BLK1	ND	mg/kg	0.20	0.0067	
2-Chlorophenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dichlorophenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2,4-Dimethylphenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4,6-Dinitro-2-methylphenol	B095811-BLK1	ND	mg/kg	0.50	0.0067	
2,4-Dinitrophenol	B095811-BLK1	ND	mg/kg	0.50	0.0067	
2-Methylphenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
3- & 4-Methylphenol	B095811-BLK1	ND	mg/kg	0.20	0.014	
2-Nitrophenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
4-Nitrophenol	B095811-BLK1	ND	mg/kg	0.20	0.018	
Pentachlorophenol	B095811-BLK1	ND	mg/kg	0.20	0.017	
Phenol	B095811-BLK1	ND	mg/kg	0.10	0.0067	
2,4,5-Trichlorophenol	B095811-BLK1	ND	mg/kg	0.20	0.011	
2,4,6-Trichlorophenol	B095811-BLK1	ND	mg/kg	0.20	0.0067	
2-Fluorophenol (Surrogate)	**B095811-BLK1**	**92.1**	%	**20 - 130 (LCL - UCL)**		
Phenol-d5 (Surrogate)	**B095811-BLK1**	**91.1**	%	**30 - 130 (LCL - UCL)**		
Nitrobenzene-d5 (Surrogate)	**B095811-BLK1**	**86.7**	%	**30 - 130 (LCL - UCL)**		
2-Fluorobiphenyl (Surrogate)	**B095811-BLK1**	**93.5**	%	**30 - 140 (LCL - UCL)**		
2,4,6-Tribromophenol (Surrogate)	**B095811-BLK1**	**95.1**	%	**20 - 150 (LCL - UCL)**		
p-Terphenyl-d14 (Surrogate)	**B095811-BLK1**	**111**	%	**30 - 150 (LCL - UCL)**		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B095811										
Acenaphthene	B095811-BS1	LCS	1.2751	1.6722	mg/kg	76.2		50 - 130		
1,4-Dichlorobenzene	B095811-BS1	LCS	1.5671	1.6722	mg/kg	93.7		50 - 130		
2,4-Dinitrotoluene	B095811-BS1	LCS	1.5383	1.6722	mg/kg	92.0		50 - 130		
Hexachlorobenzene	B095811-BS1	LCS	1.7333	1.6722	mg/kg	104		40 - 130		
Hexachlorobutadiene	B095811-BS1	LCS	1.4019	1.6722	mg/kg	83.8		50 - 130		
Hexachloroethane	B095811-BS1	LCS	1.5231	1.6722	mg/kg	91.1		50 - 130		
Nitrobenzene	B095811-BS1	LCS	1.5545	1.6722	mg/kg	93.0		50 - 130		
N-Nitrosodi-N-propylamine	B095811-BS1	LCS	1.2959	1.6722	mg/kg	77.5		40 - 120		
Pyrene	B095811-BS1	LCS	1.5370	1.6722	mg/kg	91.9		40 - 150		
1,2,4-Trichlorobenzene	B095811-BS1	LCS	1.6227	1.6722	mg/kg	97.0		50 - 120		
4-Chloro-3-methylphenol	B095811-BS1	LCS	1.3479	1.6722	mg/kg	80.6		50 - 130		
2-Chlorophenol	B095811-BS1	LCS	1.3542	1.6722	mg/kg	81.0		50 - 130		
2-Methylphenol	B095811-BS1	LCS	1.3155	1.6722	mg/kg	78.7		50 - 130		
3- & 4-Methylphenol	B095811-BS1	LCS	2.7581	3.3445	mg/kg	82.5		50 - 130		
4-Nitrophenol	B095811-BS1	LCS	1.0347	1.6722	mg/kg	61.9		30 - 130		
Pentachlorophenol	B095811-BS1	LCS	0.83438	1.6722	mg/kg	49.9		20 - 130		
Phenol	B095811-BS1	LCS	1.2695	1.6722	mg/kg	75.9		40 - 120		
2,4,6-Trichlorophenol	B095811-BS1	LCS	1.2857	1.6722	mg/kg	76.9		50 - 130		
2-Fluorophenol (Surrogate)	B095811-BS1	LCS	1.1148	1.3378	mg/kg	83.3		20 - 130		
Phenol-d5 (Surrogate)	B095811-BS1	LCS	1.1486	1.3378	mg/kg	85.9		30 - 130		
Nitrobenzene-d5 (Surrogate)	B095811-BS1	LCS	1.1059	1.3378	mg/kg	82.7		30 - 130		
2-Fluorobiphenyl (Surrogate)	B095811-BS1	LCS	1.1950	1.3378	mg/kg	89.3		30 - 140		
2,4,6-Tribromophenol (Surrogate)	B095811-BS1	LCS	1.1718	1.3378	mg/kg	87.6		20 - 150		
p-Terphenyl-d14 (Surrogate)	B095811-BS1	LCS	0.78472	0.66890	mg/kg	117		30 - 150		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095811	Used client sample: N										
Acenaphthene	MS	2036406-01	ND	0.99264	1.6502	mg/kg		60.2		30 - 140	
	MSD	2036406-01	ND	1.1639	1.6556	mg/kg	15.9	70.3	30	30 - 140	
1,4-Dichlorobenzene	MS	2036406-01	ND	1.2231	1.6502	mg/kg		74.1		50 - 130	
	MSD	2036406-01	ND	1.3990	1.6556	mg/kg	13.4	84.5	30	50 - 130	
2,4-Dinitrotoluene	MS	2036406-01	ND	1.2497	1.6502	mg/kg		75.7		50 - 130	
	MSD	2036406-01	ND	1.3868	1.6556	mg/kg	10.4	83.8	30	50 - 130	
Hexachlorobenzene	MS	2036406-01	ND	1.3162	1.6502	mg/kg		79.8		50 - 130	
	MSD	2036406-01	ND	1.5464	1.6556	mg/kg	16.1	93.4	30	50 - 130	
Hexachlorobutadiene	MS	2036406-01	ND	1.0826	1.6502	mg/kg		65.6		50 - 130	
	MSD	2036406-01	ND	1.2550	1.6556	mg/kg	14.7	75.8	30	50 - 130	
Hexachloroethane	MS	2036406-01	ND	1.1566	1.6502	mg/kg		70.1		50 - 130	
	MSD	2036406-01	ND	1.3656	1.6556	mg/kg	16.6	82.5	30	50 - 130	
Nitrobenzene	MS	2036406-01	ND	1.2726	1.6502	mg/kg		77.1		30 - 120	
	MSD	2036406-01	ND	1.4338	1.6556	mg/kg	11.9	86.6	30	30 - 120	
N-Nitrosodi-N-propylamine	MS	2036406-01	ND	1.0347	1.6502	mg/kg		62.7		20 - 130	
	MSD	2036406-01	ND	1.1715	1.6556	mg/kg	12.4	70.8	30	20 - 130	
Pyrene	MS	2036406-01	ND	1.2441	1.6502	mg/kg		75.4		40 - 140	
	MSD	2036406-01	ND	1.6328	1.6556	mg/kg	27.0	98.6	30	40 - 140	
1,2,4-Trichlorobenzene	MS	2036406-01	ND	1.2617	1.6502	mg/kg		76.5		50 - 130	
	MSD	2036406-01	ND	1.4497	1.6556	mg/kg	13.9	87.6	30	50 - 130	
4-Chloro-3-methylphenol	MS	2036406-01	ND	1.1488	1.6502	mg/kg		69.6		50 - 130	
	MSD	2036406-01	ND	1.2507	1.6556	mg/kg	8.5	75.5	30	50 - 130	
2-Chlorophenol	MS	2036406-01	ND	1.1676	1.6502	mg/kg		70.8		50 - 130	
	MSD	2036406-01	ND	1.2950	1.6556	mg/kg	10.4	78.2	30	50 - 130	
2-Methylphenol	MS	2036406-01	ND	1.1259	1.6502	mg/kg		68.2		50 - 130	
	MSD	2036406-01	ND	1.2222	1.6556	mg/kg	8.2	73.8	30	50 - 130	
3- & 4-Methylphenol	MS	2036406-01	ND	2.3571	3.3003	mg/kg		71.4		50 - 130	
	MSD	2036406-01	ND	2.5765	3.3113	mg/kg	8.9	77.8	30	50 - 130	
4-Nitrophenol	MS	2036406-01	ND	1.0293	1.6502	mg/kg		62.4		30 - 140	
	MSD	2036406-01	ND	1.1099	1.6556	mg/kg	7.5	67.0	30	30 - 140	
Pentachlorophenol	MS	2036406-01	ND	0.93464	1.6502	mg/kg		56.6		30 - 130	
	MSD	2036406-01	ND	0.98642	1.6556	mg/kg	5.4	59.6	30	30 - 130	
Phenol	MS	2036406-01	ND	1.0735	1.6502	mg/kg		65.1		40 - 150	
	MSD	2036406-01	ND	1.1901	1.6556	mg/kg	10.3	71.9	30	40 - 150	
2,4,6-Trichlorophenol	MS	2036406-01	ND	1.1895	1.6502	mg/kg		72.1		50 - 130	
	MSD	2036406-01	ND	1.2944	1.6556	mg/kg	8.4	78.2	30	50 - 130	

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095811	Used client sample: N										
2-Fluorophenol (Surrogate)	MS	2036406-01	ND	1.0146	1.3201	mg/kg		76.9		20 - 130	
	MSD	2036406-01	ND	1.1454	1.3245	mg/kg	12.1	86.5		20 - 130	
Phenol-d5 (Surrogate)	MS	2036406-01	ND	1.0162	1.3201	mg/kg		77.0		30 - 130	
	MSD	2036406-01	ND	1.1298	1.3245	mg/kg	10.6	85.3		30 - 130	
Nitrobenzene-d5 (Surrogate)	MS	2036406-01	ND	0.92868	1.3201	mg/kg		70.3		30 - 130	
	MSD	2036406-01	ND	1.0715	1.3245	mg/kg	14.3	80.9		30 - 130	
2-Fluorobiphenyl (Surrogate)	MS	2036406-01	ND	0.97822	1.3201	mg/kg		74.1		30 - 140	
	MSD	2036406-01	ND	1.1603	1.3245	mg/kg	17.0	87.6		30 - 140	
2,4,6-Tribromophenol (Surrogate)	MS	2036406-01	ND	1.1206	1.3201	mg/kg		84.9		20 - 150	
	MSD	2036406-01	ND	1.2586	1.3245	mg/kg	11.6	95.0		20 - 150	
p-Terphenyl-d14 (Surrogate)	MS	2036406-01	ND	0.65183	0.66007	mg/kg		98.8		30 - 150	
	MSD	2036406-01	ND	0.87086	0.66225	mg/kg	28.8	132		30 - 150	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022911-1									
Acenaphthene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	54030	50000	ug/kg	108	80 - 120	
1,4-Dichlorobenzene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	53250	50000	ug/kg	106	80 - 120	
2,4-Dinitrotoluene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	57120	50000	ug/kg	114	80 - 120	
Hexachlorobenzene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	55740	50000	ug/kg	111	80 - 120	
Hexachlorobutadiene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	52850	50000	ug/kg	106	80 - 120	
Hexachloroethane	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	52400	50000	ug/kg	105	80 - 120	
Nitrobenzene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	52750	50000	ug/kg	106	80 - 120	
N-Nitrosodi-N-propylamine	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	51580	50000	ug/kg	103	80 - 120	
Pyrene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	52690	50000	ug/kg	105	80 - 120	
1,2,4-Trichlorobenzene	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	54140	50000	ug/kg	108	80 - 120	
4-Chloro-3-methylphenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	55360	50000	ug/kg	111	80 - 120	
2-Chlorophenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	53680	50000	ug/kg	107	80 - 120	
2-Methylphenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	52970	50000	ug/kg	106	80 - 120	
3- & 4-Methylphenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	109860	100000	ug/kg	110	80 - 120	
4-Nitrophenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	55650	50000	ug/kg	111	80 - 120	
Pentachlorophenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	51100	50000	ug/kg	102	80 - 120	
Phenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	55130	50000	ug/kg	110	80 - 120	
2,4,6-Trichlorophenol	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	57090	50000	ug/kg	114	80 - 120	
2-Fluorophenol (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	53600	50000	ug/kg	107	80 - 120	
Phenol-d5 (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	53670	50000	ug/kg	107	80 - 120	
Nitrobenzene-d5 (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	51990	50000	ug/kg	104	80 - 120	
2-Fluorobiphenyl (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	54500	50000	ug/kg	109	80 - 120	
2,4,6-Tribromophenol (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	60630	50000	ug/kg	121	80 - 120	
p-Terphenyl-d14 (Surrogate)	2022911-CCV1	CCV, Beginning	12/22/2020 22:14	26640	25000	ug/kg	107	80 - 120	

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095810						
TPH - Light Naptha	B095810-BLK1	ND	mg/kg	50	20	
TPH - Aviation Gas	B095810-BLK1	ND	mg/kg	50	20	
TPH - Stoddard Solvent	B095810-BLK1	ND	mg/kg	20	5.0	
TPH - Heavy Naptha	B095810-BLK1	ND	mg/kg	10	5.0	
TPH - Gasoline	B095810-BLK1	ND	mg/kg	20	5.0	
TPH - Jet Fuel (JP4)	B095810-BLK1	ND	mg/kg	10	5.0	
TPH - Jet Fuel (JP5)	B095810-BLK1	ND	mg/kg	10	4.6	
TPH - Jet Fuel (JP8)	B095810-BLK1	ND	mg/kg	10	5.0	
TPH - Kerosene	B095810-BLK1	ND	mg/kg	10	1.4	
TPH - Diesel (FFP)	B095810-BLK1	ND	mg/kg	10	2.2	
TPH - Fuel Oil #6	B095810-BLK1	ND	mg/kg	10	5.0	
TPH - Crude Oil	B095810-BLK1	ND	mg/kg	20	2.8	
TPH - Hydraulic Oil / Motor Oil	B095810-BLK1	ND	mg/kg	20	7.0	
TPH - WD-40	B095810-BLK1	ND	mg/kg	10	5.0	
Tetracosane (Surrogate)	**B095810-BLK1**	**69.6**	%	**30 - 130 (LCL - UCL)**		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B095810										
TPH - Diesel (FFP)	B095810-BS1	LCS	67.695	82.508	mg/kg	82.0		64 - 124		
Tetracosane (Surrogate)	B095810-BS1	LCS	2.4031	3.3003	mg/kg	72.8		30 - 130		

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095810	Used client sample: N										
TPH - Diesel (FFP)	MS	2034722-93	ND	70.634	82.781	mg/kg		85.3		52 - 131	
	MSD	2034722-93	ND	73.527	83.893	mg/kg	4.0	87.6	30	52 - 131	
Tetracosane (Surrogate)	MS	2034722-93	ND	2.4916	3.3113	mg/kg		75.2		30 - 130	
	MSD	2034722-93	ND	2.7639	3.3557	mg/kg	10.4	82.4		30 - 130	

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Sacramento, CA 95811

Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Petroleum Hydrocarbons

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022869-1									
TPH - Diesel (FFP)	2022869-CCV1	CCV, Beginning	12/22/2020 06:15	518430	500000	ug/kg	104	85 - 115	
	2022869-CCV4	CCV, Ending	12/22/2020 17:45	535850	500000	ug/kg	107	85 - 115	
TPH - Hydraulic Oil / Motor Oil	2022869-CCV1	CCV, Beginning	12/22/2020 06:15	1020200	1000000	ug/kg	102	85 - 115	
	2022869-CCV4	CCV, Ending	12/22/2020 17:45	1105600	1000000	ug/kg	111	85 - 115	
Tetracosane (Surrogate)	2022869-CCV1	CCV, Beginning	12/22/2020 06:15	19590	20000	ug/kg	98.0	85 - 115	
	2022869-CCV4	CCV, Ending	12/22/2020 17:45	22291	20000	ug/kg	111	85 - 115	

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Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B095430						
Antimony	B095430-BLK1	ND	mg/kg	0.50	0.080	
Arsenic	B095430-BLK1	ND	mg/kg	0.50	0.17	
Barium	**B095430-BLK1**	**0.074250**	**mg/kg**	**0.25**	**0.054**	**J**
Beryllium	B095430-BLK1	ND	mg/kg	0.25	0.041	
Cadmium	B095430-BLK2	ND	mg/kg	0.25	0.048	
Chromium	B095430-BLK1	ND	mg/kg	0.75	0.25	
Cobalt	B095430-BLK1	ND	mg/kg	0.25	0.049	
Copper	**B095430-BLK1**	**0.13850**	**mg/kg**	**0.50**	**0.099**	**J**
Lead	B095430-BLK2	ND	mg/kg	0.25	0.12	
Mercury	**B095430-BLK1**	**0.039250**	**mg/kg**	**0.050**	**0.021**	**J**
Molybdenum	B095430-BLK1	ND	mg/kg	0.25	0.045	
Nickel	**B095430-BLK1**	**0.18325**	**mg/kg**	**0.50**	**0.11**	**J**
Selenium	B095430-BLK2	ND	mg/kg	0.50	0.11	
Silver	B095430-BLK1	ND	mg/kg	0.25	0.051	
Thallium	B095430-BLK3	ND	mg/kg	0.25	0.049	
Vanadium	B095430-BLK1	ND	mg/kg	0.75	0.27	
Zinc	B095430-BLK1	ND	mg/kg	2.5	0.50	

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Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B095430										
Antimony	B095430-BS1	LCS	11.126	10.000	mg/kg	111		75 - 125		
Arsenic	B095430-BS1	LCS	28.683	25.000	mg/kg	115		75 - 125		
Barium	B095430-BS1	LCS	11.845	10.000	mg/kg	118		75 - 125		
Beryllium	B095430-BS1	LCS	12.424	10.000	mg/kg	124		75 - 125		
Cadmium	B095430-BS2	LCS	11.536	10.000	mg/kg	115		75 - 125		
Chromium	B095430-BS1	LCS	12.204	10.000	mg/kg	122		75 - 125		
Cobalt	B095430-BS1	LCS	11.668	10.000	mg/kg	117		75 - 125		
Copper	B095430-BS1	LCS	30.577	25.000	mg/kg	122		75 - 125		
Lead	B095430-BS2	LCS	30.387	25.000	mg/kg	122		75 - 125		
Mercury	B095430-BS1	LCS	3.1225	4.0000	mg/kg	78.1		75 - 125		
Molybdenum	B095430-BS1	LCS	11.332	10.000	mg/kg	113		75 - 125		
Nickel	B095430-BS1	LCS	29.562	25.000	mg/kg	118		75 - 125		
Selenium	B095430-BS2	LCS	28.502	25.000	mg/kg	114		75 - 125		
Silver	B095430-BS1	LCS	12.052	10.000	mg/kg	121		75 - 125		
Thallium	B095430-BS3	LCS	10.557	10.000	mg/kg	106		75 - 125		
Vanadium	B095430-BS1	LCS	11.006	10.000	mg/kg	110		75 - 125		
Zinc	B095430-BS1	LCS	31.193	25.000	mg/kg	125		75 - 125		

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Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095430	Used client sample: N										
Antimony	DUP	**2035324-21**	**0.40750**	**0.63325**		**mg/kg**	**43.4**		**20**		**A02**
	MS	**2035324-21**	**0.40750**	**10.066**	**10.000**	**mg/kg**		**96.6**		**16 - 119**	
	MSD	**2035324-21**	**0.40750**	**10.408**	**10.000**	**mg/kg**	**3.3**	**100**	**20**	**16 - 119**	
Arsenic	DUP	2035324-21	7.7358	8.4212		mg/kg	8.5		20		
	MS	2035324-21	7.7358	35.864	25.000	mg/kg		113		75 - 125	
	MSD	2035324-21	7.7358	36.453	25.000	mg/kg	1.6	115	20	75 - 125	
Barium	DUP	2035324-21	109.30	108.45		mg/kg	0.8		20		
	MS	2035324-21	109.30	121.16	10.000	mg/kg		119		75 - 125	
	MSD	2035324-21	109.30	119.60	10.000	mg/kg	1.3	103	20	75 - 125	
Beryllium	DUP	2035324-21	0.29400	0.34950		mg/kg	17.2		20		
	MS	2035324-21	0.29400	11.680	10.000	mg/kg		114		75 - 125	
	MSD	2035324-21	0.29400	11.832	10.000	mg/kg	1.3	115	20	75 - 125	
Cadmium	DUP	**2035324-21**	**0.44300**	**0.65675**		**mg/kg**	**38.9**		**20**		**A02**
	MS	**2035324-21**	**0.44300**	**12.760**	**10.000**	**mg/kg**		**123**		**75 - 125**	
	MSD	**2035324-21**	**0.44300**	**12.382**	**10.000**	**mg/kg**	**3.0**	**119**	**20**	**75 - 125**	
Chromium	DUP	2035324-21	16.951	18.189		mg/kg	7.0		20		
	MS	2035324-21	16.951	28.044	10.000	mg/kg		111		75 - 125	
	MSD	2035324-21	16.951	27.134	10.000	mg/kg	3.3	102	20	75 - 125	
Cobalt	DUP	2035324-21	4.3665	3.6025		mg/kg	19.2		20		
	MS	2035324-21	4.3665	14.006	10.000	mg/kg		96.4		75 - 125	
	MSD	2035324-21	4.3665	13.906	10.000	mg/kg	0.7	95.4	20	75 - 125	
Copper	DUP	2035324-21	11.709	12.255		mg/kg	4.6		20		
	MS	2035324-21	11.709	39.329	25.000	mg/kg		110		75 - 125	
	MSD	2035324-21	11.709	39.389	25.000	mg/kg	0.2	111	20	75 - 125	
Lead	DUP	**2035324-21**	**109.33**	**101.83**		**mg/kg**	**7.1**		**20**		
	MS	**2035324-21**	**109.33**	**151.91**	**25.000**	**mg/kg**		**170**		**75 - 125**	**A03**
	MSD	**2035324-21**	**109.33**	**140.25**	**25.000**	**mg/kg**	**8.0**	**124**	**20**	**75 - 125**	
Mercury	DUP	2035324-21	ND	0.027500		mg/kg			20		J
	MS	2035324-21	ND	4.1062	4.0000	mg/kg		103		75 - 125	
	MSD	2035324-21	ND	4.1805	4.0000	mg/kg	1.8	105	20	75 - 125	
Molybdenum	DUP	2035324-21	0.84975	0.86300		mg/kg	1.5		20		
	MS	2035324-21	0.84975	11.101	10.000	mg/kg		103		75 - 125	
	MSD	2035324-21	0.84975	11.765	10.000	mg/kg	5.8	109	20	75 - 125	
Nickel	DUP	2035324-21	14.688	13.669		mg/kg	7.2		20		
	MS	2035324-21	14.688	38.712	25.000	mg/kg		96.1		75 - 125	
	MSD	2035324-21	14.688	38.594	25.000	mg/kg	0.3	95.6	20	75 - 125	
Selenium	DUP	2035324-21	0.44475	ND		mg/kg			20		
	MS	2035324-21	0.44475	29.712	25.000	mg/kg		117		75 - 125	
	MSD	2035324-21	0.44475	29.611	25.000	mg/kg	0.3	117	20	75 - 125	

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Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B095430	Used client sample: N										
Silver	DUP	**2035324-21**	**0.11275**	**0.14175**		**mg/kg**	**22.8**		**20**		**J,A02**
	MS	**2035324-21**	**0.11275**	**11.447**	**10.000**	**mg/kg**		**113**		**75 - 125**	
	MSD	**2035324-21**	**0.11275**	**11.743**	**10.000**	**mg/kg**	**2.6**	**116**	**20**	**75 - 125**	
Thallium	DUP	**2035324-21**	**0.13125**	**0.17375**		**mg/kg**	**27.9**		**20**		**J,A02**
	MS	**2035324-21**	**0.13125**	**11.863**	**10.000**	**mg/kg**		**117**		**75 - 125**	
	MSD	**2035324-21**	**0.13125**	**12.794**	**10.000**	**mg/kg**	**7.5**	**127**	**20**	**75 - 125**	**Q03**
Vanadium	DUP	2035324-21	25.847	24.943		mg/kg	3.6		20		
	MS	2035324-21	25.847	37.094	10.000	mg/kg		112		75 - 125	
	MSD	2035324-21	25.847	35.450	10.000	mg/kg	4.5	96.0	20	75 - 125	
Zinc	DUP	**2035324-21**	**119.92**	**159.61**		**mg/kg**	**28.4**		**20**		**Q01**
	MS	**2035324-21**	**119.92**	**213.09**	**25.000**	**mg/kg**		**373**		**75 - 125**	**A03**
	MSD	**2035324-21**	**119.92**	**149.42**	**25.000**	**mg/kg**	**35.1**	**118**	**20**	**75 - 125**	**A03**

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022709-1									
Antimony	2022709-ICV1	ICV	12/21/2020 10:55	49.674	50.000	ug/L	99.3	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	40.097	40.000	ug/L	100	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	39.652	40.000	ug/L	99.1	90 - 110	
Arsenic	2022709-ICV1	ICV	12/21/2020 10:55	126.36	125.00	ug/L	101	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	100.88	100.00	ug/L	101	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	98.589	100.00	ug/L	98.6	90 - 110	
Barium	2022709-ICV1	ICV	12/21/2020 10:55	49.876	50.000	ug/L	99.8	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	40.541	40.000	ug/L	101	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	40.490	40.000	ug/L	101	90 - 110	
Beryllium	2022709-ICV1	ICV	12/21/2020 10:55	51.051	50.000	ug/L	102	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	42.044	40.000	ug/L	105	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	42.084	40.000	ug/L	105	90 - 110	
Chromium	2022709-ICV1	ICV	12/21/2020 10:55	51.165	50.000	ug/L	102	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	39.576	40.000	ug/L	98.9	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	39.311	40.000	ug/L	98.3	90 - 110	
Cobalt	2022709-ICV1	ICV	12/21/2020 10:55	50.799	50.000	ug/L	102	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	40.331	40.000	ug/L	101	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	40.099	40.000	ug/L	100	90 - 110	
Copper	2022709-ICV1	ICV	12/21/2020 10:55	130.70	125.00	ug/L	105	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	101.12	100.00	ug/L	101	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	99.516	100.00	ug/L	99.5	90 - 110	
Mercury	2022709-ICV1	ICV	12/21/2020 10:55	10.491	10.000	ug/L	105	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	7.6020	8.0000	ug/L	95.0	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	7.6170	8.0000	ug/L	95.2	90 - 110	
Molybdenum	2022709-ICV1	ICV	12/21/2020 10:55	48.240	50.000	ug/L	96.5	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	39.547	40.000	ug/L	98.9	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	40.571	40.000	ug/L	101	90 - 110	
Nickel	2022709-ICV1	ICV	12/21/2020 10:55	129.11	125.00	ug/L	103	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	98.787	100.00	ug/L	98.8	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	97.634	100.00	ug/L	97.6	90 - 110	
Silver	2022709-ICV1	ICV	12/21/2020 10:55	50.751	50.000	ug/L	102	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	41.049	40.000	ug/L	103	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	41.363	40.000	ug/L	103	90 - 110	
Vanadium	2022709-ICV1	ICV	12/21/2020 10:55	50.329	50.000	ug/L	101	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	38.664	40.000	ug/L	96.7	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	39.769	40.000	ug/L	99.4	90 - 110	
Zinc	2022709-ICV1	ICV	12/21/2020 10:55	128.92	125.00	ug/L	103	90 - 110	
	2022709-CCVB	CCV, Beginning	12/21/2020 15:22	102.28	100.00	ug/L	102	90 - 110	
	2022709-CCVC	CCV, Ending	12/21/2020 15:50	100.72	100.00	ug/L	101	90 - 110	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Total Concentrations (TTLC)

Quality Control Report - Instrumental Parameters

Constituent	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
CCV Ref ID: 2022726-1									
Cadmium	2022726-ICV1	ICV	12/21/2020 10:55	49.622	50.000	ug/L	99.2	90 - 110	
	2022726-CCVL	CCV, Beginning	12/21/2020 21:39	41.331	40.000	ug/L	103	90 - 110	
	2022726-CCVM	CCV, Ending	12/21/2020 22:09	40.295	40.000	ug/L	101	90 - 110	
Lead	2022726-ICV1	ICV	12/21/2020 10:55	133.30	125.00	ug/L	107	90 - 110	
	2022726-CCVL	CCV, Beginning	12/21/2020 21:39	104.20	100.00	ug/L	104	90 - 110	
	2022726-CCVM	CCV, Ending	12/21/2020 22:09	103.30	100.00	ug/L	103	90 - 110	
Selenium	2022726-ICV1	ICV	12/21/2020 10:55	128.07	125.00	ug/L	102	90 - 110	
	2022726-CCVL	CCV, Beginning	12/21/2020 21:39	100.47	100.00	ug/L	100	90 - 110	
	2022726-CCVM	CCV, Ending	12/21/2020 22:09	99.018	100.00	ug/L	99.0	90 - 110	
CCV Ref ID: 2022775-1									
Thallium	2022775-ICV1	ICV	12/22/2020 08:57	50.922	50.000	ug/L	102	90 - 110	
	2022775-CCV5	CCV, Beginning	12/22/2020 11:28	40.150	40.000	ug/L	100	90 - 110	
	2022775-CCV6	CCV, Ending	12/22/2020 11:59	39.640	40.000	ug/L	99.1	90 - 110	

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Reported: 12/28/2020 19:20
Project: SMUD- No CLP
Project Number: [none]
Project Manager: Andy Shepard

Notes And Definitions

CCV	Continuing Calibration Verification
ICV	Initial Calibration Verification
J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration was more than 4 times the spike level.
A10	Detection and quantitation limits were raised due to matrix interference.
A20	Surrogate is low due to matrix interference. Interference verified through second extraction/analysis.
A52	Chromatogram not typical of diesel.
A57	Chromatogram not typical of motor oil.
Q01	Sample precision is not within the control limits.
Q03	Matrix spike recovery(s) was(were) not within the control limits.
S09	The surrogate recovery for this compound was not within the control limits.

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BC LABORATORIES, INC.

Work Order Number: 2037454

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.6

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Case Narrative

Sample Receipt

Work Order: 2037454
COC Number:
Default Cooler was received at 2.3 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B096009	EPA-6020 (TTLC)	2037644-12	<Not Client Sample>

Sample precision is not within the control limits.

Lab Number	Method	Analyte
B096009-DUP1	EPA-6020 (TTLC)	Arsenic

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

20-37454

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL
Formerly Curtis & Tompkins Labs

2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Page 1 of 1
Chain of Custody #

C&T LOGIN # n/a

Project No: 60632793.6
Project Name: SMUD 59th ST
Project P. O. No: 60632793.6
EDD Format: Report Level ☐ II ☒ III ☐ IV
Turnaround Time: ☐ RUSH ☒ Standard

Sampler: Jack Ray
Report To: Andy Shepard
Company: AECOM
Telephone: 916 414 5800
Email: Andy.Shepard@aecom.com

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE						ANALYTICAL REQUEST: Sludge Constituents
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None		
-1	VW57-1.5	12.21.20	1110		X			1					X		X
-2	VW56-1.5	12.21.20	1135		X			1					X		X

Notes: Lab to provide CLP

SAMPLE RECEIPT
☐ Intact
☐ Cold
☐ On Ice
☐ Ambient

CHK BY
DISTRIBUTION MA RTZ
SUB OUT ☐

RELINQUISHED BY:
DATE: 12/21/20 TIME: 1250
DATE: 12/21/2020 TIME: 1305
DATE: TIME:

RECEIVED BY:
DATE: 12-21-2020 TIME: 1250
DATE: 12-22-20 TIME: 950
DATE: TIME:

Chain of Custody and Cooler Receipt Form for 2037454 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 10-37454

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS	Other ☐ (Specify)	W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: glass Thermometer ID: 274 Date/Time: 12-22-20 950

Temperature: (A) 2.3 °C / (C) 2.3 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40 ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz 16oz 32oz JAR	A	A								
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAR Date/Time: 12/22/20 1012

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2037454**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2037454
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
VW57-1.5	2037454-01
VW56-1.5	2037454-02

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron
Date: 01-04-2021
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2037454
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL2

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW57-1.5

Laboratory: BC Laboratories
SDG: 2037454
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037454-01
File ID: PE_EL2_201228-244
Sampled: 12/21/20 11:10
Prepared: 12/28/20 08:30
Analyzed: 12/28/20 20:04
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B096009
Sequence: 2023102
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	30	4.55	D	EPA-6020

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW56-1.5

Laboratory: BC Laboratories
SDG: 2037454
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037454-02
File ID: PE_EL2_201228-245
Sampled: 12/21/20 11:35
Prepared: 12/28/20 08:30
Analyzed: 12/28/20 20:07
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B096009
Sequence: 2023102
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	5.7	5	D	EPA-6020

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2037454
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B096009
Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW57-1.5	2037454-01	PE_EL2_201228-244	12/28/20 08:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
VW56-1.5	2037454-02	PE_EL2_201228-245	12/28/20 08:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
Blank	B096009-BLK1	PE_EL2_201228-216	12/28/20 08:30	
LCS	B096009-BS1	PE_EL2_201228-217	12/28/20 08:30	
Duplicate	B096009-DUP1	PE_EL2_201228-240	12/28/20 08:30	
Matrix Spike	B096009-MS1	PE_EL2_201228-221	12/28/20 08:30	
Matrix Spike Dup	B096009-MSD1	PE_EL2_201228-222	12/28/20 08:30	
Post Spike	B096009-PS1	PE_EL2_201228-223	12/28/20 08:30	[Spk] 1g->250ml; 2ml->10ml; Spiked 9.8ml

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2037454
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B096009-BLK1	File ID:	PE_EL2_201228-216
Prepared:	12/28/20 08:30	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	12/28/20 18:45	Instrument:	PE-EL2		
Batch:	B096009	Sequence:	2023102	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

Duplicate

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096009
Preparation: EPA 3050B
Source Sample Name: Duplicate

SDG: 2037454
Project: SMUD 59th St.-CLP III
Laboratory ID: B096009-DUP1
Lab Source ID: 2037644-12
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	9.8612		6.9412		34.8	*	EPA-6020

* Values outside of QC limits

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

Matrix Spike

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096009
Preparation: EPA 3050B
Source Sample Number: 2037644-12

SDG: 2037454
Project: SMUD 59th St.-CLP III
Laboratory ID: B096009-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	50.000	9.8612	55.840	92.0	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	50.000	59.749	99.8	6.76	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2037454
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B096009
Laboratory ID: B096009-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	27.510	110	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2037454
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2023102	Instrument:	PE-EL2
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2023102-ICV1	PE_EL2_201228-013	12/28/20 09:22
Initial Cal Blank	2023102-ICB1	PE_EL2_201228-014	12/28/20 09:26
MRL Check	2023102-CRL1	PE_EL2_201228-015	12/28/20 09:28
Calibration Check	2023102-CCV5	PE_EL2_201228-059	12/28/20 11:36
Calibration Blank	2023102-CCB5	PE_EL2_201228-060	12/28/20 11:40
Interference Check A	2023102-IFA1	PE_EL2_201228-061	12/28/20 11:42
Interference Check B	2023102-IFB1	PE_EL2_201228-062	12/28/20 11:44
Calibration Check	2023102-CCV7	PE_EL2_201228-071	12/28/20 12:07
Calibration Blank	2023102-CCB7	PE_EL2_201228-072	12/28/20 12:11
Calibration Check	2023102-CCVO	PE_EL2_201228-214	12/28/20 18:39
Calibration Blank	2023102-CCBO	PE_EL2_201228-215	12/28/20 18:42
Blank	B096009-BLK1	PE_EL2_201228-216	12/28/20 18:45
LCS	B096009-BS1	PE_EL2_201228-217	12/28/20 18:47
Matrix Spike	B096009-MS1	PE_EL2_201228-221	12/28/20 18:55
Matrix Spike Dup	B096009-MSD1	PE_EL2_201228-222	12/28/20 18:57
Post Spike	B096009-PS1	PE_EL2_201228-223	12/28/20 18:59
Calibration Check	2023102-CCVP	PE_EL2_201228-225	12/28/20 19:03
Calibration Blank	2023102-CCBP	PE_EL2_201228-226	12/28/20 19:05
Calibration Check	2023102-CCVQ	PE_EL2_201228-235	12/28/20 19:40
Calibration Blank	2023102-CCBQ	PE_EL2_201228-236	12/28/20 19:43
Duplicate	B096009-DUP1	PE_EL2_201228-240	12/28/20 19:53
Calibration Check	2023102-CCVR	PE_EL2_201228-242	12/28/20 19:58
Calibration Blank	2023102-CCBR	PE_EL2_201228-243	12/28/20 20:01
VW57-1.5	2037454-01	PE_EL2_201228-244	12/28/20 20:04
VW56-1.5	2037454-02	PE_EL2_201228-245	12/28/20 20:07
Calibration Check	2023102-CCVS	PE_EL2_201228-254	12/28/20 20:26

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Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2037454
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2023102	Instrument:	PE-EL2
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	2023102-CCBS	PE_EL2_201228-255	12/28/20 20:29

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2023102

SDG: 2037454
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2023102-ICB1	Arsenic	-0.052000	2.0	ug/L		EPA-6020
2023102-CCB5	Arsenic	-0.47500	2.0	ug/L		EPA-6020
2023102-CCB7	Arsenic	-0.14000	2.0	ug/L		EPA-6020
2023102-CCBO	Arsenic	1.0270	2.0	ug/L		EPA-6020
2023102-CCBP	Arsenic	0.56000	2.0	ug/L		EPA-6020
2023102-CCBQ	Arsenic	0.048000	2.0	ug/L		EPA-6020
2023102-CCBR	Arsenic	-0.20700	2.0	ug/L		EPA-6020
2023102-CCBS	Arsenic	-0.88500	2.0	ug/L		EPA-6020

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2037454
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2023102

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2023102-ICV1	Arsenic	125.00	124.18	99.3	ug/L	EPA-6020
2023102-CCV5	Arsenic	100.00	97.591	97.6	ug/L	EPA-6020
2023102-CCV7	Arsenic	100.00	97.422	97.4	ug/L	EPA-6020
2023102-CCVO	Arsenic	100.00	97.498	97.5	ug/L	EPA-6020
2023102-CCVP	Arsenic	100.00	100.74	101	ug/L	EPA-6020
2023102-CCVQ	Arsenic	100.00	100.02	100	ug/L	EPA-6020
2023102-CCVR	Arsenic	100.00	98.682	98.7	ug/L	EPA-6020
2023102-CCVS	Arsenic	100.00	100.88	101	ug/L	EPA-6020

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

Post Spike

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096009
Preparation: EPA 3050B

SDG: 2037454
Project: SMUD 59th St.-CLP III
Laboratory ID: B096009-PS1
Lab Source ID: 2037644-12
Initial/Final: 0.00784 g / 10 ml

Source Sample Name: Post Spike
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	107.57	7.7312	100.00	99.8

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2023102

SDG: 2037454
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2023102-IFA1	Arsenic		-0.27200		ug/L
2023102-IFB1	Arsenic	20.000	18.89	94.4	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 09:04:26
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	4.444				ug/L
|	B	11	181.335				ug/L
|	Al	27	2432.296				ug/L
| >	Sc	45	116709.140				ug/L
|	V	51	3093.732				ug/L
|	Cr	52	1056.723				ug/L
|	Cr	53	9563.905				ug/L
|	Mn	55	184.002				ug/L
|	Co	59	752.029				ug/L
⌊	Ni	60	98.667				ug/L
⌈	Cu	63	657.799				ug/L
|	Cu	65	320.894				ug/L
|	Zn	66	48.889				ug/L
|	Zn	68	61.334				ug/L
| >	Ge	72	90805.303				ug/L
|	As	75	3.733				ug/L
|	Se	77	520.014				ug/L
⌊	Se	82	18.533				ug/L
⌈	Mo	98	152.001				ug/L
| >	Rh	103	97736.647				ug/L
⌊	Ag	107	112.001				ug/L
⌈	Cd	111	0.268				ug/L
|	Cd	114	-54.925				ug/L
| >	In	115	133104.355				ug/L
|	Sn	120	229.336				ug/L
⌊	Sb	121	200.002				ug/L
⌈	Ba	137	17.316				ug/L
|	Ba	138	143.984				ug/L
| >	Tb	159	198718.114				ug/L
|	Tl	205	152.001				ug/L
⌊	Pb	208	106.667				ug/L
⌈	Hg	200	11.966				ug/L
|	Hg	201	2.667				ug/L
| >	Bi	209	134561.538				ug/L
⌊	U	238	174.668				ug/L
	C	13	980.049				ug/L
	W	184	5.333				ug/L
	Pd	106	49.886				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	2680.363				ug/L
|	Mg	24	466.678				ug/L
|	K	39	55004.206				ug/L

Ca	44	453.344	ug/L
Ti	47	26.667	ug/L
Sc-1	45	116709.140	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 09:06:30
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	80.000	**1.000**	0.13	12.9	ug/L
|	B	11	2755.047	**20.000**	1.14	5.7	ug/L
|	Al	27	18507.796	**20.000**	0.81	4.1	ug/L
| >	Sc	45	115322.638				ug/L
|	V	51	4693.911	**3.000**	0.38	12.7	ug/L
|	Cr	52	3334.556	**3.000**	0.19	6.2	ug/L
|	Cr	53	9561.904	**3.000**	5.35	178.4	ug/L
|	Mn	55	1573.457	**1.000**	0.06	5.7	ug/L
|	Co	59	1529.006	**1.000**	0.02	2.4	ug/L
⌊	Ni	60	414.231	**2.000**	0.33	16.3	ug/L
⌈	Cu	63	1482.777	**2.000**	0.15	7.5	ug/L
|	Cu	65	681.801	**2.000**	0.07	3.3	ug/L
|	Zn	66	625.797	**5.000**	0.15	2.9	ug/L
|	Zn	68	447.121	**5.000**	0.21	4.3	ug/L
| >	Ge	72	91063.454				ug/L
|	As	75	209.521	**2.000**	1.23	61.6	ug/L
|	Se	77	518.680	**2.000**	13.58	679.0	ug/L
⌊	Se	82	35.849	**2.000**	1.27	63.6	ug/L
⌈	Mo	98	546.243	**1.000**	0.11	10.8	ug/L
| >	Rh	103	97639.695				ug/L
⌊	Ag	107	1122.730	**1.000**	0.11	10.7	ug/L
⌈	Cd	111	175.779	**1.000**	0.10	9.9	ug/L
|	Cd	114	438.601	**1.000**	0.22	21.5	ug/L
| >	In	115	137273.754				ug/L
|	Sn	120	1087.991	**1.000**	0.00	0.4	ug/L
⌊	Sb	121	1386.763	**2.000**	0.14	7.2	ug/L
⌈	Ba	137	379.988	**1.000**	0.05	5.0	ug/L
|	Ba	138	2652.333	**1.000**	0.01	0.9	ug/L
| >	Tb	159	198873.223				ug/L
|	Tl	205	2587.001	**1.000**	0.04	4.2	ug/L
⌊	Pb	208	3434.897	**1.000**	0.04	4.1	ug/L
⌈	Hg	200	41.223	**0.200**	0.06	28.5	ug/L
|	Hg	201	18.667	**0.200**	0.03	13.9	ug/L
| >	Bi	209	135835.045				ug/L
⌊	U	238	4737.122	**1.000**	0.01	1.3	ug/L
	C	13	833.368				ug/L
	W	184	17.330				ug/L
	Pd	106	15.135				ug/L
	Kr	83	17.333				ug/L
⌈	Na	23	97688.215	**100.000**	1.32	1.3	ug/L
|	Mg	24	52430.630	**100.000**	4.82	4.8	ug/L
|	K	39	146234.909	**100.000**	1.96	2.0	ug/L

Ca	44	2840.404	**100.000**	3.35	3.4	ug/L
Ti	47	0.000				ug/L
Sc-1	45	115322.638				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000655	0.000	1.000000	Linear Thru Zero
B	11.009	0.001117	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006982	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004731	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006624	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000327	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.012061	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006817	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001376	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004518	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001977	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001267	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000847	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001126	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000015	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000095	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004039	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.010354	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001277	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003621	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006202	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004296	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001825	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012612	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.012250	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.016726	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001073	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000588	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033574	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	950.078524	0.000	1.000000	Linear Thru Zero
Mg	23.985	519.639526	0.000	1.000000	Linear Thru Zero
K	38.964	912.307031	0.000	1.000000	Linear Thru Zero
Ca	43.956	23.870599	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 09:08:35
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.005
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6739.159	**99.999**	1.97	2.0	ug/L
|	B	11	98138.168	**999.878**	40.88	4.1	ug/L
|	Al	27	184144.667	**249.843**	9.61	3.8	ug/L
| >	Sc	45	114475.612				ug/L
|	V	51	86160.171	**100.031**	4.58	4.6	ug/L
|	Cr	52	73483.699	**99.996**	2.84	2.8	ug/L
|	Cr	53	18253.980	**100.052**	0.66	0.7	ug/L
|	Mn	55	284689.794	**249.999**	6.09	2.4	ug/L
|	Co	59	80303.448	**100.000**	2.78	2.8	ug/L
⌊	Ni	60	38844.187	**250.000**	5.13	2.1	ug/L
⌈	Cu	63	85197.885	**249.997**	8.91	3.6	ug/L
|	Cu	65	39186.863	**249.998**	6.34	2.5	ug/L
|	Zn	66	24116.156	**249.985**	4.55	1.8	ug/L
|	Zn	68	17205.901	**249.992**	4.24	1.7	ug/L
| >	Ge	72	87070.874				ug/L
|	As	75	24495.998	**250.000**	6.76	2.7	ug/L
|	Se	77	2640.349	**250.018**	7.35	2.9	ug/L
⌊	Se	82	2906.955	**250.005**	6.66	2.7	ug/L
⌈	Mo	98	38526.399	**100.000**	2.45	2.5	ug/L
| >	Rh	103	91163.047				ug/L
⌊	Ag	107	83735.844	**99.999**	0.87	0.9	ug/L
⌈	Cd	111	20640.439	**100.002**	3.64	3.6	ug/L
|	Cd	114	44922.892	**100.000**	2.27	2.3	ug/L
| >	In	115	125751.341				ug/L
|	Sn	120	85658.667	**100.001**	1.80	1.8	ug/L
⌊	Sb	121	61057.909	**100.005**	2.00	2.0	ug/L
⌈	Ba	137	35621.959	**100.000**	3.40	3.4	ug/L
|	Ba	138	225712.204	**99.999**	1.75	1.8	ug/L
| >	Tb	159	195386.490				ug/L
|	Tl	205	219653.201	**99.999**	0.51	0.5	ug/L
⌊	Pb	208	745790.603	**250.000**	1.37	0.5	ug/L
⌈	Hg	200	3197.751	**20.000**	0.82	4.1	ug/L
|	Hg	201	1877.510	**20.000**	0.82	4.1	ug/L
| >	Bi	209	126801.565				ug/L
⌊	U	238	436802.868	**100.000**	1.21	1.2	ug/L
	C	13	860.037				ug/L
	W	184	14.667				ug/L
	Pd	106	-233.779				ug/L
	Kr	83	16.000				ug/L
⌈	Na	23	7781802.782	**9999.779**	618.19	6.2	ug/L
|	Mg	24	5079019.040	**9999.977**	258.00	2.6	ug/L
|	K	39	8056548.067	**9999.860**	55.24	0.6	ug/L

Ca	44	232840.176	**9999.973**	192.44	1.9	ug/L
Ti	47	13.333				ug/L
Sc-1	45	114475.612				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000588	0.000	0.999999	Linear Thru Zero
B	11.009	0.000856	0.000	0.999981	Linear Thru Zero
Al	26.982	0.006357	0.000	0.999969	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007263	0.000	0.999945	Linear Thru Zero
Cr	51.941	0.006331	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000775	0.000	0.999850	Linear Thru Zero
Mn	54.938	0.009943	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006952	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001354	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003887	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001787	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001106	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000788	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001125	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000098	0.000	0.999957	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999997	Linear Thru Zero
Mo	97.906	0.004211	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009174	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001641	0.000	0.999998	Linear Thru Zero
Cd	113.904	0.003576	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006795	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004840	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001823	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011546	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011234	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015266	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001256	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000739	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034437	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	777.929457	0.000	0.999998	Linear Thru Zero
Mg	23.985	507.856414	0.000	1.000000	Linear Thru Zero
K	38.964	800.165600	0.000	0.999999	Linear Thru Zero
Ca	43.956	23.238746	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 10:15:43
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.031
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	1.778				ug/L
|	B	11	173.335				ug/L
|	Al	27	3203.180				ug/L
| >	Sc	45	124329.029				ug/L
|	V	51	2581.047				ug/L
|	Cr	52	1122.730				ug/L
|	Cr	53	9479.158				ug/L
|	Mn	55	149.334				ug/L
|	Co	59	694.246				ug/L
⌊	Ni	60	86.223				ug/L
⌈	Cu	63	696.913				ug/L
|	Cu	65	347.562				ug/L
|	Zn	66	104.889				ug/L
|	Zn	68	57.778				ug/L
| >	Ge	72	96199.295				ug/L
|	As	75	58.601				ug/L
|	Se	77	554.682				ug/L
⌊	Se	82	7.855				ug/L
⌈	Mo	98	131.562				ug/L
| >	Rh	103	101701.240				ug/L
⌊	Ag	107	125.334				ug/L
⌈	Cd	111	-15.301				ug/L
|	Cd	114	-68.154				ug/L
| >	In	115	141479.816				ug/L
|	Sn	120	106.667				ug/L
⌊	Sb	121	64.000				ug/L
⌈	Ba	137	18.649				ug/L
|	Ba	138	115.983				ug/L
| >	Tb	159	201871.021				ug/L
|	Tl	205	36.000				ug/L
⌊	Pb	208	62.667				ug/L
⌈	Hg	200	7.932				ug/L
|	Hg	201	5.333				ug/L
| >	Bi	209	135087.964				ug/L
⌊	U	238	45.333				ug/L
	C	13	760.030				ug/L
	W	184	10.667				ug/L
	Pd	106	34.406				ug/L
	Kr	83	16.667				ug/L
⌈	Na	23	3240.539				ug/L
|	Mg	24	480.013				ug/L
|	K	39	55848.892				ug/L

Ca	44	386.674		ug/L
Ti	47	26.667		ug/L
Sc-1	45	124329.029		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000588	0.000	0.999999	Linear Thru Zero
B	11.009	0.000856	0.000	0.999981	Linear Thru Zero
Al	26.982	0.006357	0.000	0.999969	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007263	0.000	0.999945	Linear Thru Zero
Cr	51.941	0.006331	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000775	0.000	0.999850	Linear Thru Zero
Mn	54.938	0.009943	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006952	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001354	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003887	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001787	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001106	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000788	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001125	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000098	0.000	0.999957	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999997	Linear Thru Zero
Mo	97.906	0.004211	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009174	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001641	0.000	0.999998	Linear Thru Zero
Cd	113.904	0.003576	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006795	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004840	0.000	0.999997	Linear Thru Zero
Ba	136.905	0.001823	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011546	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011234	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015266	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001256	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000739	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034437	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	777.929457	0.000	0.999998	Linear Thru Zero
Mg	23.985	507.856414	0.000	1.000000	Linear Thru Zero
K	38.964	800.165600	0.000	0.999999	Linear Thru Zero
Ca	43.956	23.238746	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 10:17:48
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.031
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	72.889	**1.000**	0.31	30.6	ug/L
|	B	11	2776.386	**20.000**	1.35	6.8	ug/L
|	Al	27	20404.802	**20.000**	0.77	3.8	ug/L
| >	Sc	45	125929.519				ug/L
|	V	51	5055.899	**3.000**	1.13	37.6	ug/L
|	Cr	52	3533.958	**3.000**	0.16	5.4	ug/L
|	Cr	53	9066.776	**3.000**	0.90	29.8	ug/L
|	Mn	55	1400.098	**1.000**	0.04	4.4	ug/L
|	Co	59	1436.548	**1.000**	0.06	6.4	ug/L
⌊	Ni	60	435.565	**2.000**	0.13	6.4	ug/L
⌈	Cu	63	1307.641	**2.000**	0.24	11.8	ug/L
|	Cu	65	614.241	**2.000**	0.24	12.1	ug/L
|	Zn	66	697.802	**5.000**	0.13	2.6	ug/L
|	Zn	68	454.233	**5.000**	0.61	12.2	ug/L
| >	Ge	72	95615.268				ug/L
|	As	75	324.729	**2.000**	0.38	19.0	ug/L
|	Se	77	532.014	**2.000**	5.45	272.7	ug/L
⌊	Se	82	48.539	**2.000**	0.75	37.4	ug/L
⌈	Mo	98	511.867	**1.000**	0.04	3.8	ug/L
| >	Rh	103	101343.266				ug/L
⌊	Ag	107	1018.719	**1.000**	0.14	14.0	ug/L
⌈	Cd	111	185.632	**1.000**	0.07	6.6	ug/L
|	Cd	114	456.657	**1.000**	0.17	16.7	ug/L
| >	In	115	141004.477				ug/L
|	Sn	120	1037.320	**1.000**	0.16	16.4	ug/L
⌊	Sb	121	1405.433	**2.000**	0.15	7.6	ug/L
⌈	Ba	137	393.317	**1.000**	0.02	1.6	ug/L
|	Ba	138	2596.314	**1.000**	0.07	7.3	ug/L
| >	Tb	159	203541.352				ug/L
|	Tl	205	2298.934	**1.000**	0.12	11.9	ug/L
⌊	Pb	208	3218.869	**1.000**	0.02	1.7	ug/L
⌈	Hg	200	39.992	**0.200**	0.03	13.0	ug/L
|	Hg	201	12.000	**0.200**	0.00	1.5	ug/L
| >	Bi	209	134759.303				ug/L
⌊	U	238	4621.068	**1.000**	0.04	3.7	ug/L
	C	13	786.702				ug/L
	W	184	1.333				ug/L
	Pd	106	29.510				ug/L
	Kr	83	14.667				ug/L
⌈	Na	23	94794.527	**100.000**	4.97	5.0	ug/L
|	Mg	24	57404.603	**100.000**	5.38	5.4	ug/L
|	K	39	154125.537	**100.000**	2.64	2.6	ug/L

Ca	44	2707.034	**100.000**	8.51	8.5	ug/L
Ti	47	26.667				ug/L
Sc-1	45	125929.519				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000567	0.000	1.000000	Linear Thru Zero
B	11.009	0.001034	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006817	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006495	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006348	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001410	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009920	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005828	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001383	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003219	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001405	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001241	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000829	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001389	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000104	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000215	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003757	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008831	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001423	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003736	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006631	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004749	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001840	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012183	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011112	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015503	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001191	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000248	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033956	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	915.539882	0.000	1.000000	Linear Thru Zero
Mg	23.985	569.245901	0.000	1.000000	Linear Thru Zero
K	38.964	982.766454	0.000	1.000000	Linear Thru Zero
Ca	43.956	23.203601	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 10:19:52
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.031
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7308.450	**100.001**	1.95	2.0	ug/L
|	B	11	111069.607	**999.953**	9.27	0.9	ug/L
|	Al	27	200535.091	**249.947**	8.36	3.3	ug/L
| >	Sc	45	119790.685				ug/L
|	V	51	91990.789	**100.012**	3.06	3.1	ug/L
|	Cr	52	76979.196	**100.000**	2.27	2.3	ug/L
|	Cr	53	18345.483	**100.255**	2.44	2.4	ug/L
|	Mn	55	298190.785	**250.000**	5.23	2.1	ug/L
|	Co	59	85702.613	**100.002**	1.57	1.6	ug/L
⌊	Ni	60	40870.931	**250.000**	3.85	1.5	ug/L
⌈	Cu	63	88605.048	**250.003**	2.73	1.1	ug/L
|	Cu	65	41112.828	**250.004**	8.16	3.3	ug/L
|	Zn	66	25089.231	**249.988**	8.42	3.4	ug/L
|	Zn	68	17957.446	**249.995**	5.91	2.4	ug/L
| >	Ge	72	90484.870				ug/L
|	As	75	24941.476	**249.996**	2.49	1.0	ug/L
|	Se	77	2671.024	**250.034**	14.77	5.9	ug/L
⌊	Se	82	3119.030	**249.991**	3.89	1.6	ug/L
⌈	Mo	98	38946.361	**100.001**	1.98	2.0	ug/L
| >	Rh	103	93205.768				ug/L
⌊	Ag	107	85838.884	**100.000**	1.02	1.0	ug/L
⌈	Cd	111	21501.941	**100.001**	2.54	2.5	ug/L
|	Cd	114	45456.368	**99.999**	1.59	1.6	ug/L
| >	In	115	131016.404				ug/L
|	Sn	120	88967.462	**100.000**	0.86	0.9	ug/L
⌊	Sb	121	62992.535	**100.000**	2.31	2.3	ug/L
⌈	Ba	137	36062.148	**100.000**	2.34	2.3	ug/L
|	Ba	138	231764.223	**100.000**	1.63	1.6	ug/L
| >	Tb	159	194092.379				ug/L
|	Tl	205	213945.987	**100.000**	1.04	1.0	ug/L
⌊	Pb	208	725049.455	**250.000**	2.14	0.9	ug/L
⌈	Hg	200	3067.044	**20.000**	1.71	8.5	ug/L
|	Hg	201	1848.171	**20.001**	0.57	2.9	ug/L
| >	Bi	209	123621.427				ug/L
⌊	U	238	421407.512	**100.000**	2.39	2.4	ug/L
	C	13	733.361				ug/L
	W	184	14.667				ug/L
	Pd	106	-87.267				ug/L
	Kr	83	14.667				ug/L
⌈	Na	23	8691095.149	**9999.946**	383.28	3.8	ug/L
|	Mg	24	5517519.320	**9999.968**	332.66	3.3	ug/L
|	K	39	8721098.657	**9999.866**	551.41	5.5	ug/L

	Ca	44	242192.093	**10000.040**	230.62	2.3	ug/L
	Ti	47	66.667				ug/L
	Sc-1	45	119790.685				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000610	0.000	1.000000	Linear Thru Zero
B	11.009	0.000926	0.000	0.999997	Linear Thru Zero
Al	26.982	0.006597	0.000	0.999996	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007473	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.006337	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000767	0.000	0.996395	Linear Thru Zero
Mn	54.938	0.009952	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007099	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001362	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003888	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001803	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001105	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000791	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001100	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000095	0.000	0.999860	Linear Thru Zero
Se	81.917	0.000138	0.000	0.999990	Linear Thru Zero
Mo	97.906	0.004166	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009198	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001643	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003475	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006783	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004804	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001857	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011937	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011022	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014942	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001240	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000745	0.000	0.999978	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034105	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	868.790136	0.000	1.000000	Linear Thru Zero
Mg	23.985	551.705685	0.000	1.000000	Linear Thru Zero
K	38.964	866.536600	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.180444	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 11:06:45
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.048
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	2.667				ug/L
|	B	11	226.669				ug/L
|	Al	27	3464.602				ug/L
| >	Sc	45	135453.244				ug/L
|	V	51	2571.322				ug/L
|	Cr	52	1177.403				ug/L
|	Cr	53	11850.366				ug/L
|	Mn	55	125.334				ug/L
|	Co	59	762.696				ug/L
⌊	Ni	60	96.889				ug/L
⌈	Cu	63	784.031				ug/L
|	Cu	65	291.560				ug/L
|	Zn	66	70.222				ug/L
|	Zn	68	65.778				ug/L
| >	Ge	72	99093.902				ug/L
|	As	75	90.338				ug/L
|	Se	77	609.352				ug/L
⌊	Se	82	21.212				ug/L
⌈	Mo	98	169.043				ug/L
| >	Rh	103	106678.052				ug/L
⌊	Ag	107	130.668				ug/L
⌈	Cd	111	2.517				ug/L
|	Cd	114	-67.064				ug/L
| >	In	115	150620.523				ug/L
|	Sn	120	157.335				ug/L
⌊	Sb	121	29.333				ug/L
⌈	Ba	137	10.657				ug/L
|	Ba	138	79.990				ug/L
| >	Tb	159	215525.535				ug/L
|	Tl	205	54.667				ug/L
⌊	Pb	208	54.667				ug/L
⌈	Hg	200	6.598				ug/L
|	Hg	201	10.667				ug/L
| >	Bi	209	139794.508				ug/L
⌊	U	238	41.333				ug/L
	C	13	773.364				ug/L
	W	184	10.667				ug/L
	Pd	106	55.740				ug/L
	Kr	83	14.000				ug/L
⌈	Na	23	3667.344				ug/L
|	Mg	24	560.017				ug/L
|	K	39	59845.229				ug/L

Ca	44	346.673		ug/L
Ti	47	40.000		ug/L
Sc-1	45	135453.244		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000610	0.000	1.000000	Linear Thru Zero
B	11.009	0.000926	0.000	0.999997	Linear Thru Zero
Al	26.982	0.006597	0.000	0.999996	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007473	0.000	0.999992	Linear Thru Zero
Cr	51.941	0.006337	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000767	0.000	0.996395	Linear Thru Zero
Mn	54.938	0.009952	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007099	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001362	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003888	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001803	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001105	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000791	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001100	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000095	0.000	0.999860	Linear Thru Zero
Se	81.917	0.000138	0.000	0.999990	Linear Thru Zero
Mo	97.906	0.004166	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009198	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001643	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003475	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006783	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004804	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001857	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011937	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011022	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014942	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001240	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000745	0.000	0.999978	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.034105	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	868.790136	0.000	1.000000	Linear Thru Zero
Mg	23.985	551.705685	0.000	1.000000	Linear Thru Zero
K	38.964	866.536600	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.180444	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 11:08:50
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.048
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	82.667	**1.000**	0.27	27.1	ug/L
|	B	11	3011.120	**20.000**	0.28	1.4	ug/L
|	Al	27	22224.679	**20.000**	0.42	2.1	ug/L
| >	Sc	45	136460.823				ug/L
|	V	51	4786.017	**3.000**	1.77	58.9	ug/L
|	Cr	52	3753.372	**3.000**	0.22	7.4	ug/L
|	Cr	53	12138.697	**3.000**	3.58	119.4	ug/L
|	Mn	55	1538.786	**1.000**	0.14	13.8	ug/L
|	Co	59	1522.783	**1.000**	0.05	5.4	ug/L
⌊	Ni	60	404.453	**2.000**	0.18	9.0	ug/L
⌈	Cu	63	1357.426	**2.000**	0.27	13.4	ug/L
|	Cu	65	652.466	**2.000**	0.12	6.2	ug/L
|	Zn	66	782.253	**5.000**	0.51	10.2	ug/L
|	Zn	68	573.350	**5.000**	0.27	5.4	ug/L
| >	Ge	72	102746.504				ug/L
|	As	75	243.796	**2.000**	0.73	36.6	ug/L
|	Se	77	592.684	**2.000**	1.72	86.2	ug/L
⌊	Se	82	29.194	**2.000**	1.36	68.1	ug/L
⌈	Mo	98	492.907	**1.000**	0.18	18.5	ug/L
| >	Rh	103	108591.893				ug/L
⌊	Ag	107	1216.075	**1.000**	0.14	14.0	ug/L
⌈	Cd	111	206.014	**1.000**	0.18	17.8	ug/L
|	Cd	114	516.478	**1.000**	0.03	3.4	ug/L
| >	In	115	153592.066				ug/L
|	Sn	120	1224.075	**1.000**	0.03	2.6	ug/L
⌊	Sb	121	1530.785	**2.000**	0.28	14.2	ug/L
⌈	Ba	137	409.323	**1.000**	0.05	5.3	ug/L
|	Ba	138	2747.025	**1.000**	0.01	1.2	ug/L
| >	Tb	159	217530.069				ug/L
|	Tl	205	2438.964	**1.000**	0.02	2.4	ug/L
⌊	Pb	208	3334.883	**1.000**	0.05	5.0	ug/L
⌈	Hg	200	34.624	**0.200**	0.11	53.6	ug/L
|	Hg	201	25.333	**0.200**	0.23	115.0	ug/L
| >	Bi	209	143291.344				ug/L
⌊	U	238	4594.389	**1.000**	0.03	2.7	ug/L
	C	13	793.365				ug/L
	W	184	6.667				ug/L
	Pd	106	9.604				ug/L
	Kr	83	16.000				ug/L
⌈	Na	23	104301.516	**100.000**	3.46	3.5	ug/L
|	Mg	24	63682.403	**100.000**	4.57	4.6	ug/L
|	K	39	165478.941	**100.000**	5.28	5.3	ug/L

Ca	44	3453.939	**100.000**	16.61	16.6	ug/L
Ti	47	26.667				ug/L
Sc-1	45	136460.823				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000587	0.000	1.000000	Linear Thru Zero
B	11.009	0.001020	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006864	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005373	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006271	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000493	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010360	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005529	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001125	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002651	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001705	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001381	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000983	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000730	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000190	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000035	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002953	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009990	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001327	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003806	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006926	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004899	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001833	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012257	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010959	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015082	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000970	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000500	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031765	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1006.341723	0.000	1.000000	Linear Thru Zero
Mg	23.985	631.223867	0.000	1.000000	Linear Thru Zero
K	38.964	1056.337125	0.000	1.000000	Linear Thru Zero
Ca	43.956	31.072651	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 11:10:54
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.048
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7852.860	**100.000**	2.86	2.9	ug/L
|	B	11	119936.788	**999.935**	14.13	1.4	ug/L
|	Al	27	218737.339	**249.860**	2.49	1.0	ug/L
| >	Sc	45	136496.197				ug/L
|	V	51	99322.515	**100.022**	3.64	3.6	ug/L
|	Cr	52	83119.503	**99.996**	4.87	4.9	ug/L
|	Cr	53	21532.495	**100.027**	8.44	8.4	ug/L
|	Mn	55	318375.533	**250.000**	3.91	1.6	ug/L
|	Co	59	91120.882	**100.002**	3.56	3.6	ug/L
⌊	Ni	60	44166.655	**250.002**	6.15	2.5	ug/L
⌈	Cu	63	93840.922	**250.005**	3.33	1.3	ug/L
|	Cu	65	43235.488	**250.001**	3.52	1.4	ug/L
|	Zn	66	26642.559	**249.975**	5.25	2.1	ug/L
|	Zn	68	18982.448	**249.975**	6.40	2.6	ug/L
| >	Ge	72	96336.503				ug/L
|	As	75	26828.151	**250.005**	4.14	1.7	ug/L
|	Se	77	2864.411	**250.048**	13.17	5.3	ug/L
⌊	Se	82	3351.044	**250.012**	2.52	1.0	ug/L
⌈	Mo	98	40766.854	**100.003**	2.36	2.4	ug/L
| >	Rh	103	102671.097				ug/L
⌊	Ag	107	91636.634	**99.999**	1.78	1.8	ug/L
⌈	Cd	111	22255.154	**100.001**	2.97	3.0	ug/L
|	Cd	114	49215.705	**99.999**	3.21	3.2	ug/L
| >	In	115	144087.844				ug/L
|	Sn	120	95927.243	**100.000**	1.90	1.9	ug/L
⌊	Sb	121	67278.914	**99.998**	3.09	3.1	ug/L
⌈	Ba	137	39110.944	**100.000**	2.21	2.2	ug/L
|	Ba	138	246717.316	**100.000**	1.04	1.0	ug/L
| >	Tb	159	211272.822				ug/L
|	Tl	205	226101.471	**100.000**	0.82	0.8	ug/L
⌊	Pb	208	766153.615	**250.000**	2.42	1.0	ug/L
⌈	Hg	200	3096.394	**20.000**	0.72	3.6	ug/L
|	Hg	201	1784.159	**20.001**	0.84	4.2	ug/L
| >	Bi	209	130819.461				ug/L
⌊	U	238	436289.457	**100.000**	1.05	1.0	ug/L
	C	13	926.710				ug/L
	W	184	13.332				ug/L
	Pd	106	-190.969				ug/L
	Kr	83	22.000				ug/L
⌈	Na	23	9464925.737	**9999.936**	399.07	4.0	ug/L
|	Mg	24	5989426.280	**9999.946**	117.50	1.2	ug/L
|	K	39	9476981.221	**9999.878**	370.59	3.7	ug/L

Ca	44	268111.497	**9999.840**	459.77	4.6	ug/L
Ti	47	53.333				ug/L
Sc-1	45	136496.197				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000575	0.000	1.000000	Linear Thru Zero
B	11.009	0.000877	0.000	0.999995	Linear Thru Zero
Al	26.982	0.006312	0.000	0.999976	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007089	0.000	0.999974	Linear Thru Zero
Cr	51.941	0.006007	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000703	0.000	0.999960	Linear Thru Zero
Mn	54.938	0.009328	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006623	0.000	0.999999	Linear Thru Zero
Ni	59.933	0.001292	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003865	0.000	0.999997	Linear Thru Zero
Cu	64.928	0.001784	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.999987	Linear Thru Zero
Zn	67.925	0.000786	0.000	0.999987	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001110	0.000	0.999996	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999710	Linear Thru Zero
Se	81.917	0.000138	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.003954	0.000	0.999997	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008914	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001545	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003422	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006649	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004670	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001851	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011675	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010699	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014505	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001181	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000678	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033348	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	946.131860	0.000	1.000000	Linear Thru Zero
Mg	23.985	598.889860	0.000	1.000000	Linear Thru Zero
K	38.964	941.725060	0.000	0.999999	Linear Thru Zero
Ca	43.956	26.776912	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 14:13:09
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.123
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.889				ug/L
|	B	11	362.673				ug/L
|	Al	27	2643.016				ug/L
| >	Sc	45	134390.464				ug/L
|	V	51	3777.465				ug/L
|	Cr	52	1260.746				ug/L
|	Cr	53	16680.590				ug/L
|	Mn	55	170.668				ug/L
|	Co	59	720.026				ug/L
⌊	Ni	60	84.445				ug/L
⌈	Cu	63	636.465				ug/L
|	Cu	65	304.894				ug/L
|	Zn	66	118.223				ug/L
|	Zn	68	104.001				ug/L
| >	Ge	72	97572.384				ug/L
|	As	75	-3.959				ug/L
|	Se	77	826.034				ug/L
⌊	Se	82	33.235				ug/L
⌈	Mo	98	149.188				ug/L
| >	Rh	103	104045.246				ug/L
⌊	Ag	107	88.000				ug/L
⌈	Cd	111	-9.030				ug/L
|	Cd	114	-44.828				ug/L
| >	In	115	145973.082				ug/L
|	Sn	120	221.302				ug/L
⌊	Sb	121	64.000				ug/L
⌈	Ba	137	15.976				ug/L
|	Ba	138	111.977				ug/L
| >	Tb	159	211218.314				ug/L
|	Tl	205	21.333				ug/L
⌊	Pb	208	30.667				ug/L
⌈	Hg	200	6.086				ug/L
|	Hg	201	1.333				ug/L
| >	Bi	209	134210.641				ug/L
⌊	U	238	13.333				ug/L
	C	13	693.358				ug/L
	W	184	90.667				ug/L
	Pd	106	23.479				ug/L
	Kr	83	11.333				ug/L
⌈	Na	23	12981.836				ug/L
|	Mg	24	880.040				ug/L
|	K	39	64447.078				ug/L

Ca	44	493.346	ug/L
Ti	47	40.000	ug/L
Sc-1	45	134390.464	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000575	0.000	1.000000	Linear Thru Zero
B	11.009	0.000877	0.000	0.999995	Linear Thru Zero
Al	26.982	0.006312	0.000	0.999976	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007089	0.000	0.999974	Linear Thru Zero
Cr	51.941	0.006007	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000703	0.000	0.999960	Linear Thru Zero
Mn	54.938	0.009328	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006623	0.000	0.999999	Linear Thru Zero
Ni	59.933	0.001292	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003865	0.000	0.999997	Linear Thru Zero
Cu	64.928	0.001784	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001104	0.000	0.999987	Linear Thru Zero
Zn	67.925	0.000786	0.000	0.999987	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001110	0.000	0.999996	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999710	Linear Thru Zero
Se	81.917	0.000138	0.000	0.999982	Linear Thru Zero
Mo	97.906	0.003954	0.000	0.999997	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008914	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001545	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003422	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006649	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004670	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001851	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011675	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010699	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014505	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001181	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000678	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033348	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	946.131860	0.000	1.000000	Linear Thru Zero
Mg	23.985	598.889860	0.000	1.000000	Linear Thru Zero
K	38.964	941.725060	0.000	0.999999	Linear Thru Zero
Ca	43.956	26.776912	0.000	0.999999	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 14:15:14
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.123
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	96.889	**1.000**	0.23	22.9	ug/L
|	B	11	2560.329	**20.000**	1.43	7.1	ug/L
|	Al	27	19771.553	**20.000**	0.91	4.5	ug/L
| >	Sc	45	122630.010				ug/L
|	V	51	4211.931	**3.000**	0.44	14.7	ug/L
|	Cr	52	3421.919	**3.000**	0.11	3.7	ug/L
|	Cr	53	10400.082	**3.000**	0.30	10.1	ug/L
|	Mn	55	1530.784	**1.000**	0.05	5.4	ug/L
|	Co	59	1270.303	**1.000**	0.03	2.9	ug/L
⌊	Ni	60	418.676	**2.000**	0.27	13.7	ug/L
⌈	Cu	63	1131.620	**2.000**	0.13	6.4	ug/L
|	Cu	65	566.238	**2.000**	0.26	12.8	ug/L
|	Zn	66	853.370	**5.000**	0.01	0.1	ug/L
|	Zn	68	583.128	**5.000**	0.48	9.6	ug/L
| >	Ge	72	96409.570				ug/L
|	As	75	203.268	**2.000**	1.02	50.8	ug/L
|	Se	77	517.347	**2.000**	0.21	10.5	ug/L
⌊	Se	82	44.557	**2.000**	2.08	104.0	ug/L
⌈	Mo	98	481.053	**1.000**	0.13	13.0	ug/L
| >	Rh	103	100894.112				ug/L
⌊	Ag	107	1018.719	**1.000**	0.10	9.7	ug/L
⌈	Cd	111	236.782	**1.000**	0.20	20.3	ug/L
|	Cd	114	538.882	**1.000**	0.19	19.2	ug/L
| >	In	115	139319.562				ug/L
|	Sn	120	1085.393	**1.000**	0.16	15.8	ug/L
⌊	Sb	121	1477.443	**2.000**	0.03	1.6	ug/L
⌈	Ba	137	461.324	**1.000**	0.06	5.9	ug/L
|	Ba	138	2669.670	**1.000**	0.07	7.1	ug/L
| >	Tb	159	205103.860				ug/L
|	Tl	205	2288.262	**1.000**	0.05	5.1	ug/L
⌊	Pb	208	3148.195	**1.000**	0.06	6.0	ug/L
⌈	Hg	200	43.753	**0.200**	0.10	49.8	ug/L
|	Hg	201	28.000	**0.200**	0.10	51.4	ug/L
| >	Bi	209	132201.561				ug/L
⌊	U	238	4298.258	**1.000**	0.03	3.1	ug/L
	C	13	753.362				ug/L
	W	184	38.667				ug/L
	Pd	106	28.010				ug/L
	Kr	83	12.667				ug/L
⌈	Na	23	109185.713	**100.000**	14.30	14.3	ug/L
|	Mg	24	60972.371	**100.000**	5.70	5.7	ug/L
|	K	39	151228.611	**100.000**	3.80	3.8	ug/L

Ca	44	3493.980	**100.000**	34.81	34.8	ug/L
Ti	47	26.667				ug/L
Sc-1	45	122630.010				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000783	0.000	1.000000	Linear Thru Zero
B	11.009	0.000909	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007077	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.002080	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006174	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.013109	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011215	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005001	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001392	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002611	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001376	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001528	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000997	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001062	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.001549	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000059	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003350	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009242	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001762	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.004193	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006300	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.005084	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.002175	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012496	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011062	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015211	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001434	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001006	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032409	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	962.038769	0.000	1.000000	Linear Thru Zero
Mg	23.985	600.923309	0.000	1.000000	Linear Thru Zero
K	38.964	867.815330	0.000	1.000000	Linear Thru Zero
Ca	43.956	30.006341	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 14:17:18
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.123
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7771.908	**99.998**	3.98	4.0	ug/L
|	B	11	111506.506	**999.994**	31.92	3.2	ug/L
|	Al	27	204530.251	**249.863**	3.44	1.4	ug/L
| >	Sc	45	124042.256				ug/L
|	V	51	91864.568	**100.064**	0.57	0.6	ug/L
|	Cr	52	78290.006	**100.001**	1.82	1.8	ug/L
|	Cr	53	19295.973	**103.994**	24.65	23.7	ug/L
|	Mn	55	305419.671	**249.999**	3.23	1.3	ug/L
|	Co	59	84734.426	**100.003**	1.09	1.1	ug/L
⌊	Ni	60	40797.729	**249.999**	5.48	2.2	ug/L
⌈	Cu	63	89081.291	**250.005**	6.24	2.5	ug/L
|	Cu	65	40820.933	**250.003**	5.76	2.3	ug/L
|	Zn	66	24742.576	**249.957**	3.09	1.2	ug/L
|	Zn	68	18006.426	**249.971**	2.27	0.9	ug/L
| >	Ge	72	92360.718				ug/L
|	As	75	25137.270	**250.000**	5.69	2.3	ug/L
|	Se	77	2743.710	**250.308**	7.61	3.0	ug/L
⌊	Se	82	3120.370	**250.009**	3.37	1.3	ug/L
⌈	Mo	98	38555.525	**100.002**	2.90	2.9	ug/L
| >	Rh	103	92952.758				ug/L
⌊	Ag	107	84841.135	**100.000**	2.36	2.4	ug/L
⌈	Cd	111	20456.946	**99.999**	1.99	2.0	ug/L
|	Cd	114	44693.879	**99.998**	2.06	2.1	ug/L
| >	In	115	133285.278				ug/L
|	Sn	120	89887.688	**100.001**	3.13	3.1	ug/L
⌊	Sb	121	62627.549	**99.997**	2.44	2.4	ug/L
⌈	Ba	137	36642.912	**99.998**	1.47	1.5	ug/L
|	Ba	138	232843.035	**99.999**	2.02	2.0	ug/L
| >	Tb	159	201859.975				ug/L
|	Tl	205	211346.170	**99.999**	2.57	2.6	ug/L
⌊	Pb	208	721908.891	**250.000**	4.19	1.7	ug/L
⌈	Hg	200	2958.772	**20.000**	0.68	3.4	ug/L
|	Hg	201	1828.167	**19.999**	0.72	3.6	ug/L
| >	Bi	209	124825.016				ug/L
⌊	U	238	418664.924	**100.000**	1.86	1.9	ug/L
	C	13	773.363				ug/L
	W	184	52.000				ug/L
	Pd	106	-196.349				ug/L
	Kr	83	14.000				ug/L
⌈	Na	23	8907751.144	**9999.918**	508.83	5.1	ug/L
|	Mg	24	5837440.939	**9999.970**	188.66	1.9	ug/L
|	K	39	8931199.024	**10000.021**	154.29	1.5	ug/L

Ca	44	254055.153	**9999.817**	292.55	2.9	ug/L
Ti	47	13.333				ug/L
Sc-1	45	124042.256				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000627	0.000	0.999997	Linear Thru Zero
B	11.009	0.000897	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006520	0.000	0.999977	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007120	0.000	0.999775	Linear Thru Zero
Cr	51.941	0.006219	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000302	0.000	0.600575	Linear Thru Zero
Mn	54.938	0.009845	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006779	0.000	0.999997	Linear Thru Zero
Ni	59.933	0.001314	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003833	0.000	0.999997	Linear Thru Zero
Cu	64.928	0.001756	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001067	0.000	0.999963	Linear Thru Zero
Zn	67.925	0.000776	0.000	0.999984	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000085	0.000	0.988357	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999990	Linear Thru Zero
Mo	97.906	0.004135	0.000	0.999998	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009120	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001535	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003357	0.000	0.999997	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006730	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004695	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001815	0.000	0.999998	Linear Thru Zero
Ba	137.905	0.011530	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010472	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014307	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001183	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000732	0.000	0.999993	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033544	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	889.484186	0.000	1.000000	Linear Thru Zero
Mg	23.985	583.657816	0.000	1.000000	Linear Thru Zero
K	38.964	886.673309	0.000	1.000000	Linear Thru Zero
Ca	43.956	25.356646	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 16:18:04
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.155
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	1.778				ug/L
	B	11	376.007				ug/L
	Al	27	1810.832				ug/L
>	Sc	45	133896.047				ug/L
	V	51	3540.158				ug/L
	Cr	52	1176.736				ug/L
	Cr	53	12144.706				ug/L
	Mn	55	144.001				ug/L
	Co	59	698.691				ug/L
	Ni	60	93.334				ug/L
	Cu	63	736.916				ug/L
	Cu	65	322.672				ug/L
	Zn	66	88.889				ug/L
	Zn	68	86.223				ug/L
>	Ge	72	98094.838				ug/L
	As	75	105.013				ug/L
	Se	77	638.020				ug/L
	Se	82	41.942				ug/L
	Mo	98	119.562				ug/L
>	Rh	103	108117.695				ug/L
	Ag	107	90.667				ug/L
	Cd	111	-17.564				ug/L
	Cd	114	-89.923				ug/L
>	In	115	148006.192				ug/L
	Sn	120	216.002				ug/L
	Sb	121	26.667				ug/L
	Ba	137	23.996				ug/L
	Ba	138	63.996				ug/L
>	Tb	159	219009.649				ug/L
	Tl	205	8.000				ug/L
	Pb	208	40.000				ug/L
	Hg	200	15.642				ug/L
	Hg	201	5.333				ug/L
>	Bi	209	140404.375				ug/L
	U	238	17.333				ug/L
	C	13	680.023				ug/L
	W	184	56.000				ug/L
	Pd	106	39.479				ug/L
	Kr	83	6.667				ug/L
	Na	23	13756.139				ug/L
	Mg	24	986.720				ug/L
	K	39	59402.689				ug/L

Ca	44	413.342		ug/L
Ti	47	26.667		ug/L
Sc-1	45	133896.047		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000627	0.000	0.999997	Linear Thru Zero
B	11.009	0.000897	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006520	0.000	0.999977	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007120	0.000	0.999775	Linear Thru Zero
Cr	51.941	0.006219	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000302	0.000	0.600575	Linear Thru Zero
Mn	54.938	0.009845	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006779	0.000	0.999997	Linear Thru Zero
Ni	59.933	0.001314	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003833	0.000	0.999997	Linear Thru Zero
Cu	64.928	0.001756	0.000	0.999998	Linear Thru Zero
Zn	65.926	0.001067	0.000	0.999963	Linear Thru Zero
Zn	67.925	0.000776	0.000	0.999984	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000085	0.000	0.988357	Linear Thru Zero
Se	81.917	0.000134	0.000	0.999990	Linear Thru Zero
Mo	97.906	0.004135	0.000	0.999998	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009120	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001535	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003357	0.000	0.999997	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006730	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004695	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001815	0.000	0.999998	Linear Thru Zero
Ba	137.905	0.011530	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010472	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014307	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001183	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000732	0.000	0.999993	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033544	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	889.484186	0.000	1.000000	Linear Thru Zero
Mg	23.985	583.657816	0.000	1.000000	Linear Thru Zero
K	38.964	886.673309	0.000	1.000000	Linear Thru Zero
Ca	43.956	25.356646	0.000	0.999998	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 16:20:08
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.155
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	90.667	**1.000**	0.11	11.0	ug/L
|	B	11	2832.402	**20.000**	1.52	7.6	ug/L
|	Al	27	60996.220	**20.000**	0.54	2.7	ug/L
| >	Sc	45	130985.871				ug/L
|	V	51	5296.475	**3.000**	1.21	40.4	ug/L
|	Cr	52	3665.339	**3.000**	0.16	5.2	ug/L
|	Cr	53	10017.018	**3.000**	0.85	28.2	ug/L
|	Mn	55	1450.773	**1.000**	0.14	13.5	ug/L
|	Co	59	1289.861	**1.000**	0.14	14.0	ug/L
⌊	Ni	60	439.121	**2.000**	0.19	9.4	ug/L
⌈	Cu	63	1227.631	**2.000**	0.23	11.4	ug/L
|	Cu	65	568.016	**2.000**	0.57	28.7	ug/L
|	Zn	66	776.030	**5.000**	0.22	4.5	ug/L
|	Zn	68	668.467	**5.000**	0.56	11.2	ug/L
| >	Ge	72	99129.080				ug/L
|	As	75	171.388	**2.000**	3.64	181.9	ug/L
|	Se	77	551.349	**2.000**	0.12	5.9	ug/L
⌊	Se	82	43.258	**2.000**	30.85	1542.3	ug/L
⌈	Mo	98	505.656	**1.000**	0.10	9.6	ug/L
| >	Rh	103	105131.257				ug/L
⌊	Ag	107	880.039	**1.000**	0.13	13.4	ug/L
⌈	Cd	111	204.774	**1.000**	0.06	6.0	ug/L
|	Cd	114	482.401	**1.000**	0.14	14.2	ug/L
| >	In	115	145364.567				ug/L
|	Sn	120	1176.069	**1.000**	0.09	9.4	ug/L
⌊	Sb	121	1304.085	**2.000**	0.11	5.7	ug/L
⌈	Ba	137	425.300	**1.000**	0.08	7.5	ug/L
|	Ba	138	2613.632	**1.000**	0.02	1.7	ug/L
| >	Tb	159	213250.466				ug/L
|	Tl	205	2338.941	**1.000**	0.08	7.5	ug/L
⌊	Pb	208	3257.550	**1.000**	0.01	1.4	ug/L
⌈	Hg	200	50.121	**0.200**	0.07	34.6	ug/L
|	Hg	201	20.000	**0.200**	0.19	92.9	ug/L
| >	Bi	209	138510.147				ug/L
⌊	U	238	4374.290	**1.000**	0.04	3.8	ug/L
	C	13	566.683				ug/L
	W	184	85.334				ug/L
	Pd	106	17.021				ug/L
	Kr	83	8.667				ug/L
⌈	Na	23	108399.023	**100.000**	6.75	6.8	ug/L
|	Mg	24	65037.607	**100.000**	3.11	3.1	ug/L
|	K	39	159936.476	**100.000**	5.43	5.4	ug/L

Ca	44	2947.117	**100.000**	27.82	27.8	ug/L
Ti	47	93.334				ug/L
Sc-1	45	130985.871				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000679	0.000	1.000000	Linear Thru Zero
B	11.009	0.000942	0.000	1.000000	Linear Thru Zero
Al	26.982	0.022610	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004641	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006400	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.004726	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009997	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004638	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001326	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002440	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001222	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001385	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001175	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000321	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000471	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000006	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003709	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007517	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001530	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003929	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006646	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004395	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001887	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011964	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010934	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015096	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001252	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000529	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031470	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	946.428839	0.000	1.000000	Linear Thru Zero
Mg	23.985	640.508866	0.000	1.000000	Linear Thru Zero
K	38.964	1005.337864	0.000	1.000000	Linear Thru Zero
Ca	43.956	25.337750	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 16:22:13
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.155
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7497.034	**99.999**	2.86	2.9	ug/L
|	B	11	108880.204	**999.969**	5.03	0.5	ug/L
|	Al	27	196597.124	**245.926**	4.57	1.9	ug/L
| >	Sc	45	124298.426				ug/L
|	V	51	93316.403	**100.032**	3.11	3.1	ug/L
|	Cr	52	78509.072	**99.998**	2.77	2.8	ug/L
|	Cr	53	19023.417	**100.777**	7.36	7.3	ug/L
|	Mn	55	300120.417	**250.000**	4.02	1.6	ug/L
|	Co	59	84119.471	**100.003**	1.84	1.8	ug/L
⌊	Ni	60	40803.086	**250.000**	3.56	1.4	ug/L
⌈	Cu	63	88193.449	**250.006**	7.66	3.1	ug/L
|	Cu	65	41293.080	**250.005**	6.34	2.5	ug/L
|	Zn	66	24761.290	**249.972**	4.17	1.7	ug/L
|	Zn	68	17885.321	**249.949**	4.18	1.7	ug/L
| >	Ge	72	91421.528				ug/L
|	As	75	24872.243	**250.011**	7.49	3.0	ug/L
|	Se	77	2715.703	**250.097**	8.51	3.4	ug/L
⌊	Se	82	3018.327	**250.015**	8.11	3.2	ug/L
⌈	Mo	98	38257.059	**100.001**	2.32	2.3	ug/L
| >	Rh	103	95991.903				ug/L
⌊	Ag	107	85973.329	**100.002**	1.22	1.2	ug/L
⌈	Cd	111	20864.477	**100.000**	2.09	2.1	ug/L
|	Cd	114	45791.732	**99.998**	2.19	2.2	ug/L
| >	In	115	138983.587				ug/L
|	Sn	120	90030.123	**100.000**	2.34	2.3	ug/L
⌊	Sb	121	62710.783	**100.001**	0.39	0.4	ug/L
⌈	Ba	137	36637.615	**100.000**	1.87	1.9	ug/L
|	Ba	138	230382.519	**100.000**	1.42	1.4	ug/L
| >	Tb	159	201682.846				ug/L
|	Tl	205	211681.219	**100.000**	1.58	1.6	ug/L
⌊	Pb	208	714448.794	**250.000**	1.59	0.6	ug/L
⌈	Hg	200	2961.226	**20.000**	0.87	4.3	ug/L
|	Hg	201	1872.175	**20.001**	0.27	1.3	ug/L
| >	Bi	209	124692.605				ug/L
⌊	U	238	409104.516	**100.000**	1.57	1.6	ug/L
	C	13	893.374				ug/L
	W	184	85.334				ug/L
	Pd	106	-192.876				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	8598301.760	**9999.898**	520.85	5.2	ug/L
|	Mg	24	5392018.554	**9999.812**	214.62	2.1	ug/L
|	K	39	8695319.471	**9999.836**	86.06	0.9	ug/L

Ca	44	247316.961	**9999.974**	371.23	3.7	ug/L
Ti	47	13.333				ug/L
Sc-1	45	124298.426				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000603	0.000	0.999999	Linear Thru Zero
B	11.009	0.000873	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006376	0.000	0.979878	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007240	0.000	0.999942	Linear Thru Zero
Cr	51.941	0.006229	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000619	0.000	0.968039	Linear Thru Zero
Mn	54.938	0.009654	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006716	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001310	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003831	0.000	0.999996	Linear Thru Zero
Cu	64.928	0.001794	0.000	0.999997	Linear Thru Zero
Zn	65.926	0.001080	0.000	0.999984	Linear Thru Zero
Zn	67.925	0.000779	0.000	0.999948	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001084	0.000	0.999984	Linear Thru Zero
Se	76.920	0.000093	0.000	0.998821	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999971	Linear Thru Zero
Mo	97.906	0.003975	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008949	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001503	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003302	0.000	0.999998	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006465	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004510	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001815	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011420	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010496	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014169	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001182	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000749	0.000	0.999996	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032808	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	858.463359	0.000	0.999999	Linear Thru Zero
Mg	23.985	539.113323	0.000	0.999998	Linear Thru Zero
K	38.964	863.605851	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.690427	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Al	27	Correlation Coefficient not > 0.995

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 18:24:33
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.208
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.889				ug/L
|	B	11	157.335				ug/L
|	Al	27	3179.172				ug/L
| >	Sc	45	127719.783				ug/L
|	V	51	1436.866				ug/L
|	Cr	52	1062.723				ug/L
|	Cr	53	9759.432				ug/L
|	Mn	55	168.001				ug/L
|	Co	59	708.470				ug/L
⌊	Ni	60	79.111				ug/L
⌈	Cu	63	676.467				ug/L
|	Cu	65	295.115				ug/L
|	Zn	66	41.778				ug/L
|	Zn	68	39.111				ug/L
| >	Ge	72	94121.109				ug/L
|	As	75	1.431				ug/L
|	Se	77	561.349				ug/L
⌊	Se	82	10.562				ug/L
⌈	Mo	98	74.228				ug/L
| >	Rh	103	101416.080				ug/L
⌊	Ag	107	138.668				ug/L
⌈	Cd	111	-18.868				ug/L
|	Cd	114	-76.890				ug/L
| >	In	115	142262.287				ug/L
|	Sn	120	114.667				ug/L
⌊	Sb	121	24.000				ug/L
⌈	Ba	137	17.306				ug/L
|	Ba	138	79.973				ug/L
| >	Tb	159	210188.694				ug/L
|	Tl	205	5.333				ug/L
⌊	Pb	208	26.667				ug/L
⌈	Hg	200	9.282				ug/L
|	Hg	201	5.333				ug/L
| >	Bi	209	135572.874				ug/L
⌊	U	238	10.667				ug/L
	C	13	566.684				ug/L
	W	184	8.000				ug/L
	Pd	106	37.333				ug/L
	Kr	83	12.000				ug/L
⌈	Na	23	3774.051				ug/L
|	Mg	24	680.025				ug/L
|	K	39	57149.705				ug/L

Ca	44	306.671		ug/L
Ti	47	53.334		ug/L
Sc-1	45	127719.783		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000603	0.000	0.999999	Linear Thru Zero
B	11.009	0.000873	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006376	0.000	0.979878	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007240	0.000	0.999942	Linear Thru Zero
Cr	51.941	0.006229	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000619	0.000	0.968039	Linear Thru Zero
Mn	54.938	0.009654	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006716	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001310	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003831	0.000	0.999996	Linear Thru Zero
Cu	64.928	0.001794	0.000	0.999997	Linear Thru Zero
Zn	65.926	0.001080	0.000	0.999984	Linear Thru Zero
Zn	67.925	0.000779	0.000	0.999948	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001084	0.000	0.999984	Linear Thru Zero
Se	76.920	0.000093	0.000	0.998821	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999971	Linear Thru Zero
Mo	97.906	0.003975	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008949	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001503	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003302	0.000	0.999998	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006465	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004510	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001815	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011420	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010496	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014169	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001182	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000749	0.000	0.999996	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032808	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	858.463359	0.000	0.999999	Linear Thru Zero
Mg	23.985	539.113323	0.000	0.999998	Linear Thru Zero
K	38.964	863.605851	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.690427	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 18:26:38
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.208
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	81.778	**1.000**	0.16	16.0	ug/L
|	B	11	2608.342	**20.000**	2.16	10.8	ug/L
|	Al	27	83827.285	**20.000**	0.28	1.4	ug/L
| >	Sc	45	128173.543				ug/L
|	V	51	5044.844	**3.000**	1.02	34.1	ug/L
|	Cr	52	3459.932	**3.000**	0.06	1.9	ug/L
|	Cr	53	9740.090	**3.000**	42.66	1422.1	ug/L
|	Mn	55	1544.121	**1.000**	0.17	16.7	ug/L
|	Co	59	1283.638	**1.000**	0.20	20.0	ug/L
⌊	Ni	60	425.787	**2.000**	0.13	6.3	ug/L
⌈	Cu	63	1118.285	**2.000**	0.34	17.1	ug/L
|	Cu	65	517.347	**2.000**	0.58	28.9	ug/L
|	Zn	66	835.591	**5.000**	0.42	8.3	ug/L
|	Zn	68	568.905	**5.000**	0.24	4.8	ug/L
| >	Ge	72	95520.731				ug/L
|	As	75	209.521	**2.000**	0.08	4.1	ug/L
|	Se	77	532.014	**2.000**	2.23	111.4	ug/L
⌊	Se	82	39.258	**2.000**	0.17	8.4	ug/L
⌈	Mo	98	490.679	**1.000**	0.11	11.1	ug/L
| >	Rh	103	101017.036				ug/L
⌊	Ag	107	933.377	**1.000**	0.06	6.5	ug/L
⌈	Cd	111	205.228	**1.000**	0.21	21.1	ug/L
|	Cd	114	463.723	**1.000**	0.18	18.2	ug/L
| >	In	115	143432.747				ug/L
|	Sn	120	1064.057	**1.000**	0.09	9.1	ug/L
⌊	Sb	121	1317.420	**2.000**	0.10	5.2	ug/L
⌈	Ba	137	457.291	**1.000**	0.10	10.1	ug/L
|	Ba	138	2481.589	**1.000**	0.01	1.1	ug/L
| >	Tb	159	210444.890				ug/L
|	Tl	205	2304.266	**1.000**	0.05	5.1	ug/L
⌊	Pb	208	3233.538	**1.000**	0.02	2.0	ug/L
⌈	Hg	200	35.966	**0.200**	0.05	26.4	ug/L
|	Hg	201	22.667	**0.200**	0.10	48.4	ug/L
| >	Bi	209	134259.336				ug/L
⌊	U	238	4380.960	**1.000**	0.03	2.6	ug/L
	C	13	600.019				ug/L
	W	184	5.333				ug/L
	Pd	106	3.167				ug/L
	Kr	83	8.667				ug/L
⌈	Na	23	104395.622	**100.000**	2.43	2.4	ug/L
|	Mg	24	64433.801	**100.000**	4.00	4.0	ug/L
|	K	39	159312.796	**100.000**	3.69	3.7	ug/L

Ca	44	3400.590	**100.000**	19.05	19.1	ug/L
Ti	47	13.333				ug/L
Sc-1	45	128173.543				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000631	0.000	1.000000	Linear Thru Zero
B	11.009	0.000956	0.000	1.000000	Linear Thru Zero
Al	26.982	0.031455	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.009363	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006224	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000133	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010738	0.000	1.000000	Linear Thru Zero
Co	58.933	0.004465	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001351	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002261	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001141	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001660	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001108	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001089	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000197	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000149	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004128	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007873	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001557	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003764	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006616	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004504	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.002090	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011411	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010925	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015241	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000998	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000648	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032556	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	1006.215702	0.000	1.000000	Linear Thru Zero
Mg	23.985	637.537757	0.000	1.000000	Linear Thru Zero
K	38.964	1021.630910	0.000	1.000000	Linear Thru Zero
Ca	43.956	30.939182	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 18:28:42
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.208
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7885.776	**100.000**	2.85	2.8	ug/L
|	B	11	111018.418	**999.961**	21.96	2.2	ug/L
|	Al	27	210186.533	**244.048**	4.26	1.7	ug/L
| >	Sc	45	127274.154				ug/L
|	V	51	92068.428	**99.972**	3.10	3.1	ug/L
|	Cr	52	78715.274	**99.998**	1.16	1.2	ug/L
|	Cr	53	19066.836	**100.106**	4.96	5.0	ug/L
|	Mn	55	298535.292	**249.999**	4.65	1.9	ug/L
|	Co	59	84450.274	**100.003**	2.05	2.0	ug/L
⌊	Ni	60	40329.172	**249.999**	4.41	1.8	ug/L
⌈	Cu	63	88512.711	**250.007**	8.70	3.5	ug/L
|	Cu	65	40531.755	**250.006**	6.70	2.7	ug/L
|	Zn	66	24773.789	**249.947**	14.74	5.9	ug/L
|	Zn	68	17538.923	**249.955**	3.80	1.5	ug/L
| >	Ge	72	91397.238				ug/L
|	As	75	24631.636	**250.000**	7.23	2.9	ug/L
|	Se	77	2678.359	**250.050**	10.47	4.2	ug/L
⌊	Se	82	2977.659	**249.998**	5.26	2.1	ug/L
⌈	Mo	98	38314.336	**100.000**	2.12	2.1	ug/L
| >	Rh	103	96452.395				ug/L
⌊	Ag	107	85882.094	**100.001**	2.26	2.3	ug/L
⌈	Cd	111	20774.987	**100.000**	0.74	0.7	ug/L
|	Cd	114	46290.664	**99.999**	1.19	1.2	ug/L
| >	In	115	138901.576				ug/L
|	Sn	120	90934.324	**100.000**	1.55	1.5	ug/L
⌊	Sb	121	63161.531	**100.000**	0.41	0.4	ug/L
⌈	Ba	137	36893.237	**99.998**	4.15	4.1	ug/L
|	Ba	138	232305.126	**100.000**	1.57	1.6	ug/L
| >	Tb	159	203440.577				ug/L
|	Tl	205	211376.444	**99.999**	2.08	2.1	ug/L
⌊	Pb	208	711257.915	**250.000**	1.43	0.6	ug/L
⌈	Hg	200	2972.348	**20.000**	0.50	2.5	ug/L
|	Hg	201	1821.500	**20.000**	1.14	5.7	ug/L
| >	Bi	209	125877.986				ug/L
⌊	U	238	414752.228	**100.000**	0.94	0.9	ug/L
	C	13	866.705				ug/L
	W	184	14.665				ug/L
	Pd	106	-121.960				ug/L
	Kr	83	14.000				ug/L
⌈	Na	23	9257935.721	**9999.913**	465.32	4.7	ug/L
|	Mg	24	5581172.587	**9999.858**	233.12	2.3	ug/L
|	K	39	9123253.960	**9999.873**	237.72	2.4	ug/L

Ca	44	248382.739	**9999.753**	358.83	3.6	ug/L
Ti	47	66.667				ug/L
Sc-1	45	127274.154				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000620	0.000	1.000000	Linear Thru Zero
B	11.009	0.000871	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006665	0.000	0.958463	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007123	0.000	0.999956	Linear Thru Zero
Cr	51.941	0.006102	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000733	0.000	0.999372	Linear Thru Zero
Mn	54.938	0.009378	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006580	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001265	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003847	0.000	0.999995	Linear Thru Zero
Cu	64.928	0.001762	0.000	0.999996	Linear Thru Zero
Zn	65.926	0.001084	0.000	0.999943	Linear Thru Zero
Zn	67.925	0.000766	0.000	0.999960	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001078	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999691	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999999	Linear Thru Zero
Mo	97.906	0.003965	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008891	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001497	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003338	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006539	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004546	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001813	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.011415	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010390	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013984	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001177	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000721	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032948	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	925.424246	0.000	1.000000	Linear Thru Zero
Mg	23.985	558.057204	0.000	0.999999	Linear Thru Zero
K	38.964	906.621926	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.808220	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Al	27	Correlation Coefficient not > 0.995

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Monday, December 28, 2020 19:29:54
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.231
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.000				ug/L
|	B	11	128.001				ug/L
|	Al	27	2005.535				ug/L
| >	Sc	45	125106.001				ug/L
|	V	51	1341.175				ug/L
|	Cr	52	1035.387				ug/L
|	Cr	53	10694.387				ug/L
|	Mn	55	181.335				ug/L
|	Co	59	697.802				ug/L
⌊	Ni	60	79.111				ug/L
⌈	Cu	63	746.695				ug/L
|	Cu	65	343.117				ug/L
|	Zn	66	52.445				ug/L
|	Zn	68	48.000				ug/L
| >	Ge	72	94602.791				ug/L
|	As	75	79.954				ug/L
|	Se	77	530.681				ug/L
⌊	Se	82	13.206				ug/L
⌈	Mo	98	106.229				ug/L
| >	Rh	103	98808.425				ug/L
⌊	Ag	107	122.667				ug/L
⌈	Cd	111	8.815				ug/L
|	Cd	114	-33.019				ug/L
| >	In	115	140307.017				ug/L
|	Sn	120	109.334				ug/L
⌊	Sb	121	13.333				ug/L
⌈	Ba	137	14.644				ug/L
|	Ba	138	58.644				ug/L
| >	Tb	159	205751.215				ug/L
|	Tl	205	5.333				ug/L
⌊	Pb	208	29.333				ug/L
⌈	Hg	200	2.564				ug/L
|	Hg	201	2.667				ug/L
| >	Bi	209	131527.630				ug/L
⌊	U	238	25.333				ug/L
	C	13	546.682				ug/L
	W	184	16.000				ug/L
	Pd	106	22.958				ug/L
	Kr	83	14.667				ug/L
⌈	Na	23	3680.677				ug/L
|	Mg	24	666.690				ug/L
|	K	39	61951.313				ug/L

Ca	44	306.672	ug/L
Ti	47	0.000	ug/L
Sc-1	45	125106.001	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000620	0.000	1.000000	Linear Thru Zero
B	11.009	0.000871	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006665	0.000	0.958463	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007123	0.000	0.999956	Linear Thru Zero
Cr	51.941	0.006102	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000733	0.000	0.999372	Linear Thru Zero
Mn	54.938	0.009378	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006580	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001265	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003847	0.000	0.999995	Linear Thru Zero
Cu	64.928	0.001762	0.000	0.999996	Linear Thru Zero
Zn	65.926	0.001084	0.000	0.999943	Linear Thru Zero
Zn	67.925	0.000766	0.000	0.999960	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001078	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000093	0.000	0.999691	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999999	Linear Thru Zero
Mo	97.906	0.003965	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008891	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001497	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003338	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006539	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004546	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001813	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.011415	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010390	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013984	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001177	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000721	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032948	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	925.424246	0.000	1.000000	Linear Thru Zero
Mg	23.985	558.057204	0.000	0.999999	Linear Thru Zero
K	38.964	906.621926	0.000	0.999999	Linear Thru Zero
Ca	43.956	24.808220	0.000	0.999997	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Monday, December 28, 2020 19:31:58
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.231
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	91.556	**1.000**	0.26	26.1	ug/L
|	B	11	2432.296	**20.000**	0.90	4.5	ug/L
|	Al	27	77655.081	**20.000**	0.22	1.1	ug/L
| >	Sc	45	123985.311				ug/L
|	V	51	5540.586	**3.000**	1.01	33.5	ug/L
|	Cr	52	3452.596	**3.000**	0.08	2.7	ug/L
|	Cr	53	9682.021	**3.000**	1.24	41.3	ug/L
|	Mn	55	1493.446	**1.000**	0.17	16.6	ug/L
|	Co	59	1316.531	**1.000**	0.10	10.3	ug/L
⌊	Ni	60	398.230	**2.000**	0.10	5.0	ug/L
⌈	Cu	63	1152.067	**2.000**	0.51	25.7	ug/L
|	Cu	65	508.457	**2.000**	0.38	18.8	ug/L
|	Zn	66	786.698	**5.000**	0.18	3.5	ug/L
|	Zn	68	576.906	**5.000**	0.37	7.4	ug/L
| >	Ge	72	94430.438				ug/L
|	As	75	296.839	**2.000**	0.82	41.0	ug/L
|	Se	77	504.680	**2.000**	5.16	258.2	ug/L
⌊	Se	82	55.942	**2.000**	0.97	48.6	ug/L
⌈	Mo	98	479.427	**1.000**	0.04	4.5	ug/L
| >	Rh	103	99586.952				ug/L
⌊	Ag	107	880.039	**1.000**	0.11	10.8	ug/L
⌈	Cd	111	232.299	**1.000**	0.28	28.3	ug/L
|	Cd	114	453.108	**1.000**	0.17	16.9	ug/L
| >	In	115	137936.741				ug/L
|	Sn	120	1058.723	**1.000**	0.07	7.0	ug/L
⌊	Sb	121	1328.088	**2.000**	0.06	3.2	ug/L
⌈	Ba	137	409.292	**1.000**	0.11	11.3	ug/L
|	Ba	138	2512.266	**1.000**	0.03	3.0	ug/L
| >	Tb	159	203345.519				ug/L
|	Tl	205	2118.892	**1.000**	0.08	7.7	ug/L
⌊	Pb	208	3009.511	**1.000**	0.05	4.6	ug/L
⌈	Hg	200	35.974	**0.200**	0.06	31.4	ug/L
|	Hg	201	32.000	**0.200**	0.09	47.4	ug/L
| >	Bi	209	131300.410				ug/L
⌊	U	238	4255.572	**1.000**	0.03	2.6	ug/L
	C	13	793.365				ug/L
	W	184	4.000				ug/L
	Pd	106	5.375				ug/L
	Kr	83	6.667				ug/L
⌈	Na	23	95938.328	**100.000**	3.37	3.4	ug/L
|	Mg	24	61978.375	**100.000**	4.36	4.4	ug/L
|	K	39	155371.447	**100.000**	3.77	3.8	ug/L

Ca	44	3587.312	**100.000**	6.94	6.9	ug/L
Ti	47	26.667				ug/L
Sc-1	45	123985.311				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000737	0.000	1.000000	Linear Thru Zero
B	11.009	0.000930	0.000	1.000000	Linear Thru Zero
Al	26.982	0.030514	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.011337	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006525	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.002456	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010597	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005045	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001290	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.002155	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.000878	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001556	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.001121	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001148	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000134	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000226	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003742	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007604	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001622	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003520	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006896	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004767	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001942	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012072	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010392	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014657	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001271	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.001118	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032223	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	922.576509	0.000	1.000000	Linear Thru Zero
Mg	23.985	613.116853	0.000	1.000000	Linear Thru Zero
K	38.964	934.201339	0.000	1.000000	Linear Thru Zero
Ca	43.956	32.806394	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Monday, December 28, 2020 19:34:03
Sample File: C:\Elandata\Sample\PE_EL2_201228.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.231
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201228.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7481.025	**99.998**	6.09	6.1	ug/L
|	B	11	107408.594	**999.976**	25.59	2.6	ug/L
|	Al	27	201117.374	**244.285**	4.97	2.0	ug/L
| >	Sc	45	122149.527				ug/L
|	V	51	91256.160	**99.952**	2.92	2.9	ug/L
|	Cr	52	77051.054	**99.996**	1.72	1.7	ug/L
|	Cr	53	19203.776	**100.399**	10.15	10.1	ug/L
|	Mn	55	292089.897	**250.000**	3.75	1.5	ug/L
|	Co	59	82824.282	**100.002**	0.72	0.7	ug/L
⌊	Ni	60	39693.738	**250.000**	2.55	1.0	ug/L
⌈	Cu	63	86891.596	**250.007**	7.44	3.0	ug/L
|	Cu	65	40496.956	**250.008**	3.40	1.4	ug/L
|	Zn	66	24991.207	**249.958**	7.19	2.9	ug/L
|	Zn	68	17602.148	**249.955**	2.61	1.0	ug/L
| >	Ge	72	90802.404				ug/L
|	As	75	24964.699	**249.999**	6.19	2.5	ug/L
|	Se	77	2570.330	**250.040**	10.25	4.1	ug/L
⌊	Se	82	3036.332	**249.989**	5.11	2.0	ug/L
⌈	Mo	98	37179.076	**100.001**	1.49	1.5	ug/L
| >	Rh	103	92885.499				ug/L
⌊	Ag	107	84316.644	**100.002**	2.30	2.3	ug/L
⌈	Cd	111	20674.535	**99.999**	1.60	1.6	ug/L
|	Cd	114	46033.086	**100.000**	0.29	0.3	ug/L
| >	In	115	134105.453				ug/L
|	Sn	120	88889.385	**100.000**	1.71	1.7	ug/L
⌊	Sb	121	63958.570	**100.000**	0.44	0.4	ug/L
⌈	Ba	137	36521.171	**99.999**	3.63	3.6	ug/L
|	Ba	138	228680.114	**99.999**	1.79	1.8	ug/L
| >	Tb	159	200924.483				ug/L
|	Tl	205	207392.579	**100.000**	2.94	2.9	ug/L
⌊	Pb	208	701481.671	**250.000**	7.50	3.0	ug/L
⌈	Hg	200	3104.286	**20.000**	1.07	5.3	ug/L
|	Hg	201	1826.834	**19.999**	1.17	5.9	ug/L
| >	Bi	209	120374.838				ug/L
⌊	U	238	403027.920	**100.000**	0.51	0.5	ug/L
	C	13	740.028				ug/L
	W	184	30.667				ug/L
	Pd	106	-109.230				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	8870606.171	**9999.960**	438.15	4.4	ug/L
|	Mg	24	5461841.522	**9999.877**	345.45	3.5	ug/L
|	K	39	8756637.106	**9999.926**	25.57	0.3	ug/L

Ca	44	237892.266	**9999.619**	935.47	9.4	ug/L
Ti	47	53.334				ug/L
Sc-1	45	122149.527				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000613	0.000	0.999998	Linear Thru Zero
B	11.009	0.000878	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006675	0.000	0.961519	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007368	0.000	0.999869	Linear Thru Zero
Cr	51.941	0.006226	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000715	0.000	0.991259	Linear Thru Zero
Mn	54.938	0.009560	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006725	0.000	0.999997	Linear Thru Zero
Ni	59.933	0.001297	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003796	0.000	0.999994	Linear Thru Zero
Cu	64.928	0.001769	0.000	0.999992	Linear Thru Zero
Zn	65.926	0.001099	0.000	0.999965	Linear Thru Zero
Zn	67.925	0.000773	0.000	0.999960	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001096	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000091	0.000	0.999804	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999984	Linear Thru Zero
Mo	97.906	0.003993	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009068	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001541	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003435	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006620	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004768	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001818	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011381	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010326	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013971	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001288	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000758	0.000	0.999989	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.033479	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	886.696137	0.000	1.000000	Linear Thru Zero
Mg	23.985	546.124182	0.000	0.999999	Linear Thru Zero
K	38.964	869.475052	0.000	1.000000	Linear Thru Zero
Ca	43.956	23.759464	0.000	0.999993	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Al	27	Correlation Coefficient not > 0.995

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Monday, December 28, 2020 06:22:13
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.1635
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	7.027	1567	2081	0.737	
Mg	23.985	23.978	5679	2108	0.719	
Rh	102.905	102.879	24824	2266	0.729	
Ce	139.905	139.828	33785	2344	0.725	
Pb	207.977	208.028	50327	2516	0.678	
U	238.050	238.126	57623	2574	0.678	

Daily Performance Report

Sample ID: Daily Performance Check

Sample Date/Time: Monday, December 28, 2020 06:31:36
Sample Description:
Method File: C:\Elandata\Method\BC Methods\OTHER\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.1637
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 50
Current Dead Time (ns): 50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	14623.0	14623.005	197.433	1.4
	In	114.9	51138.4	51138.356	271.828	0.5
	U	238.1	81834.4	81834.448	461.565	0.6
⌈>	Ba	137.9	45040.1	45040.066	370.417	0.8
⌊	Ba++	69.0	593.1	0.013	0.000	3.3
⌈>	Ce	139.9	55390.1	55390.114	611.265	1.1
⌊	CeO	155.9	1420.9	0.026	0.001	2.3
	220	220.0	0.2	0.160	0.219	136.9
	8.5	8.5	0.3	0.320	0.179	55.9

Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
7.25	Lens Voltage
1500.00	ICP RF Power
-1800.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	69	6.8	68419.9
Mg	24	69	6.3	13489.1
In	115	69	7.3	46487.8
Ce	140	69	8.0	52195.9
Pb	208	69	8.0	31108.3

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/4/2021 12:48:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2037618

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.6

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Case Narrative

Sample Receipt

Work Order: 2037618
COC Number:
Cooler 2 was received at 4 °C
Default Cooler was received at 4 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL2

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B096199	EPA-6020 (TTLC)	2037618-04	WB07-1.5-MS/MSD

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

The Post Spike recoveries were within QC limits.

Interference Checks

The Interference Check recoveries were within QC limits.

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL BC Labs
Formerly Curtis & Tompkins Labs

2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Page 1 of 2
Chain of Custody # 20-37618

C&T LOGIN # _____

Project No: 60632793.6
Project Name: SMUD 59th St
Project P. O. No:
EDD Format: Report Level ☐ II ☑ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☑ Standard

Sampler: Jack Rayl
Report To: Andy Shepard
Company: AECOM
Telephone: 916 414 5800
Email: andy.shepard@AECOM.com

ANALYTICAL REQUEST

Lab No.	Sample ID.	SAMPLING Date Collected	SAMPLING Time Collected	MATRIX Water	MATRIX Solid	# of Containers	CHEMICAL PRESERVATIVE HCl	H2SO4	HNO3	NaOH	None	SW 6020 Arsenic
-1	WB01-0.5	12.22.20	0840		X	1					X	X
-2	WB01-Dock	12.22.20	0815		X	1					X	X
-3	WB01-0.5-FD	12.22.20	0840		X	1					X	X
-4	WB07-1.5-ms/msd	12.22.20	0910		X	2					X	X
-5	WB07-5	12.22.20	0940		X	1					X	X
-6	WB06-1.5	12.22.20	0945		X	1					X	X
-7	WB06-5	12.22.20	0955		X	1					X	X
-8	WB06-5FD	12.22.20	0955		X	1					X	X
-9	WB05-1.5	12.22.20	1005		X	1					X	X
-10	WB05-5	12.22.20	1015		X	1					X	X
-11	WB03-1.5	12.22.20	1110		X	1					X	X
-12	WB04-1.5	12.22.20	1115		X	1					X	X
-13	WB02-Dock	12.22.20	1140		X	1					X	X

CHK BY [signature] DISTRIBUTION
SUB OUT ☐

Notes: Lab to provide CLP

SAMPLE RECEIPT
☐ Intact
☐ Cold
☐ On Ice
☐ Ambient

RELINQUISHED BY:
[signature] DATE: 12/22/20 TIME: 1230
[signature] DATE: 12/22/2020 TIME: 1310
DATE: TIME:

RECEIVED BY:
[signature] DATE: 12/22/2020 TIME: 12:30
[signature] DATE: 12-23-20 TIME: 1025
DATE: TIME:

CHAIN OF CUSTODY

ENTHALPY ANALYTICAL BC labs

Formerly Curtis & Tompkins Labs

2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Page 2 of 2
Chain of Custody # 20-37618

C&T LOGIN # _____

Project No: 60632793.6
Project Name: SMUD 65th ST
Project P. O. No:
EDD Format: Report Level ☐ II ☑ III ☐ IV
Turnaround Time: ☐ RUSH ☑ Standard

Sampler: Jack Zayl
Report To: Andy Shepard
Company: AECom
Telephone: 916 414 5800
Email: Andy.shepard@aecom

ANALYTICAL REQUEST

Lab No.	Sample ID.	SAMPLING Date Collected	SAMPLING Time Collected	MATRIX Water	MATRIX Solid	# of Containers	CHEMICAL PRESERVATIVE HCl	H2SO4	HNO3	NaOH	None	SW6020
-14	WB02-0.5	12.22.20	1145		X	1					X	X
-15	WB01A-1.5'	12.22.20	1230		X	1					X	X

JR 12.22.20

Notes:
Lab to provide CLP

SAMPLE RECEIPT
☐ Intact
☐ Cold
☐ On Ice
☐ Ambient

RELINQUISHED BY:
DATE: 12/22/22 TIME: 1230
DATE: 12/28/2020 TIME: 1310
DATE: TIME:

RECEIVED BY:
DATE: 12/22/2020 TIME: 12:36
DATE: 12-23-20 TIME: 1025
DATE: TIME:

Chain of Custody and Cooler Receipt Form for 2037618 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 20-37618

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: 9 1055 Thermometer ID: 274 Date/Time 12-23-20 1025

Temperature: (A) 4.0 °C / (C) 4.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR 40z	A	A	A	A,B	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMZ Date/Time: 12/23/20 1100

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2037618 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 20-37618

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 95 Container: glass Thermometer ID: 174 Date/Time 12-23-20 1025

Temperature: (A) 4.0 °C / (C) 4.0 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR 402	A	A	A	A	A					
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: _____ Date/Time: 12/23/20 1100

A = Actual / C = Corrected

Rev 21 05/23/2016

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/6/2021 4:18:00PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2037618**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/6/2021 4:18:00PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2037618
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
WB01-0.5	2037618-01
WB01-Dock	2037618-02
WB01-0.5-FD	2037618-03
WB07-1.5-MS/MSD	2037618-04
WB07-5	2037618-05
WB06-1.5	2037618-06
WB06-5	2037618-07
WB06-5FD	2037618-08
WB05-1.5	2037618-09
WB05-5	2037618-10
WB03-1.5	2037618-11
WB04-1.5	2037618-12
WB02-Dock	2037618-13
WB02-0.5	2037618-14
WB01A-1.5	2037618-15

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 01-06-2021
Title: QA/QC Manager

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL2

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB01-0.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-01
File ID: PE_EL2_201230-159
Sampled: 12/22/20 08:40
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:00
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.2	0.926		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB01-Dock

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-02
File ID: PE_EL2_201230-160
Sampled: 12/22/20 08:15
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:02
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	19	0.99		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB01-0.5-FD

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-03
File ID: PE_EL2_201230-161
Sampled: 12/22/20 08:40
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:04
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	12	0.943		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB07-1.5-MS/MSD

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-04
File ID: PE_EL2_201230-150
Sampled: 12/22/20 09:10
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 16:39
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	7.2	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB07-5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-05
File ID: PE_EL2_201230-162
Sampled: 12/22/20 09:40
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:06
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	170	0.99		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB06-1.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-06
File ID: PE_EL2_201230-163
Sampled: 12/22/20 09:45
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:08
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	9.2	0.926		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB06-5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-07
File ID: PE_EL2_201230-164
Sampled: 12/22/20 09:55
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:10
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	70	0.971		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB06-5FD

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-08
File ID: PE_EL2_201230-165
Sampled: 12/22/20 09:55
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:12
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.04 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	39	0.962		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB05-1.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-09
File ID: PE_EL2_201230-166
Sampled: 12/22/20 10:05
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:14
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.4	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB05-5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-10
File ID: PE_EL2_201230-170
Sampled: 12/22/20 10:15
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:26
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.0	0.971		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB03-1.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-11
File ID: PE_EL2_201230-171
Sampled: 12/22/20 11:10
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:29
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.2	0.952		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB04-1.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-12
File ID: PE_EL2_201230-172
Sampled: 12/22/20 11:15
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:31
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.09 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.9	0.917		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB02-Dock

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-13
File ID: PE_EL2_201230-173
Sampled: 12/22/20 11:40
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:33
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.09 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.3	0.917		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB02-0.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-14
File ID: PE_EL2_201230-174
Sampled: 12/22/20 11:45
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:35
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.7	0.943		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB01A-1.5

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2037618-15
File ID: PE_EL2_201230-175
Sampled: 12/22/20 12:30
Prepared: 12/30/20 07:30
Analyzed: 12/30/20 17:37
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B096199
Sequence: 2023255
Calibration: UNASSIGNED
Instrument: PE-EL2

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.8	0.943		EPA-6020

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PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B096199 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
WB01-0.5	2037618-01	PE_EL2_201230-159	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB01-Dock	2037618-02	PE_EL2_201230-160	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB01-0.5-FD	2037618-03	PE_EL2_201230-161	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB07-1.5-MS/MSD	2037618-04	PE_EL2_201230-150	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB07-5	2037618-05	PE_EL2_201230-162	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB06-1.5	2037618-06	PE_EL2_201230-163	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB06-5	2037618-07	PE_EL2_201230-164	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB06-5FD	2037618-08	PE_EL2_201230-165	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB05-1.5	2037618-09	PE_EL2_201230-166	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB05-5	2037618-10	PE_EL2_201230-170	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB03-1.5	2037618-11	PE_EL2_201230-171	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB04-1.5	2037618-12	PE_EL2_201230-172	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB02-Dock	2037618-13	PE_EL2_201230-173	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE

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PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2037618
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B096199 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
WB02-0.5	2037618-14	PE_EL2_201230-174	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
WB01A-1.5	2037618-15	PE_EL2_201230-175	12/30/20 07:30	IF COC SHOWS 6010, CALL CLIENT TO HAVE THEM REVISE
Blank	B096199-BLK1	PE_EL2_201230-148	12/30/20 07:30	
LCS	B096199-BS1	PE_EL2_201230-149	12/30/20 07:30	
WB07-1.5-MS/MSD	B096199-DUP1	PE_EL2_201230-151	12/30/20 07:30	
WB07-1.5-MS/MSD	B096199-MS1	PE_EL2_201230-153	12/30/20 07:30	
WB07-1.5-MS/MSD	B096199-MSD1	PE_EL2_201230-154	12/30/20 07:30	
WB07-1.5-MS/MSD	B096199-PS1	PE_EL2_201230-155	12/30/20 07:30	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories		SDG:	2037618	
Client:	AECOM - Sacramento $AECS		Project:	SMUD 59th St.-CLP III	
Matrix:	Solids	Laboratory ID:	B096199-BLK1	File ID:	PE_EL2_201230-148
Prepared:	12/30/20 07:30	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	12/30/20 16:35	Instrument:	PE-EL2		
Batch:	B096199	Sequence:	2023255	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U

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WB07-1.5-MS/MSD

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096199
Preparation: EPA 3050B
Source Sample Name: WB07-1.5-MS/MSD

SDG: 2037618
Project: SMUD 59th St.-CLP III
Laboratory ID: B096199-DUP1
Lab Source ID: 2037618-04
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	7.1750		6.1515		15.4		EPA-6020

* Values outside of QC limits

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Project Number: 60632793.6
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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

WB07-1.5-MS/MSD

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096199
Preparation: EPA 3050B
Source Sample Number: 2037618-04

SDG: 2037618
Project: SMUD 59th St.-CLP III
Laboratory ID: B096199-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	7.1750	30.202	92.1	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	32.308	101	6.74	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project Number: 60632793.6
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096199
Preparation: EPA 3050B

SDG: 2037618
Project: SMUD 59th St.-CLP III
Laboratory ID: B096199-BS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	27.277	109	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 1/6/2021 4:18:00PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2037618
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2023255	Instrument:	PE-EL2
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2023255-ICV1	PE_EL2_201230-027	12/30/20 09:20
Initial Cal Blank	2023255-ICB1	PE_EL2_201230-028	12/30/20 09:23
MRL Check	2023255-CRL3	PE_EL2_201230-035	12/30/20 09:44
Calibration Check	2023255-CCV4	PE_EL2_201230-070	12/30/20 11:14
Calibration Blank	2023255-CCB4	PE_EL2_201230-071	12/30/20 11:17
Interference Check A	2023255-IFA1	PE_EL2_201230-072	12/30/20 11:19
Interference Check B	2023255-IFB1	PE_EL2_201230-073	12/30/20 11:22
Calibration Check	2023255-CCV5	PE_EL2_201230-080	12/30/20 11:37
Calibration Blank	2023255-CCB5	PE_EL2_201230-081	12/30/20 11:40
Calibration Check	2023255-CCVC	PE_EL2_201230-146	12/30/20 16:28
Calibration Blank	2023255-CCBC	PE_EL2_201230-147	12/30/20 16:31
Blank	B096199-BLK1	PE_EL2_201230-148	12/30/20 16:35
LCS	B096199-BS1	PE_EL2_201230-149	12/30/20 16:37
WB07-1.5-MS/MSD	2037618-04	PE_EL2_201230-150	12/30/20 16:39
WB07-1.5-MS/MSD	B096199-DUP1	PE_EL2_201230-151	12/30/20 16:41
WB07-1.5-MS/MSD	B096199-MS1	PE_EL2_201230-153	12/30/20 16:46
WB07-1.5-MS/MSD	B096199-MSD1	PE_EL2_201230-154	12/30/20 16:48
WB07-1.5-MS/MSD	B096199-PS1	PE_EL2_201230-155	12/30/20 16:50
Calibration Check	2023255-CCVD	PE_EL2_201230-157	12/30/20 16:54
Calibration Blank	2023255-CCBD	PE_EL2_201230-158	12/30/20 16:56
WB01-0.5	2037618-01	PE_EL2_201230-159	12/30/20 17:00
WB01-Dock	2037618-02	PE_EL2_201230-160	12/30/20 17:02
WB01-0.5-FD	2037618-03	PE_EL2_201230-161	12/30/20 17:04
WB07-5	2037618-05	PE_EL2_201230-162	12/30/20 17:06
WB06-1.5	2037618-06	PE_EL2_201230-163	12/30/20 17:08
WB06-5	2037618-07	PE_EL2_201230-164	12/30/20 17:10

AECOM - Sacramento
2020 L St, Suite 400
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2037618
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2023255	Instrument:	PE-EL2
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
WB06-5FD	2037618-08	PE_EL2_201230-165	12/30/20 17:12
WB05-1.5	2037618-09	PE_EL2_201230-166	12/30/20 17:14
Calibration Check	2023255-CCVE	PE_EL2_201230-168	12/30/20 17:19
Calibration Blank	2023255-CCBE	PE_EL2_201230-169	12/30/20 17:21
WB05-5	2037618-10	PE_EL2_201230-170	12/30/20 17:26
WB03-1.5	2037618-11	PE_EL2_201230-171	12/30/20 17:29
WB04-1.5	2037618-12	PE_EL2_201230-172	12/30/20 17:31
WB02-Dock	2037618-13	PE_EL2_201230-173	12/30/20 17:33
WB02-0.5	2037618-14	PE_EL2_201230-174	12/30/20 17:35
WB01A-1.5	2037618-15	PE_EL2_201230-175	12/30/20 17:37
Calibration Check	2023255-CCVF	PE_EL2_201230-177	12/30/20 17:41
Calibration Blank	2023255-CCBF	PE_EL2_201230-178	12/30/20 17:43

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BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2023255

SDG: 2037618
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2023255-ICB1	Arsenic	0.27100	2.0	ug/L		EPA-6020
2023255-CCB4	Arsenic	-0.067000	2.0	ug/L		EPA-6020
2023255-CCB5	Arsenic	-0.95000	2.0	ug/L		EPA-6020
2023255-CCBC	Arsenic	-1.0030	2.0	ug/L		EPA-6020
2023255-CCBD	Arsenic	-1.4180	2.0	ug/L		EPA-6020
2023255-CCBE	Arsenic	-1.5280	2.0	ug/L		EPA-6020
2023255-CCBF	Arsenic	-1.0710	2.0	ug/L		EPA-6020

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INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Control Limt: +/- 10.00%

SDG: 2037618
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2023255

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2023255-ICV1	Arsenic	125.00	126.84	101	ug/L	EPA-6020
2023255-CCV4	Arsenic	100.00	97.001	97.0	ug/L	EPA-6020
2023255-CCV5	Arsenic	100.00	102.93	103	ug/L	EPA-6020
2023255-CCVC	Arsenic	100.00	98.721	98.7	ug/L	EPA-6020
2023255-CCVD	Arsenic	100.00	99.817	99.8	ug/L	EPA-6020
2023255-CCVE	Arsenic	100.00	97.998	98.0	ug/L	EPA-6020
2023255-CCVF	Arsenic	100.00	97.418	97.4	ug/L	EPA-6020

* Values outside of QC limits

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

WB07-1.5-MS/MSD

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B096199
Preparation: EPA 3050B

SDG: 2037618
Project: SMUD 59th St.-CLP III
Laboratory ID: B096199-PS1
Lab Source ID: 2037618-04
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: WB07-1.5-MS/MSD
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	126.05	28.126	100.00	97.9

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
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ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL2
Sequence: 2023255

SDG: 2037618
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2023255-IFA1	Arsenic		-0.51700		ug/L
2023255-IFB1	Arsenic	20.000	18.54	92.7	ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL2

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, December 30, 2020 08:21:04
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.476
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	3.556				ug/L
|	B	11	152.001				ug/L
|	Al	27	1338.757				ug/L
| >	Sc	45	126526.369				ug/L
|	V	51	267.420				ug/L
|	Cr	52	1128.064				ug/L
|	Cr	53	10763.797				ug/L
|	Mn	55	144.001				ug/L
|	Co	59	729.804				ug/L
⌊	Ni	60	94.223				ug/L
⌈	Cu	63	759.140				ug/L
|	Cu	65	327.117				ug/L
|	Zn	66	237.336				ug/L
|	Zn	68	181.335				ug/L
| >	Ge	72	91773.947				ug/L
|	As	75	141.797				ug/L
|	Se	77	678.690				ug/L
⌊	Se	82	15.844				ug/L
⌈	Mo	98	134.375				ug/L
| >	Rh	103	98447.916				ug/L
⌊	Ag	107	112.001				ug/L
⌈	Cd	111	6.076				ug/L
|	Cd	114	-16.916				ug/L
| >	In	115	136645.911				ug/L
|	Sn	120	194.635				ug/L
⌊	Sb	121	109.334				ug/L
⌈	Ba	137	25.305				ug/L
|	Ba	138	98.638				ug/L
| >	Tb	159	190340.397				ug/L
|	Tl	205	149.334				ug/L
⌊	Pb	208	66.667				ug/L
⌈	Hg	200	2.590				ug/L
|	Hg	201	6.667				ug/L
| >	Bi	209	130890.058				ug/L
⌊	U	238	136.001				ug/L
	C	13	673.356				ug/L
	W	184	12.000				ug/L
	Pd	106	38.698				ug/L
	Kr	83	18.000				ug/L
⌈	Na	23	2960.441				ug/L
|	Mg	24	440.010				ug/L
|	K	39	56318.142				ug/L

Ca	44	306.673	ug/L
Ti	47	53.334	ug/L
Sc-1	45	126526.369	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero
Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, December 30, 2020 08:23:08
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.476
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	77.334	**1.000**	0.14	13.7	ug/L
|	B	11	2402.956	**20.000**	1.10	5.5	ug/L
|	Al	27	17652.908	**20.000**	0.68	3.4	ug/L
| >	Sc	45	131474.931				ug/L
|	V	51	4160.976	**3.000**	1.13	37.7	ug/L
|	Cr	52	3247.194	**3.000**	0.12	4.1	ug/L
|	Cr	53	10611.628	**3.000**	1.21	40.5	ug/L
|	Mn	55	1458.774	**1.000**	0.12	12.1	ug/L
|	Co	59	1464.996	**1.000**	0.08	7.9	ug/L
⌊	Ni	60	413.342	**2.000**	0.03	1.7	ug/L
⌈	Cu	63	1515.670	**2.000**	0.20	10.2	ug/L
|	Cu	65	622.242	**2.000**	0.19	9.4	ug/L
|	Zn	66	723.582	**5.000**	0.45	8.9	ug/L
|	Zn	68	517.347	**5.000**	0.14	2.7	ug/L
| >	Ge	72	96212.758				ug/L
|	As	75	347.371	**2.000**	0.58	28.9	ug/L
|	Se	77	600.018	**2.000**	0.09	4.4	ug/L
⌊	Se	82	37.212	**2.000**	0.88	44.1	ug/L
⌈	Mo	98	482.532	**1.000**	0.03	3.3	ug/L
| >	Rh	103	101076.398				ug/L
⌊	Ag	107	1056.056	**1.000**	0.12	12.2	ug/L
⌈	Cd	111	187.354	**1.000**	0.31	31.3	ug/L
|	Cd	114	342.349	**1.000**	0.11	10.9	ug/L
| >	In	115	141023.797				ug/L
|	Sn	120	1005.317	**1.000**	0.17	17.1	ug/L
⌊	Sb	121	1280.083	**2.000**	0.19	9.3	ug/L
⌈	Ba	137	366.651	**1.000**	0.20	19.6	ug/L
|	Ba	138	2556.305	**1.000**	0.04	4.3	ug/L
| >	Tb	159	198440.263				ug/L
|	Tl	205	2164.235	**1.000**	0.10	9.9	ug/L
⌊	Pb	208	2821.491	**1.000**	0.02	2.3	ug/L
⌈	Hg	200	29.316	**0.200**	0.06	29.5	ug/L
|	Hg	201	18.667	**0.200**	0.27	135.9	ug/L
| >	Bi	209	132471.945				ug/L
⌊	U	238	3947.446	**1.000**	0.02	2.3	ug/L
	C	13	726.693				ug/L
	W	184	2.665				ug/L
	Pd	106	25.542				ug/L
	Kr	83	14.000				ug/L
⌈	Na	23	44016.824	**100.000**	5.41	5.4	ug/L
|	Mg	24	27865.444	**100.000**	1.71	1.7	ug/L
|	K	39	99128.921	**100.000**	1.70	1.7	ug/L

Ca	44	1200.073	**100.000**	16.15	16.1	ug/L
Ti	47	26.667				ug/L
Sc-1	45	131474.931				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000559	0.000	1.000000	Linear Thru Zero
B	11.009	0.000853	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006186	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.009867	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005263	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001445	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009950	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005370	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001200	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003746	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001451	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000986	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000680	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001035	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000580	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000107	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003408	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009301	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001283	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002553	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005696	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004134	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001715	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012363	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010123	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013869	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001004	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000445	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.028769	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	410.563835	0.000	1.000000	Linear Thru Zero
Mg	23.985	274.254338	0.000	1.000000	Linear Thru Zero
K	38.964	428.107798	0.000	1.000000	Linear Thru Zero
Ca	43.956	8.934000	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, December 30, 2020 08:25:13
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.476
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6957.089	**100.000**	5.09	5.1	ug/L
|	B	11	117213.448	**1000.023**	24.85	2.5	ug/L
|	Al	27	207717.334	**250.051**	6.60	2.6	ug/L
| >	Sc	45	129282.408				ug/L
|	V	51	92328.614	**99.965**	2.80	2.8	ug/L
|	Cr	52	77221.710	**100.010**	4.16	4.2	ug/L
|	Cr	53	19468.268	**100.288**	13.86	13.8	ug/L
|	Mn	55	298247.465	**250.000**	10.52	4.2	ug/L
|	Co	59	85214.040	**100.002**	3.70	3.7	ug/L
⌊	Ni	60	41043.197	**250.001**	6.86	2.7	ug/L
⌈	Cu	63	90026.582	**250.001**	9.92	4.0	ug/L
|	Cu	65	41594.808	**250.003**	8.20	3.3	ug/L
|	Zn	66	24618.717	**250.008**	9.07	3.6	ug/L
|	Zn	68	17796.278	**250.012**	3.14	1.3	ug/L
| >	Ge	72	91543.029				ug/L
|	As	75	24545.556	**250.000**	9.25	3.7	ug/L
|	Se	77	2693.696	**250.121**	27.00	10.8	ug/L
⌊	Se	82	2998.198	**250.003**	6.85	2.7	ug/L
⌈	Mo	98	37519.485	**100.001**	0.80	0.8	ug/L
| >	Rh	103	96374.445				ug/L
⌊	Ag	107	84314.120	**99.999**	4.23	4.2	ug/L
⌈	Cd	111	19978.533	**100.001**	2.79	2.8	ug/L
|	Cd	114	44835.479	**100.002**	1.58	1.6	ug/L
| >	In	115	139620.436				ug/L
|	Sn	120	87616.812	**100.001**	1.58	1.6	ug/L
⌊	Sb	121	59775.468	**100.001**	2.01	2.0	ug/L
⌈	Ba	137	35494.839	**100.001**	2.12	2.1	ug/L
|	Ba	138	223503.820	**99.999**	2.36	2.4	ug/L
| >	Tb	159	195351.406				ug/L
|	Tl	205	204307.521	**100.000**	1.00	1.0	ug/L
⌊	Pb	208	691998.065	**250.000**	5.78	2.3	ug/L
⌈	Hg	200	2712.266	**20.000**	0.85	4.2	ug/L
|	Hg	201	1606.796	**20.001**	0.77	3.8	ug/L
| >	Bi	209	125103.319				ug/L
⌊	U	238	396525.831	**100.001**	0.29	0.3	ug/L
	C	13	1033.387				ug/L
	W	184	16.000				ug/L
	Pd	106	-151.696				ug/L
	Kr	83	30.000				ug/L
⌈	Na	23	8754852.656	**10000.531**	196.84	2.0	ug/L
|	Mg	24	5699939.307	**10000.519**	222.98	2.2	ug/L
|	K	39	8709321.121	**10000.505**	377.26	3.8	ug/L

Ca	44	252659.064	**10000.646**	137.49	1.4	ug/L
Ti	47	120.001				ug/L
Sc-1	45	129282.408				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000538	0.000	1.000000	Linear Thru Zero
B	11.009	0.000905	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006389	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007129	0.000	0.999934	Linear Thru Zero
Cr	51.941	0.005892	0.000	0.999995	Linear Thru Zero
Cr	52.941	0.000656	0.000	0.995419	Linear Thru Zero
Mn	54.938	0.009235	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006542	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001268	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003905	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001805	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.001066	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000770	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001068	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000088	0.000	0.998175	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999999	Linear Thru Zero
Mo	97.906	0.003879	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008743	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001430	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003212	0.000	0.999998	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006261	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004274	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001816	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011438	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010452	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014171	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001084	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000640	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031687	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	875.142764	0.000	0.999986	Linear Thru Zero
Mg	23.985	569.920363	0.000	0.999987	Linear Thru Zero
K	38.964	865.256583	0.000	0.999987	Linear Thru Zero
Ca	43.956	25.233609	0.000	0.999979	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, December 30, 2020 09:02:40
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.490
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	1.778				ug/L
|	B	11	229.336				ug/L
|	Al	27	1352.092				ug/L
| >	Sc	45	128231.310				ug/L
|	V	51	1485.279				ug/L
|	Cr	52	1074.058				ug/L
|	Cr	53	10933.321				ug/L
|	Mn	55	122.667				ug/L
|	Co	59	754.695				ug/L
⌊	Ni	60	88.000				ug/L
⌈	Cu	63	749.361				ug/L
|	Cu	65	311.116				ug/L
|	Zn	66	168.890				ug/L
|	Zn	68	130.668				ug/L
| >	Ge	72	96703.796				ug/L
|	As	75	-6.593				ug/L
|	Se	77	642.687				ug/L
⌊	Se	82	14.539				ug/L
⌈	Mo	98	186.230				ug/L
| >	Rh	103	99911.217				ug/L
⌊	Ag	107	122.667				ug/L
⌈	Cd	111	-14.861				ug/L
|	Cd	114	-71.838				ug/L
| >	In	115	142438.738				ug/L
|	Sn	120	194.669				ug/L
⌊	Sb	121	66.667				ug/L
⌈	Ba	137	10.659				ug/L
|	Ba	138	70.660				ug/L
| >	Tb	159	191194.806				ug/L
|	Tl	205	70.667				ug/L
⌊	Pb	208	70.667				ug/L
⌈	Hg	200	9.222				ug/L
|	Hg	201	2.667				ug/L
| >	Bi	209	131314.602				ug/L
⌊	U	238	96.000				ug/L
	C	13	933.378				ug/L
	W	184	17.333				ug/L
	Pd	106	31.479				ug/L
	Kr	83	14.667				ug/L
⌈	Na	23	2867.084				ug/L
|	Mg	24	333.339				ug/L
|	K	39	56251.119				ug/L

Ca	44	293.338	ug/L
Ti	47	26.667	ug/L
Sc-1	45	128231.310	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000538	0.000	1.000000	Linear Thru Zero
B	11.009	0.000905	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006389	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007129	0.000	0.999934	Linear Thru Zero
Cr	51.941	0.005892	0.000	0.999995	Linear Thru Zero
Cr	52.941	0.000656	0.000	0.995419	Linear Thru Zero
Mn	54.938	0.009235	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006542	0.000	0.999998	Linear Thru Zero
Ni	59.933	0.001268	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003905	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001805	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.001066	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000770	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001068	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000088	0.000	0.998175	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999999	Linear Thru Zero
Mo	97.906	0.003879	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008743	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001430	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.003212	0.000	0.999998	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006261	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004274	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001816	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011438	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010452	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014171	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001084	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000640	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031687	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	875.142764	0.000	0.999986	Linear Thru Zero
Mg	23.985	569.920363	0.000	0.999987	Linear Thru Zero
K	38.964	865.256583	0.000	0.999987	Linear Thru Zero
Ca	43.956	25.233609	0.000	0.999979	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, December 30, 2020 09:04:45
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.490
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	64.000	**1.000**	0.24	24.1	ug/L
|	B	11	2317.604	**20.000**	2.96	14.8	ug/L
|	Al	27	17623.519	**20.000**	0.67	3.3	ug/L
| >	Sc	45	130953.312				ug/L
|	V	51	3342.319	**3.000**	0.96	32.0	ug/L
|	Cr	52	3253.863	**3.000**	0.18	5.9	ug/L
|	Cr	53	10134.467	**3.000**	0.51	16.9	ug/L
|	Mn	55	1288.083	**1.000**	0.04	3.8	ug/L
|	Co	59	1549.454	**1.000**	0.15	14.8	ug/L
⌊	Ni	60	400.008	**2.000**	0.44	21.8	ug/L
⌈	Cu	63	1476.553	**2.000**	0.12	6.1	ug/L
|	Cu	65	664.022	**2.000**	0.27	13.6	ug/L
|	Zn	66	606.241	**5.000**	0.20	4.0	ug/L
|	Zn	68	492.457	**5.000**	0.34	6.9	ug/L
| >	Ge	72	96657.040				ug/L
|	As	75	190.859	**2.000**	1.24	61.9	ug/L
|	Se	77	680.023	**2.000**	2.92	145.9	ug/L
⌊	Se	82	37.861	**2.000**	0.96	48.2	ug/L
⌈	Mo	98	435.425	**1.000**	0.18	17.5	ug/L
| >	Rh	103	101547.677				ug/L
⌊	Ag	107	954.713	**1.000**	0.15	15.3	ug/L
⌈	Cd	111	181.134	**1.000**	0.22	22.3	ug/L
|	Cd	114	418.991	**1.000**	0.05	5.4	ug/L
| >	In	115	144424.477				ug/L
|	Sn	120	1018.685	**1.000**	0.06	5.9	ug/L
⌊	Sb	121	1261.413	**2.000**	0.17	8.5	ug/L
⌈	Ba	137	384.001	**1.000**	0.14	14.4	ug/L
|	Ba	138	2473.633	**1.000**	0.03	3.4	ug/L
| >	Tb	159	198410.704				ug/L
|	Tl	205	2116.224	**1.000**	0.03	3.1	ug/L
⌊	Pb	208	2682.807	**1.000**	0.06	5.8	ug/L
⌈	Hg	200	45.265	**0.200**	0.10	51.5	ug/L
|	Hg	201	21.333	**0.200**	0.21	105.1	ug/L
| >	Bi	209	134094.485				ug/L
⌊	U	238	3846.073	**1.000**	0.01	0.8	ug/L
	C	13	766.696				ug/L
	W	184	10.665				ug/L
	Pd	106	17.802				ug/L
	Kr	83	16.000				ug/L
⌈	Na	23	44806.895	**100.000**	3.46	3.5	ug/L
|	Mg	24	28935.176	**100.000**	3.90	3.9	ug/L
|	K	39	97499.768	**100.000**	4.17	4.2	ug/L

Ca	44	1546.789	**100.000**	21.25	21.3	ug/L
Ti	47	53.333				ug/L
Sc-1	45	130953.312				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000476	0.000	1.000000	Linear Thru Zero
B	11.009	0.000796	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006204	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.004633	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005494	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.002622	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.008881	0.000	1.000000	Linear Thru Zero
Co	58.933	0.005949	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001186	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003767	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001829	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000906	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000748	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001027	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000194	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000121	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.002423	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008177	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001355	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003410	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005680	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004137	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001882	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012101	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010297	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013160	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001342	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000690	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027949	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	419.398115	0.000	1.000000	Linear Thru Zero
Mg	23.985	286.018371	0.000	1.000000	Linear Thru Zero
K	38.964	412.486488	0.000	1.000000	Linear Thru Zero
Ca	43.956	12.534507	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, December 30, 2020 09:06:49
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.490
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7143.886	**100.001**	3.16	3.2	ug/L
|	B	11	117189.462	**1000.039**	32.62	3.3	ug/L
|	Al	27	210494.046	**250.026**	2.95	1.2	ug/L
| >	Sc	45	132596.277				ug/L
|	V	51	92636.396	**100.029**	4.67	4.7	ug/L
|	Cr	52	79166.848	**100.006**	3.48	3.5	ug/L
|	Cr	53	20741.493	**100.423**	5.25	5.2	ug/L
|	Mn	55	301513.001	**250.000**	3.58	1.4	ug/L
|	Co	59	86351.716	**100.001**	1.03	1.0	ug/L
⌊	Ni	60	41882.202	**250.001**	9.38	3.8	ug/L
⌈	Cu	63	93168.902	**250.001**	3.74	1.5	ug/L
|	Cu	65	42752.532	**250.000**	2.67	1.1	ug/L
|	Zn	66	25124.861	**250.014**	1.97	0.8	ug/L
|	Zn	68	17995.734	**250.001**	6.96	2.8	ug/L
| >	Ge	72	95057.753				ug/L
|	As	75	24802.670	**250.000**	2.94	1.2	ug/L
|	Se	77	2874.413	**249.983**	5.40	2.2	ug/L
⌊	Se	82	3095.651	**250.001**	4.70	1.9	ug/L
⌈	Mo	98	38652.654	**100.004**	1.29	1.3	ug/L
| >	Rh	103	97044.693				ug/L
⌊	Ag	107	87291.348	**100.001**	1.42	1.4	ug/L
⌈	Cd	111	20645.827	**100.001**	1.83	1.8	ug/L
|	Cd	114	44570.539	**99.999**	2.36	2.4	ug/L
| >	In	115	139106.565				ug/L
|	Sn	120	88101.031	**100.001**	0.64	0.6	ug/L
⌊	Sb	121	59909.603	**100.002**	0.91	0.9	ug/L
⌈	Ba	137	36253.571	**100.000**	4.18	4.2	ug/L
|	Ba	138	227520.668	**99.999**	2.56	2.6	ug/L
| >	Tb	159	199155.951				ug/L
|	Tl	205	207564.211	**100.000**	2.53	2.5	ug/L
⌊	Pb	208	702768.819	**250.000**	7.18	2.9	ug/L
⌈	Hg	200	2791.013	**20.000**	0.12	0.6	ug/L
|	Hg	201	1633.467	**20.000**	0.45	2.3	ug/L
| >	Bi	209	125616.114				ug/L
⌊	U	238	405134.902	**100.001**	1.06	1.1	ug/L
	C	13	826.701				ug/L
	W	184	6.667				ug/L
	Pd	106	-218.354				ug/L
	Kr	83	19.333				ug/L
⌈	Na	23	9209196.038	**10000.544**	237.41	2.4	ug/L
|	Mg	24	5744899.124	**10000.502**	265.31	2.7	ug/L
|	K	39	9277908.352	**10000.553**	72.59	0.7	ug/L

Ca	44	256438.985	**10000.511**	529.38	5.3	ug/L
Ti	47	53.334				ug/L
Sc-1	45	132596.277				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000539	0.000	0.999999	Linear Thru Zero
B	11.009	0.000882	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006308	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006873	0.000	0.999952	Linear Thru Zero
Cr	51.941	0.005889	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000709	0.000	0.990216	Linear Thru Zero
Mn	54.938	0.009094	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006454	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001261	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003890	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001786	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001050	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000752	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001044	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999964	Linear Thru Zero
Se	81.917	0.000130	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003964	0.000	0.999992	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008984	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001485	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003209	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006320	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004302	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001821	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011424	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010421	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014118	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001107	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000649	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032246	0.000	0.999999	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	920.582777	0.000	0.999985	Linear Thru Zero
Mg	23.985	574.427738	0.000	0.999987	Linear Thru Zero
K	38.964	922.114760	0.000	0.999985	Linear Thru Zero
Ca	43.956	25.613257	0.000	0.999987	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, December 30, 2020 10:28:04
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.523
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.000				ug/L
|	B	11	162.668				ug/L
|	Al	27	4755.801				ug/L
| >	Sc	45	126866.657				ug/L
|	V	51	1648.608				ug/L
|	Cr	52	1075.391				ug/L
|	Cr	53	10717.742				ug/L
|	Mn	55	104.001				ug/L
|	Co	59	659.577				ug/L
⌊	Ni	60	89.778				ug/L
⌈	Cu	63	732.471				ug/L
|	Cu	65	312.005				ug/L
|	Zn	66	72.000				ug/L
|	Zn	68	57.778				ug/L
| >	Ge	72	92535.611				ug/L
|	As	75	97.255				ug/L
|	Se	77	690.024				ug/L
⌊	Se	82	21.913				ug/L
⌈	Mo	98	517.348				ug/L
| >	Rh	103	95453.460				ug/L
⌊	Ag	107	96.000				ug/L
⌈	Cd	111	-16.201				ug/L
|	Cd	114	-82.224				ug/L
| >	In	115	136948.953				ug/L
|	Sn	120	122.667				ug/L
⌊	Sb	121	48.000				ug/L
⌈	Ba	137	11.973				ug/L
|	Ba	138	69.306				ug/L
| >	Tb	159	190847.011				ug/L
|	Tl	205	28.000				ug/L
⌊	Pb	208	36.000				ug/L
⌈	Hg	200	9.274				ug/L
|	Hg	201	4.000				ug/L
| >	Bi	209	126119.796				ug/L
⌊	U	238	17.333				ug/L
	C	13	786.698				ug/L
	W	184	9.333				ug/L
	Pd	106	37.073				ug/L
	Kr	83	10.000				ug/L
⌈	Na	23	10405.417				ug/L
|	Mg	24	2907.096				ug/L
|	K	39	58960.079				ug/L

Ca	44	413.342	ug/L
Ti	47	53.334	ug/L
Sc-1	45	126866.657	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000539	0.000	0.999999	Linear Thru Zero
B	11.009	0.000882	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006308	0.000	0.999999	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006873	0.000	0.999952	Linear Thru Zero
Cr	51.941	0.005889	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000709	0.000	0.990216	Linear Thru Zero
Mn	54.938	0.009094	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006454	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001261	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003890	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001786	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001050	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000752	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001044	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.999964	Linear Thru Zero
Se	81.917	0.000130	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003964	0.000	0.999992	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008984	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001485	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003209	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006320	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004302	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001821	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011424	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010421	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014118	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001107	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000649	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032246	0.000	0.999999	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	920.582777	0.000	0.999985	Linear Thru Zero
Mg	23.985	574.427738	0.000	0.999987	Linear Thru Zero
K	38.964	922.114760	0.000	0.999985	Linear Thru Zero
Ca	43.956	25.613257	0.000	0.999987	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, December 30, 2020 10:30:09
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.523
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	64.000	**1.000**	0.22	21.8	ug/L
|	B	11	2504.316	**20.000**	2.24	11.2	ug/L
|	Al	27	21992.167	**20.000**	0.67	3.4	ug/L
| >	Sc	45	131747.560				ug/L
|	V	51	6164.510	**3.000**	1.01	33.7	ug/L
|	Cr	52	3373.903	**3.000**	0.12	3.8	ug/L
|	Cr	53	11324.411	**3.000**	3.50	116.5	ug/L
|	Mn	55	1413.434	**1.000**	0.12	11.7	ug/L
|	Co	59	1562.789	**1.000**	0.11	10.7	ug/L
⌊	Ni	60	434.676	**2.000**	0.08	4.1	ug/L
⌈	Cu	63	1511.225	**2.000**	0.10	4.8	ug/L
|	Cu	65	685.357	**2.000**	0.15	7.3	ug/L
|	Zn	66	590.240	**5.000**	0.54	10.7	ug/L
|	Zn	68	433.787	**5.000**	0.39	7.9	ug/L
| >	Ge	72	98324.674				ug/L
|	As	75	305.352	**2.000**	1.86	93.2	ug/L
|	Se	77	587.351	**2.000**	0.56	28.0	ug/L
⌊	Se	82	33.200	**2.000**	2.87	143.3	ug/L
⌈	Mo	98	751.736	**1.000**	0.36	36.0	ug/L
| >	Rh	103	102498.665				ug/L
⌊	Ag	107	1109.396	**1.000**	0.13	12.8	ug/L
⌈	Cd	111	199.427	**1.000**	0.32	31.8	ug/L
|	Cd	114	395.374	**1.000**	0.17	17.2	ug/L
| >	In	115	145738.729				ug/L
|	Sn	120	952.046	**1.000**	0.11	10.9	ug/L
⌊	Sb	121	1224.075	**2.000**	0.15	7.7	ug/L
⌈	Ba	137	381.329	**1.000**	0.09	8.5	ug/L
|	Ba	138	2485.631	**1.000**	0.05	4.6	ug/L
| >	Tb	159	203543.991				ug/L
|	Tl	205	2152.234	**1.000**	0.12	12.1	ug/L
⌊	Pb	208	2829.488	**1.000**	0.03	2.9	ug/L
⌈	Hg	200	38.556	**0.200**	0.06	29.3	ug/L
|	Hg	201	17.333	**0.200**	0.03	16.5	ug/L
| >	Bi	209	132940.530				ug/L
⌊	U	238	3858.078	**1.000**	0.01	0.6	ug/L
	C	13	820.035				ug/L
	W	184	17.333				ug/L
	Pd	106	28.469				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	55701.440	**100.000**	3.25	3.3	ug/L
|	Mg	24	32011.387	**100.000**	9.09	9.1	ug/L
|	K	39	103344.753	**100.000**	4.94	4.9	ug/L

Ca	44	1640.135	**100.000**	3.26	3.3	ug/L
Ti	47	53.334				ug/L
Sc-1	45	131747.560				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000486	0.000	1.000000	Linear Thru Zero
B	11.009	0.000887	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006472	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.011253	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005712	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000491	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009913	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006666	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001296	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003734	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001798	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001049	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000760	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000994	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000740	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000053	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.001919	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.009808	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001486	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003315	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005632	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004025	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001811	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011850	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010424	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013712	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001083	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000493	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.028883	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	452.960228	0.000	1.000000	Linear Thru Zero
Mg	23.985	291.042906	0.000	1.000000	Linear Thru Zero
K	38.964	443.846741	0.000	1.000000	Linear Thru Zero
Ca	43.956	12.267924	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, December 30, 2020 10:32:13
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.523
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	6988.221	**100.001**	3.46	3.5	ug/L
|	B	11	113766.388	**999.991**	19.81	2.0	ug/L
|	Al	27	212212.415	**249.965**	5.20	2.1	ug/L
| >	Sc	45	130972.118				ug/L
|	V	51	94291.805	**99.947**	2.01	2.0	ug/L
|	Cr	52	79402.718	**100.004**	1.70	1.7	ug/L
|	Cr	53	20884.464	**100.031**	5.09	5.1	ug/L
|	Mn	55	305895.176	**250.000**	5.40	2.2	ug/L
|	Co	59	86537.351	**100.000**	1.57	1.6	ug/L
⌊	Ni	60	41177.099	**249.999**	7.38	3.0	ug/L
⌈	Cu	63	91308.426	**250.001**	3.42	1.4	ug/L
|	Cu	65	42254.444	**250.000**	0.96	0.4	ug/L
|	Zn	66	24971.595	**250.002**	1.11	0.4	ug/L
|	Zn	68	17710.790	**250.000**	3.46	1.4	ug/L
| >	Ge	72	93173.523				ug/L
|	As	75	24700.706	**250.001**	2.61	1.0	ug/L
|	Se	77	2896.420	**250.141**	7.26	2.9	ug/L
⌊	Se	82	3014.298	**250.009**	6.72	2.7	ug/L
⌈	Mo	98	38944.890	**100.005**	2.29	2.3	ug/L
| >	Rh	103	97483.529				ug/L
⌊	Ag	107	86710.647	**99.999**	3.11	3.1	ug/L
⌈	Cd	111	19560.038	**100.000**	3.35	3.3	ug/L
|	Cd	114	44608.550	**100.000**	1.67	1.7	ug/L
| >	In	115	136877.313				ug/L
|	Sn	120	89236.503	**100.001**	1.52	1.5	ug/L
⌊	Sb	121	59933.749	**100.003**	1.25	1.2	ug/L
⌈	Ba	137	36121.066	**100.000**	2.12	2.1	ug/L
|	Ba	138	229150.468	**100.000**	1.30	1.3	ug/L
| >	Tb	159	199748.953				ug/L
|	Tl	205	208818.213	**100.000**	0.72	0.7	ug/L
⌊	Pb	208	698161.061	**250.000**	1.69	0.7	ug/L
⌈	Hg	200	2844.294	**20.000**	0.47	2.4	ug/L
|	Hg	201	1610.796	**20.000**	0.64	3.2	ug/L
| >	Bi	209	125433.814				ug/L
⌊	U	238	401751.888	**100.001**	0.56	0.6	ug/L
	C	13	906.709				ug/L
	W	184	17.333				ug/L
	Pd	106	-125.458				ug/L
	Kr	83	18.667				ug/L
⌈	Na	23	9048251.815	**10000.499**	36.43	0.4	ug/L
|	Mg	24	5842814.969	**10000.502**	174.02	1.7	ug/L
|	K	39	8886705.616	**10000.497**	318.78	3.2	ug/L

Ca	44	252837.660	**10000.514**	244.17	2.4	ug/L
Ti	47	53.333				ug/L
Sc-1	45	130972.118				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000534	0.000	1.000000	Linear Thru Zero
B	11.009	0.000867	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006333	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007073	0.000	0.999843	Linear Thru Zero
Cr	51.941	0.005978	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000749	0.000	0.999946	Linear Thru Zero
Mn	54.938	0.009339	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006555	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001255	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003889	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001801	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001069	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000758	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001056	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.997512	Linear Thru Zero
Se	81.917	0.000128	0.000	0.999989	Linear Thru Zero
Mo	97.906	0.003941	0.000	0.999987	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008884	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001431	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003264	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006510	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004375	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001808	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011470	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010453	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013981	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001130	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000641	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032027	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	903.739562	0.000	0.999988	Linear Thru Zero
Mg	23.985	583.961495	0.000	0.999987	Linear Thru Zero
K	38.964	882.730665	0.000	0.999988	Linear Thru Zero
Ca	43.956	25.241134	0.000	0.999987	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, December 30, 2020 11:02:03
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.535
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	2.667				ug/L
|	B	11	194.669				ug/L
|	Al	27	4246.239				ug/L
| >	Sc	45	135644.303				ug/L
|	V	51	2260.542				ug/L
|	Cr	52	1111.395				ug/L
|	Cr	53	12188.769				ug/L
|	Mn	55	144.001				ug/L
|	Co	59	700.469				ug/L
⌊	Ni	60	127.112				ug/L
⌈	Cu	63	842.702				ug/L
|	Cu	65	375.118				ug/L
|	Zn	66	289.782				ug/L
|	Zn	68	196.446				ug/L
| >	Ge	72	98375.069				ug/L
|	As	75	62.020				ug/L
|	Se	77	701.358				ug/L
⌊	Se	82	31.948				ug/L
⌈	Mo	98	343.568				ug/L
| >	Rh	103	102614.906				ug/L
⌊	Ag	107	96.000				ug/L
⌈	Cd	111	-2.789				ug/L
|	Cd	114	-46.332				ug/L
| >	In	115	146445.614				ug/L
|	Sn	120	221.336				ug/L
⌊	Sb	121	37.333				ug/L
⌈	Ba	137	15.956				ug/L
|	Ba	138	114.623				ug/L
| >	Tb	159	202251.010				ug/L
|	Tl	205	21.333				ug/L
⌊	Pb	208	100.001				ug/L
⌈	Hg	200	7.889				ug/L
|	Hg	201	0.000				ug/L
| >	Bi	209	132559.447				ug/L
⌊	U	238	28.000				ug/L
	C	13	880.039				ug/L
	W	184	17.333				ug/L
	Pd	106	34.406				ug/L
	Kr	83	6.000				ug/L
⌈	Na	23	15425.238				ug/L
|	Mg	24	2306.933				ug/L
|	K	39	69829.797				ug/L

Ca	44	1053.390	ug/L
Ti	47	0.000	ug/L
Sc-1	45	135644.303	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000534	0.000	1.000000	Linear Thru Zero
B	11.009	0.000867	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006333	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007073	0.000	0.999843	Linear Thru Zero
Cr	51.941	0.005978	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000749	0.000	0.999946	Linear Thru Zero
Mn	54.938	0.009339	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006555	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001255	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003889	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001801	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001069	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000758	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001056	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	0.997512	Linear Thru Zero
Se	81.917	0.000128	0.000	0.999989	Linear Thru Zero
Mo	97.906	0.003941	0.000	0.999987	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008884	0.000	0.999999	Linear Thru Zero
Cd	110.904	0.001431	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003264	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006510	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004375	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001808	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011470	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010453	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013981	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001130	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000641	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.032027	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	903.739562	0.000	0.999988	Linear Thru Zero
Mg	23.985	583.961495	0.000	0.999987	Linear Thru Zero
K	38.964	882.730665	0.000	0.999988	Linear Thru Zero
Ca	43.956	25.241134	0.000	0.999987	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, December 30, 2020 11:04:07
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.535
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	65.778	**1.000**	0.10	10.4	ug/L
|	B	11	2552.326	**20.000**	0.48	2.4	ug/L
|	Al	27	20602.535	**20.000**	0.19	0.9	ug/L
| >	Sc	45	135476.911				ug/L
|	V	51	5216.443	**3.000**	1.62	54.1	ug/L
|	Cr	52	3451.929	**3.000**	0.14	4.6	ug/L
|	Cr	53	11729.548	**3.000**	2.71	90.2	ug/L
|	Mn	55	1389.431	**1.000**	0.17	16.7	ug/L
|	Co	59	1614.353	**1.000**	0.04	4.5	ug/L
⌊	Ni	60	454.233	**2.000**	0.22	11.1	ug/L
⌈	Cu	63	1558.344	**2.000**	0.12	6.1	ug/L
|	Cu	65	742.250	**2.000**	0.21	10.5	ug/L
|	Zn	66	630.242	**5.000**	0.91	18.2	ug/L
|	Zn	68	464.900	**5.000**	0.31	6.2	ug/L
| >	Ge	72	99839.982				ug/L
|	As	75	307.792	**2.000**	1.76	88.0	ug/L
|	Se	77	598.685	**2.000**	1.13	56.7	ug/L
⌊	Se	82	48.591	**2.000**	0.92	46.0	ug/L
⌈	Mo	98	497.200	**1.000**	0.33	33.3	ug/L
| >	Rh	103	106667.444				ug/L
⌊	Ag	107	1002.717	**1.000**	0.10	10.5	ug/L
⌈	Cd	111	208.205	**1.000**	0.23	22.8	ug/L
|	Cd	114	389.708	**1.000**	0.10	10.3	ug/L
| >	In	115	149126.160				ug/L
|	Sn	120	1064.058	**1.000**	0.20	19.6	ug/L
⌊	Sb	121	1157.401	**2.000**	0.15	7.4	ug/L
⌈	Ba	137	399.987	**1.000**	0.10	9.9	ug/L
|	Ba	138	2609.653	**1.000**	0.04	4.4	ug/L
| >	Tb	159	207245.861				ug/L
|	Tl	205	2070.882	**1.000**	0.06	6.0	ug/L
⌊	Pb	208	3088.187	**1.000**	0.03	2.9	ug/L
⌈	Hg	200	29.291	**0.200**	0.05	27.3	ug/L
|	Hg	201	13.333	**0.200**	0.09	43.8	ug/L
| >	Bi	209	136400.325				ug/L
⌊	U	238	4090.171	**1.000**	0.05	4.9	ug/L
	C	13	600.018				ug/L
	W	184	6.667				ug/L
	Pd	106	20.010				ug/L
	Kr	83	8.667				ug/L
⌈	Na	23	52189.293	**100.000**	5.35	5.4	ug/L
|	Mg	24	31730.350	**100.000**	5.55	5.6	ug/L
|	K	39	105473.423	**100.000**	5.12	5.1	ug/L

Ca	44	1853.505	**100.000**	12.58	12.6	ug/L
Ti	47	66.667				ug/L
Sc-1	45	135476.911				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000466	0.000	1.000000	Linear Thru Zero
B	11.009	0.000870	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006039	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007287	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.005764	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001094	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009189	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006751	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001208	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003523	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001812	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000674	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000532	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001236	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000565	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000081	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.001320	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008453	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001416	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002929	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005619	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003754	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001850	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012020	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009881	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014411	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000775	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000486	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.029778	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	367.640556	0.000	1.000000	Linear Thru Zero
Mg	23.985	294.234161	0.000	1.000000	Linear Thru Zero
K	38.964	356.436260	0.000	1.000000	Linear Thru Zero
Ca	43.956	8.001153	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, December 30, 2020 11:06:12
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.535
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	7017.573	**100.001**	3.34	3.3	ug/L
|	B	11	115376.746	**1000.004**	44.94	4.5	ug/L
|	Al	27	212261.828	**250.076**	6.92	2.8	ug/L
| >	Sc	45	131280.307				ug/L
|	V	51	94119.838	**99.996**	1.96	2.0	ug/L
|	Cr	52	79958.403	**100.004**	2.50	2.5	ug/L
|	Cr	53	21224.514	**100.227**	11.20	11.2	ug/L
|	Mn	55	310956.775	**250.000**	9.93	4.0	ug/L
|	Co	59	88339.592	**100.000**	1.69	1.7	ug/L
⌊	Ni	60	43296.220	**250.001**	8.20	3.3	ug/L
⌈	Cu	63	92564.379	**250.001**	8.65	3.5	ug/L
|	Cu	65	42623.097	**250.000**	6.02	2.4	ug/L
|	Zn	66	25062.500	**250.036**	8.65	3.5	ug/L
|	Zn	68	17795.379	**250.028**	2.10	0.8	ug/L
| >	Ge	72	94737.365				ug/L
|	As	75	25335.158	**249.997**	5.15	2.1	ug/L
|	Se	77	2889.751	**250.113**	7.68	3.1	ug/L
⌊	Se	82	3179.044	**250.006**	9.48	3.8	ug/L
⌈	Mo	98	38194.135	**100.007**	1.19	1.2	ug/L
| >	Rh	103	97900.934				ug/L
⌊	Ag	107	86605.445	**100.000**	0.77	0.8	ug/L
⌈	Cd	111	20542.414	**100.000**	3.20	3.2	ug/L
|	Cd	114	44975.547	**100.001**	3.50	3.5	ug/L
| >	In	115	143409.656				ug/L
|	Sn	120	90169.977	**100.001**	0.65	0.7	ug/L
⌊	Sb	121	60346.888	**100.004**	1.91	1.9	ug/L
⌈	Ba	137	37105.999	**100.000**	2.37	2.4	ug/L
|	Ba	138	231416.432	**99.999**	1.63	1.6	ug/L
| >	Tb	159	202322.671				ug/L
|	Tl	205	207760.479	**100.000**	3.28	3.3	ug/L
⌊	Pb	208	700337.906	**250.000**	6.51	2.6	ug/L
⌈	Hg	200	2764.238	**20.001**	0.83	4.2	ug/L
|	Hg	201	1596.128	**20.000**	1.30	6.5	ug/L
| >	Bi	209	125460.921				ug/L
⌊	U	238	400223.995	**100.001**	1.09	1.1	ug/L
	C	13	873.372				ug/L
	W	184	22.667				ug/L
	Pd	106	-200.148				ug/L
	Kr	83	15.333				ug/L
⌈	Na	23	8856387.938	**10000.584**	398.43	4.0	ug/L
|	Mg	24	5821994.651	**10000.494**	148.84	1.5	ug/L
|	K	39	9117820.685	**10000.606**	133.77	1.3	ug/L

Ca	44	253713.263	**10000.683**	290.29	2.9	ug/L
Ti	47	13.333				ug/L
Sc-1	45	131280.307				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000535	0.000	0.999999	Linear Thru Zero
B	11.009	0.000878	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006342	0.000	0.999993	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007005	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.006010	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000718	0.000	0.997143	Linear Thru Zero
Mn	54.938	0.009475	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006679	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001316	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003875	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001785	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001046	0.000	0.999975	Linear Thru Zero
Zn	67.925	0.000743	0.000	0.999984	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001067	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000093	0.000	0.998416	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999995	Linear Thru Zero
Mo	97.906	0.003868	0.000	0.999978	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008837	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001433	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003140	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006272	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004206	0.000	0.999998	Linear Thru Zero
Ba	136.905	0.001834	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011434	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010271	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013848	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001098	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000637	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031902	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	884.044630	0.000	0.999983	Linear Thru Zero
Mg	23.985	581.940001	0.000	0.999988	Linear Thru Zero
K	38.964	904.744258	0.000	0.999982	Linear Thru Zero
Ca	43.956	25.264261	0.000	0.999977	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Blank

Sample Date/Time: Wednesday, December 30, 2020 15:46:23
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.601
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 1
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	0.889				ug/L
|	B	11	136.001				ug/L
|	Al	27	8387.541				ug/L
| >	Sc	45	106557.605				ug/L
|	V	51	1832.334				ug/L
|	Cr	52	942.711				ug/L
|	Cr	53	8053.245				ug/L
|	Mn	55	354.673				ug/L
|	Co	59	589.351				ug/L
⌊	Ni	60	85.334				ug/L
⌈	Cu	63	568.905				ug/L
|	Cu	65	272.893				ug/L
|	Zn	66	55.111				ug/L
|	Zn	68	46.222				ug/L
| >	Ge	72	80666.020				ug/L
|	As	75	124.452				ug/L
|	Se	77	526.681				ug/L
⌊	Se	82	31.275				ug/L
⌈	Mo	98	82.375				ug/L
| >	Rh	103	83426.608				ug/L
⌊	Ag	107	90.667				ug/L
⌈	Cd	111	17.306				ug/L
|	Cd	114	-22.175				ug/L
| >	In	115	119946.306				ug/L
|	Sn	120	109.266				ug/L
⌊	Sb	121	10.667				ug/L
⌈	Ba	137	31.880				ug/L
|	Ba	138	178.548				ug/L
| >	Tb	159	169518.769				ug/L
|	Tl	205	13.333				ug/L
⌊	Pb	208	32.000				ug/L
⌈	Hg	200	6.481				ug/L
|	Hg	201	2.667				ug/L
| >	Bi	209	110572.817				ug/L
⌊	U	238	10.667				ug/L
	C	13	540.015				ug/L
	W	184	237.335				ug/L
	Pd	106	39.740				ug/L
	Kr	83	6.667				ug/L
⌈	Na	23	3707.358				ug/L
|	Mg	24	2053.551				ug/L
|	K	39	57149.522				ug/L

Ca	44	266.671		ug/L
Ti	47	0.000		ug/L
Sc-1	45	106557.605		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000535	0.000	0.999999	Linear Thru Zero
B	11.009	0.000878	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006342	0.000	0.999993	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007005	0.000	0.999999	Linear Thru Zero
Cr	51.941	0.006010	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000718	0.000	0.997143	Linear Thru Zero
Mn	54.938	0.009475	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006679	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001316	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003875	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001785	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001046	0.000	0.999975	Linear Thru Zero
Zn	67.925	0.000743	0.000	0.999984	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001067	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000093	0.000	0.998416	Linear Thru Zero
Se	81.917	0.000133	0.000	0.999995	Linear Thru Zero
Mo	97.906	0.003868	0.000	0.999978	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008837	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001433	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003140	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006272	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004206	0.000	0.999998	Linear Thru Zero
Ba	136.905	0.001834	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011434	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010271	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013848	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001098	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000637	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031902	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	884.044630	0.000	0.999983	Linear Thru Zero
Mg	23.985	581.940001	0.000	0.999988	Linear Thru Zero
K	38.964	904.744258	0.000	0.999982	Linear Thru Zero
Ca	43.956	25.264261	0.000	0.999977	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL2)

Sample ID: Standard 1

Sample Date/Time: Wednesday, December 30, 2020 15:48:27
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.601
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 2
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	63.111	**1.000**	0.30	29.6	ug/L
|	B	11	1885.512	**20.000**	2.25	11.3	ug/L
|	Al	27	21775.739	**20.000**	1.47	7.3	ug/L
| >	Sc	45	106325.078				ug/L
|	V	51	3537.856	**3.000**	0.25	8.3	ug/L
|	Cr	52	2871.747	**3.000**	0.18	6.1	ug/L
|	Cr	53	7508.153	**3.000**	1.34	44.5	ug/L
|	Mn	55	1546.787	**1.000**	0.09	8.8	ug/L
|	Co	59	1300.529	**1.000**	0.07	6.6	ug/L
⌊	Ni	60	393.786	**2.000**	0.12	6.1	ug/L
⌈	Cu	63	1219.630	**2.000**	0.38	19.2	ug/L
|	Cu	65	612.463	**2.000**	0.37	18.6	ug/L
|	Zn	66	487.123	**5.000**	0.98	19.6	ug/L
|	Zn	68	359.118	**5.000**	1.19	23.9	ug/L
| >	Ge	72	82974.901				ug/L
|	As	75	158.963	**2.000**	10.43	521.3	ug/L
|	Se	77	494.679	**2.000**	1.95	97.4	ug/L
⌊	Se	82	31.948	**2.000**	67.61	3380.7	ug/L
⌈	Mo	98	399.716	**1.000**	0.02	1.7	ug/L
| >	Rh	103	84572.161				ug/L
⌊	Ag	107	792.031	**1.000**	0.03	2.7	ug/L
⌈	Cd	111	120.247	**1.000**	0.08	8.2	ug/L
|	Cd	114	277.497	**1.000**	0.19	19.4	ug/L
| >	In	115	120208.602				ug/L
|	Sn	120	792.031	**1.000**	0.08	7.5	ug/L
⌊	Sb	121	1034.721	**2.000**	0.29	14.4	ug/L
⌈	Ba	137	314.541	**1.000**	0.10	9.7	ug/L
|	Ba	138	2189.443	**1.000**	0.06	5.6	ug/L
| >	Tb	159	167726.550				ug/L
|	Tl	205	1789.494	**1.000**	0.11	10.8	ug/L
⌊	Pb	208	2225.431	**1.000**	0.02	1.7	ug/L
⌈	Hg	200	31.857	**0.200**	0.12	58.7	ug/L
|	Hg	201	13.333	**0.200**	0.19	94.3	ug/L
| >	Bi	209	111856.833				ug/L
⌊	U	238	3177.838	**1.000**	0.04	3.5	ug/L
	C	13	793.366				ug/L
	W	184	230.669				ug/L
	Pd	106	34.979				ug/L
	Kr	83	6.000				ug/L
⌈	Na	23	38219.795	**100.000**	7.64	7.6	ug/L
|	Mg	24	24777.549	**100.000**	11.43	11.4	ug/L
|	K	39	92384.961	**100.000**	6.53	6.5	ug/L

	Ca	44	1093.394	**100.000**	19.56	19.6	ug/L
	Ti	47	53.334				ug/L
	Sc-1	45	106325.078				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000586	0.000	1.000000	Linear Thru Zero
B	11.009	0.000824	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006301	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.005358	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006050	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.001650	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011230	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006697	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001451	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003832	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002004	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.001035	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000750	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000176	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000285	0.000	1.000000	Linear Thru Zero
Se	81.917	-0.000002	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.003739	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008279	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000856	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002490	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005681	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004257	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001687	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.012012	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010607	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013084	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001126	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000473	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.028320	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	345.124377	0.000	1.000000	Linear Thru Zero
Mg	23.985	227.239977	0.000	1.000000	Linear Thru Zero
K	38.964	352.354392	0.000	1.000000	Linear Thru Zero
Ca	43.956	8.267234	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL2)

Sample ID: Standard 2

Sample Date/Time: Wednesday, December 30, 2020 15:50:32
Sample File: C:\Elandata\Sample\PE_EL2_201230.sam
Blank File: C:\Elandata\Dataset\2020 DEC (28-31)\Blank.601
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\BC Methods\200.8-6020-6020A-120619.mth
Autosampler Position: 3
Report Filename PE_EL2_201230.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	5638.035	**99.999**	3.27	3.3	ug/L
|	B	11	88962.020	**1000.008**	14.68	1.5	ug/L
|	Al	27	176678.140	**250.017**	5.69	2.3	ug/L
| >	Sc	45	105756.282				ug/L
|	V	51	76015.966	**100.021**	1.33	1.3	ug/L
|	Cr	52	64461.769	**99.999**	0.60	0.6	ug/L
|	Cr	53	15443.250	**100.301**	2.59	2.6	ug/L
|	Mn	55	252311.829	**249.999**	3.74	1.5	ug/L
|	Co	59	72410.564	**100.000**	1.14	1.1	ug/L
⌊	Ni	60	34469.089	**249.998**	3.61	1.4	ug/L
⌈	Cu	63	76670.577	**250.000**	6.79	2.7	ug/L
|	Cu	65	35461.891	**249.998**	3.89	1.6	ug/L
|	Zn	66	21005.151	**250.000**	3.26	1.3	ug/L
|	Zn	68	14697.906	**249.996**	3.43	1.4	ug/L
| >	Ge	72	80990.775				ug/L
|	As	75	21392.251	**250.013**	4.01	1.6	ug/L
|	Se	77	2364.280	**250.066**	2.15	0.9	ug/L
⌊	Se	82	2667.599	**250.016**	5.13	2.1	ug/L
⌈	Mo	98	32107.323	**100.001**	1.62	1.6	ug/L
| >	Rh	103	80665.424				ug/L
⌊	Ag	107	72187.628	**100.001**	2.39	2.4	ug/L
⌈	Cd	111	17927.904	**100.004**	3.87	3.9	ug/L
|	Cd	114	39084.574	**100.003**	0.37	0.4	ug/L
| >	In	115	117227.197				ug/L
|	Sn	120	74527.358	**100.001**	0.98	1.0	ug/L
⌊	Sb	121	52545.730	**100.002**	1.71	1.7	ug/L
⌈	Ba	137	30396.691	**100.001**	2.42	2.4	ug/L
|	Ba	138	190016.455	**100.000**	1.36	1.4	ug/L
| >	Tb	159	164952.286				ug/L
|	Tl	205	170089.005	**100.000**	1.81	1.8	ug/L
⌊	Pb	208	578898.457	**250.000**	7.37	2.9	ug/L
⌈	Hg	200	2227.011	**20.000**	0.99	5.0	ug/L
|	Hg	201	1416.100	**20.001**	0.85	4.3	ug/L
| >	Bi	209	104073.466				ug/L
⌊	U	238	324370.261	**100.001**	1.37	1.4	ug/L
	C	13	640.021				ug/L
	W	184	193.335				ug/L
	Pd	106	-31.623				ug/L
	Kr	83	10.667				ug/L
⌈	Na	23	7249106.033	**10000.524**	71.50	0.7	ug/L
|	Mg	24	4597971.157	**10000.506**	298.57	3.0	ug/L
|	K	39	7243690.926	**10000.510**	261.04	2.6	ug/L

Ca	44	202415.116	**10000.591**	169.79	1.7	ug/L
Ti	47	66.667				ug/L
Sc-1	45	105756.282				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		
	Ti	47		
	Sc-1	45		

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000533	0.000	1.000000	Linear Thru Zero
B	11.009	0.000840	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006367	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007014	0.000	0.999975	Linear Thru Zero
Cr	51.941	0.006007	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000702	0.000	0.994988	Linear Thru Zero
Mn	54.938	0.009530	0.000	1.000000	Linear Thru Zero
Co	58.933	0.006792	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001301	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003760	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001738	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.001035	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000724	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001051	0.000	0.999978	Linear Thru Zero
Se	76.920	0.000091	0.000	0.999451	Linear Thru Zero
Se	81.917	0.000130	0.000	0.999967	Linear Thru Zero
Mo	97.906	0.003971	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008940	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001528	0.000	0.999990	Linear Thru Zero
Cd	113.904	0.003336	0.000	0.999997	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006348	0.000	0.999999	Linear Thru Zero
Sb	120.904	0.004481	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001841	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.011510	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010313	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.014042	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001067	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000679	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.031169	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	724.501930	0.000	0.999986	Linear Thru Zero
Mg	23.985	459.568528	0.000	0.999987	Linear Thru Zero
K	38.964	718.617514	0.000	0.999987	Linear Thru Zero
Ca	43.956	20.213650	0.000	0.999983	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Raw Data - Instrument Tuning

Sample Information

Sample Date/Time: Wednesday, December 30, 2020 07:04:41
Method File: C:\Elandata\Method\BC Methods\BC-Tuning.mth
Dataset File: C:\Elandata\Dataset\Default\Mass Calibration and Resolution.1643
Tuning File: C:\Elandata\Tuning\default.tun
Number of Sweeps: 35
Number of Readings: 1
Number of Replicates: 5
Measurement Unit: cps

Instrument Tuning Report

File Name: default.tun
File Path: C:\Elandata\Tuning\default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Li	7.016	6.977	1556	2081	0.729	
Mg	23.985	23.978	5679	2108	0.709	
Rh	102.905	102.929	24836	2266	0.724	
Ce	139.905	139.828	33785	2344	0.726	
Pb	207.977	208.028	50327	2516	0.668	
U	238.050	238.126	57623	2574	0.667	

Daily Performance Report

Sample ID: Daily Performance Check

Sample Date/Time: Wednesday, December 30, 2020 07:15:20
Sample Description:
Method File: C:\Elandata\Method\BC Methods\OTHER\BC_Daily Performance.mth
Dataset File: C:\Elandata\Dataset\Default\Daily Performance Check.1645
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 50
Current Dead Time (ns): 50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	14959.0	14959.023	258.959	1.7
	In	114.9	46922.9	46922.873	257.612	0.5
	U	238.1	74446.2	74446.168	324.503	0.4
⌈>	Ba	137.9	42794.1	42794.065	521.936	1.2
⌊	Ba++	69.0	537.5	0.013	0.000	2.8
⌈>	Ce	139.9	51419.9	51419.864	288.437	0.6
⌊	CeO	155.9	1463.7	0.028	0.000	1.7
	220	220.0	0.5	0.480	0.335	69.7
	8.5	8.5	0.3	0.320	0.335	104.6

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
7.00	Lens Voltage
1500.00	ICP RF Power
-1800.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset Std [QRO]
-10.00	Cell Rod Offset Std [CRO]
60.00	Discriminator Threshold
-21.00	Cell Path Voltage Std [CPV]
0.00	RPa
0.25	RPq
0.98	DRC Mode NEB
-8.00	DRC Mode QRO
-2.00	DRC Mode CRO
-25.00	DRC Mode CPV
0.00	Cell Gas A
0.00	Cell Gas B
210.00	RF Voltage
0.00	DC Voltage
60.00	Service DAC 1
450.00	Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
C	12	69	5.8	80428.8
Mg	24	69	5.0	14507.2
In	115	69	7.0	44542.3
Ce	140	69	6.8	49019.9
Pb	208	69	7.0	29603.8

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 1/6/2021 4:18:00PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2106339

Laboratory Documentation Requirements
For Data Validation of
GC Analysis

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.6

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EPA-8015B/FFP

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Case Narrative

Sample Receipt

Work Order: 2106339
COC Number:
Default Cooler was received at 5.4 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-8015B/FFP	GC-13

Sample Qualifier Summary

Chromatogram not typical of diesel.

Lab Number	Method	Analyte
2106339-01	EPA-8015B/FFP	TPH - Diesel (FFP)

Chromatogram not typical of motor oil.

Lab Number	Method	Analyte
2106339-01	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-02	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-03	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-04	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-05	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-06	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-07	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-08	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-09	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-10	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-29	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil
2106339-30	EPA-8015B/FFP	TPH - Hydraulic Oil / Motor Oil

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B101942	EPA-8015B/FFP	2106339-06	VW-35-W-2

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Chain of Custody and Cooler Receipt Form for 2106339 Page 1 of 7

AECOM

CHAIN OF CUSTODY

21-06339

Page 1 of 3

Lab: BC Laboratories

TAT: 6-day

RUSH!

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 60632793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

CHK BY: MW 1
DISTRIBUTION: MA FLP RT2 PAE JLP SLM
SUB OUT

Analyses Requested

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	Arsenic (SW6020)	Lead (SW6020)	TPH	Sample Condition/Comments	Preservative
VW-35-N-2 -1	22-Feb-21	1120	soil	1	x	x	x		N
VW-35-N-5 -2	22-Feb-21	1155	soil	1	x	x	x		N
VW-35-N-7.5 -3	22-Feb-21	1335	soil	1	x	x	x		N
VW-35-E-2 -4	22-Feb-21	1430	soil	1	x	x	x		N
VW-35-E-5 -5	22-Feb-21	1440	soil	1	x	x	x		N
VW-35-W-2 -6	22-Feb-21	1605	soil	1	x	x	x		N
VW-35-W-5 -7	22-Feb-21	1615	soil	1	x	x	x	MS/MSD	N
VW-35-S-2 -8	23-Feb-21	0755	soil	1	x	x	x		N
VW-35-S-5 -9	23-Feb-21	0805	soil	1	x	x	x		N
VW-35-S-5-FD -10	23-Feb-21	0810	soil	1	x	x	x		N
VW-31-S-5 -11	23-Feb-21	0940	soil	1	x				N
VW-31-S-5-FD -12	23-Feb-21	0945	soil	1	x				N
WB08-DOCK -13	23-Feb-21	1105	soil	1	x				N
VW-31-S-2 -14	23-Feb-21	0935	soil	1	x				N

Relinquished by: Brian Weeks *Date/Time* 2/24/21 @ 1430
Relinquished by: [signature] *Date/Time* 2/24/21 @ 1700
Relinquished by: *Date/Time*
Relinquished by: [signature] *Date/Time* 2/24/21 1915
Method of Shipment:

Received by: [signature] *Date/Time* 2/24/21 @ 1700
Received by: [signature] *Date/Time* 2/24/21 1900
Received by: [signature] *Date/Time* 2-25-21 925
Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 2 of 7

AECOM

CHAIN OF CUSTODY

21-0639

Page 2 of 3

Lab: BC Laboratories

TAT: 6-day

RUSH!

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 60632793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont's	Arsenic (SW6020)	Lead (SW6020)	TPH	Analyses Requested	Sample Condition/Comments	Preservative
WB08-1.5 -13	23-Feb-21	1125	soil	1	x					N
WB09-DOCK -14	23-Feb-21	1405	soil	1	x					N
WB09-1.5 -15	23-Feb-21	1410	soil	1	x					N
WB10-7.5 -16	23-Feb-21	1510	soil	1	x					N
WB10-10 -19	23-Feb-21	1515	soil	1	x				MS/MSD	N
WB11-5 -20	24-Feb-21	0830	soil	1	x					N
WB11-7.5 -21	24-Feb-21	0840	soil	1	x					N
WB11-10 -22	24-Feb-21	0850	soil	1	x					N
WB12-5 -23	24-Feb-21	0925	soil	1	x					N
WB12-7.5 -24	24-Feb-21	0930	soil	1	x					N
WB12-10 -25	24-Feb-21	0940	soil	1	x					N
VW-35-SS-2 -26	24-Feb-21	1255	soil	1	x	x	x			N
VW-35-SS-5 -27	24-Feb-21	1310	soil	1	x	x	x			N
VW-35-SS-5-FD -28	24-Feb-21	1315	soil	1	x	x	x			N

Relinquished by: Brian Weeks Date/Time 2/24/21 @ 1430 Received by: Date/Time 2/24/21 1706
Relinquished by: Date/Time 2/24/21 @ 1700 Received by: Date/Time 2/24/21 1906
Relinquished by: Date/Time 2/24/21 1915 Received by: Date/Time 2/25/21 915
Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 3 of 7

Page 3 of 3

CHAIN OF CUSTODY

21-06339

RUSH

Lab: BC Laboratories

TAT: 6-day

AECOM

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 606327793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

Sample Identification	Date Sampled	Time Sampled	Matrix / Medium	No. of Containers	Analyses Requested: Arsenic (SW6020)	Lead (SW6020)	TPH	Sample Condition/Comments	Preservative
VW-35-NN-2 -29	24-Feb-21	1410	soil	1	x	x	x		N
VW-35-NN-5 -30	24-Feb-21	1415	soil	1	x	x	x		N
WB11-5-FD -31	24-Feb-21	0835	soil	1	x	x			

Relinquished by: Date/Time 2/24/21 @ 1430 Received by: Date/Time 2/24/21 @ 1700

Relinquished by: Date/Time 2/24/21 @ 1900 Received by: Date/Time 2/25/21 925

Relinquished by: Date/Time 2/24/21 1915 Received by: Date/Time 2-25-21

Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 4 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 9

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2106339 Page 5 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) GLS	Other ☐ (Specify)	W / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received			
☒ YES ☐ NO	Emissivity: 97 Container: glass Thermometer ID: 274	Temperature: (A) 5.4 °C / (C) 5.4 °C	Date/Time 2-25-21 925 Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS (20)									
	11	12	13	14	15	16	17	18	19	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2106339 Page 6 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 21	22	23	24	25	26	27	28	29	~~10~~ 30
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 3/1/21 0850 Rev 21 05/23/2016

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 2106339 Page 7 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	3,1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz/ 16oz / 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2106339**
Class: **GC**
Method: **EPA-8015B/FFP**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2106339
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
VW-35-N-2	2106339-01
VW-35-N-5	2106339-02
VW-35-N-7.5	2106339-03
VW-35-E-2	2106339-04
VW-35-E-5	2106339-05
VW-35-W-2	2106339-06
VW-35-W-5	2106339-07
VW-35-S-2	2106339-08
VW-35-S-5	2106339-09
VW-35-S-5-FD	2106339-10
VW-35-SS-2	2106339-26
VW-35-SS-5	2106339-27
VW-35-SS-5-FD	2106339-28
VW-35-NN-2	2106339-29
VW-35-NN-5	2106339-30

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron
Name: Sara Guron

Date: 03-19-2021
Title: QA/QC Manager

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: GC-13

Analyte	MDL	PQL	Units
TPH - Light Naptha	20	50	mg/kg
TPH - Aviation Gas	20	50	mg/kg
TPH - Stoddard Solvent	5	20	mg/kg
TPH - Heavy Naptha	5	10	mg/kg
TPH - Gasoline	5	20	mg/kg
TPH - Jet Fuel (JP4)	5	10	mg/kg
TPH - Jet Fuel (JP5)	4.6	10	mg/kg
TPH - Jet Fuel (JP8)	5	10	mg/kg
TPH - Kerosene	1.4	10	mg/kg
TPH - Diesel (FFP)	2.2	10	mg/kg
TPH - Fuel Oil #6	5	10	mg/kg
TPH - Crude Oil	2.8	20	mg/kg
TPH - Hydraulic Oil / Motor Oil	7	20	mg/kg
TPH - WD-40	5	10	mg/kg

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-N-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-01
File ID: 05MAR022.D
Sampled: 02/22/21 11:20
Prepared: 03/04/21 16:00
Analyzed: 03/05/21 13:45
Solids:
Preparation: EPA 3550B
Initial/Final: 10.8 g / 5 ml
Batch: B101942
Sequence: 2104411
Calibration: 2103009
Instrument: GC-13

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	27.8	560	UD
---	TPH - Aviation Gas	27.8	560	UD
---	TPH - Stoddard Solvent	27.8	140	UD
---	TPH - Heavy Naptha	27.8	140	UD
---	TPH - Gasoline	27.8	140	UD
---	TPH - Jet Fuel (JP4)	27.8	140	UD
---	TPH - Jet Fuel (JP5)	27.8	130	UD
---	TPH - Jet Fuel (JP8)	27.8	140	UD
---	TPH - Kerosene	27.8	39	UD
---	TPH - Diesel (FFP)	27.8	280	D
---	TPH - Fuel Oil #6	27.8	140	UD
---	TPH - Crude Oil	27.8	78	UD
---	TPH - Hydraulic Oil / Motor Oil	27.8	6000	D
---	TPH - WD-40	27.8	140	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	9.2593	4.5185	48.8	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-N-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-02	File ID:	05MAR007.D
Sampled:	02/22/21 11:55	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 07:52
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.3 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	0.99	20	U
---	TPH - Aviation Gas	0.99	20	U
---	TPH - Stoddard Solvent	0.99	5.0	U
---	TPH - Heavy Naptha	0.99	5.0	U
---	TPH - Gasoline	0.99	5.0	U
---	TPH - Jet Fuel (JP4)	0.99	5.0	U
---	TPH - Jet Fuel (JP5)	0.99	4.6	U
---	TPH - Jet Fuel (JP8)	0.99	5.0	U
---	TPH - Kerosene	0.99	1.4	U
---	TPH - Diesel (FFP)	0.99	2.2	U
---	TPH - Fuel Oil #6	0.99	5.0	U
---	TPH - Crude Oil	0.99	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	0.99	83	
---	TPH - WD-40	0.99	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3003	3.4101	103	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-N-7.5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-03	File ID:	05MAR008.D
Sampled:	02/22/21 13:35	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 08:15
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.8 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1.01	20	U
---	TPH - Aviation Gas	1.01	20	U
---	TPH - Stoddard Solvent	1.01	5.0	U
---	TPH - Heavy Naptha	1.01	5.0	U
---	TPH - Gasoline	1.01	5.0	U
---	TPH - Jet Fuel (JP4)	1.01	5.0	U
---	TPH - Jet Fuel (JP5)	1.01	4.6	U
---	TPH - Jet Fuel (JP8)	1.01	5.0	U
---	TPH - Kerosene	1.01	1.4	U
---	TPH - Diesel (FFP)	1.01	2.2	U
---	TPH - Fuel Oil #6	1.01	5.0	U
---	TPH - Crude Oil	1.01	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1.01	28	
---	TPH - WD-40	1.01	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3557	3.0676	91.4	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-E-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-04
File ID: 05MAR009.D
Sampled: 02/22/21 14:30
Prepared: 03/04/21 16:00
Analyzed: 03/05/21 08:37
Solids:
Preparation: EPA 3550B
Initial/Final: 30.5 g / 5 ml
Batch: B101942
Sequence: 2104411
Calibration: 2103009
Instrument: GC-13

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	4.92	100	UD
---	TPH - Aviation Gas	4.92	100	UD
---	TPH - Stoddard Solvent	4.92	25	UD
---	TPH - Heavy Naptha	4.92	25	UD
---	TPH - Gasoline	4.92	25	UD
---	TPH - Jet Fuel (JP4)	4.92	25	UD
---	TPH - Jet Fuel (JP5)	4.92	23	UD
---	TPH - Jet Fuel (JP8)	4.92	25	UD
---	TPH - Kerosene	4.92	7.0	UD
---	TPH - Diesel (FFP)	4.92	11	UD
---	TPH - Fuel Oil #6	4.92	25	UD
---	TPH - Crude Oil	4.92	14	UD
---	TPH - Hydraulic Oil / Motor Oil	4.92	960	D
---	TPH - WD-40	4.92	25	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.2787	2.2230	67.8	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-E-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-05	File ID:	05MAR010.D
Sampled:	02/22/21 14:40	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 09:00
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.4 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	4.93	100	UD
---	TPH - Aviation Gas	4.93	100	UD
---	TPH - Stoddard Solvent	4.93	25	UD
---	TPH - Heavy Naptha	4.93	25	UD
---	TPH - Gasoline	4.93	25	UD
---	TPH - Jet Fuel (JP4)	4.93	25	UD
---	TPH - Jet Fuel (JP5)	4.93	23	UD
---	TPH - Jet Fuel (JP8)	4.93	25	UD
---	TPH - Kerosene	4.93	7.0	UD
---	TPH - Diesel (FFP)	4.93	11	UD
---	TPH - Fuel Oil #6	4.93	25	UD
---	TPH - Crude Oil	4.93	14	UD
---	TPH - Hydraulic Oil / Motor Oil	4.93	400	D
---	TPH - WD-40	4.93	25	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.2895	3.2319	98.2	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-W-2

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-06	File ID:	05MAR003.D
Sampled:	02/22/21 16:05	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 05:40
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.7 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1.01	20	U
---	TPH - Aviation Gas	1.01	20	U
---	TPH - Stoddard Solvent	1.01	5.0	U
---	TPH - Heavy Naptha	1.01	5.0	U
---	TPH - Gasoline	1.01	5.0	U
---	TPH - Jet Fuel (JP4)	1.01	5.0	U
---	TPH - Jet Fuel (JP5)	1.01	4.6	U
---	TPH - Jet Fuel (JP8)	1.01	5.0	U
---	TPH - Kerosene	1.01	1.4	U
---	TPH - Diesel (FFP)	1.01	2.2	U
---	TPH - Fuel Oil #6	1.01	5.0	U
---	TPH - Crude Oil	1.01	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1.01	7.0	U
---	TPH - WD-40	1.01	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3670	3.0416	90.3	30 - 130	

* Values outside of QC limits

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Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-W-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-07	File ID:	05MAR013.D
Sampled:	02/22/21 16:15	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 10:09
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.5 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	0.984	20	U
---	TPH - Aviation Gas	0.984	20	U
---	TPH - Stoddard Solvent	0.984	5.0	U
---	TPH - Heavy Naptha	0.984	5.0	U
---	TPH - Gasoline	0.984	5.0	U
---	TPH - Jet Fuel (JP4)	0.984	5.0	U
---	TPH - Jet Fuel (JP5)	0.984	4.6	U
---	TPH - Jet Fuel (JP8)	0.984	5.0	U
---	TPH - Kerosene	0.984	1.4	U
---	TPH - Diesel (FFP)	0.984	2.2	U
---	TPH - Fuel Oil #6	0.984	5.0	U
---	TPH - Crude Oil	0.984	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	0.984	9.1	J
---	TPH - WD-40	0.984	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.2787	3.5859	109	30 - 130	

* Values outside of QC limits

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Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-S-2

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-08	File ID:	05MAR020.D
Sampled:	02/23/21 07:55	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 12:59
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.5 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	5.08	100	UD
---	TPH - Aviation Gas	5.08	100	UD
---	TPH - Stoddard Solvent	5.08	25	UD
---	TPH - Heavy Naptha	5.08	25	UD
---	TPH - Gasoline	5.08	25	UD
---	TPH - Jet Fuel (JP4)	5.08	25	UD
---	TPH - Jet Fuel (JP5)	5.08	23	UD
---	TPH - Jet Fuel (JP8)	5.08	25	UD
---	TPH - Kerosene	5.08	7.0	UD
---	TPH - Diesel (FFP)	5.08	11	UD
---	TPH - Fuel Oil #6	5.08	25	UD
---	TPH - Crude Oil	5.08	14	UD
---	TPH - Hydraulic Oil / Motor Oil	5.08	380	D
---	TPH - WD-40	5.08	25	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3898	2.3161	68.3	30 - 130	

* Values outside of QC limits

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Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-S-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-09	File ID:	05MAR016.D
Sampled:	02/23/21 08:05	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 11:28
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.5 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	0.984	20	U
---	TPH - Aviation Gas	0.984	20	U
---	TPH - Stoddard Solvent	0.984	5.0	U
---	TPH - Heavy Naptha	0.984	5.0	U
---	TPH - Gasoline	0.984	5.0	U
---	TPH - Jet Fuel (JP4)	0.984	5.0	U
---	TPH - Jet Fuel (JP5)	0.984	4.6	U
---	TPH - Jet Fuel (JP8)	0.984	5.0	U
---	TPH - Kerosene	0.984	1.4	U
---	TPH - Diesel (FFP)	0.984	2.2	U
---	TPH - Fuel Oil #6	0.984	5.0	U
---	TPH - Crude Oil	0.984	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	0.984	14	J
---	TPH - WD-40	0.984	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.2787	3.8779	118	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-S-5-FD

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-10	File ID:	05MAR019.D
Sampled:	02/23/21 08:10	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 12:37
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.9 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1	20	U
---	TPH - Aviation Gas	1	20	U
---	TPH - Stoddard Solvent	1	5.0	U
---	TPH - Heavy Naptha	1	5.0	U
---	TPH - Gasoline	1	5.0	U
---	TPH - Jet Fuel (JP4)	1	5.0	U
---	TPH - Jet Fuel (JP5)	1	4.6	U
---	TPH - Jet Fuel (JP8)	1	5.0	U
---	TPH - Kerosene	1	1.4	U
---	TPH - Diesel (FFP)	1	2.2	U
---	TPH - Fuel Oil #6	1	5.0	U
---	TPH - Crude Oil	1	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1	27	
---	TPH - WD-40	1	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3445	3.9319	118	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
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Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-SS-2

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-26	File ID:	05MAR017.D
Sampled:	02/24/21 12:55	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 11:51
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.5 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1.02	20	U
---	TPH - Aviation Gas	1.02	20	U
---	TPH - Stoddard Solvent	1.02	5.0	U
---	TPH - Heavy Naptha	1.02	5.0	U
---	TPH - Gasoline	1.02	5.0	U
---	TPH - Jet Fuel (JP4)	1.02	5.0	U
---	TPH - Jet Fuel (JP5)	1.02	4.6	U
---	TPH - Jet Fuel (JP8)	1.02	5.0	U
---	TPH - Kerosene	1.02	1.4	U
---	TPH - Diesel (FFP)	1.02	2.2	U
---	TPH - Fuel Oil #6	1.02	5.0	U
---	TPH - Crude Oil	1.02	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1.02	7.0	U
---	TPH - WD-40	1.02	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3898	3.6597	108	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-SS-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-27	File ID:	05MAR018.D
Sampled:	02/24/21 13:10	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 12:14
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.1 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	0.997	20	U
---	TPH - Aviation Gas	0.997	20	U
---	TPH - Stoddard Solvent	0.997	5.0	U
---	TPH - Heavy Naptha	0.997	5.0	U
---	TPH - Gasoline	0.997	5.0	U
---	TPH - Jet Fuel (JP4)	0.997	5.0	U
---	TPH - Jet Fuel (JP5)	0.997	4.6	U
---	TPH - Jet Fuel (JP8)	0.997	5.0	U
---	TPH - Kerosene	0.997	1.4	U
---	TPH - Diesel (FFP)	0.997	2.2	U
---	TPH - Fuel Oil #6	0.997	5.0	U
---	TPH - Crude Oil	0.997	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	0.997	7.0	U
---	TPH - WD-40	0.997	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3223	3.7664	113	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-SS-5-FD

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-28	File ID:	05MAR014.D
Sampled:	02/24/21 13:15	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 10:42
Solids:		Preparation:	EPA 3550B	Initial/Final:	29.9 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	1	20	U
---	TPH - Aviation Gas	1	20	U
---	TPH - Stoddard Solvent	1	5.0	U
---	TPH - Heavy Naptha	1	5.0	U
---	TPH - Gasoline	1	5.0	U
---	TPH - Jet Fuel (JP4)	1	5.0	U
---	TPH - Jet Fuel (JP5)	1	4.6	U
---	TPH - Jet Fuel (JP8)	1	5.0	U
---	TPH - Kerosene	1	1.4	U
---	TPH - Diesel (FFP)	1	2.2	U
---	TPH - Fuel Oil #6	1	5.0	U
---	TPH - Crude Oil	1	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	1	7.0	U
---	TPH - WD-40	1	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3445	3.6943	110	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-NN-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-29
File ID: 05MAR021.D
Sampled: 02/24/21 14:10
Prepared: 03/04/21 16:00
Analyzed: 03/05/21 13:22
Solids:
Preparation: EPA 3550B
Initial/Final: 29.5 g / 5 ml
Batch: B101942
Sequence: 2104411
Calibration: 2103009
Instrument: GC-13

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	5.08	100	UD
---	TPH - Aviation Gas	5.08	100	UD
---	TPH - Stoddard Solvent	5.08	25	UD
---	TPH - Heavy Naptha	5.08	25	UD
---	TPH - Gasoline	5.08	25	UD
---	TPH - Jet Fuel (JP4)	5.08	25	UD
---	TPH - Jet Fuel (JP5)	5.08	23	UD
---	TPH - Jet Fuel (JP8)	5.08	25	UD
---	TPH - Kerosene	5.08	7.0	UD
---	TPH - Diesel (FFP)	5.08	11	UD
---	TPH - Fuel Oil #6	5.08	25	UD
---	TPH - Crude Oil	5.08	14	UD
---	TPH - Hydraulic Oil / Motor Oil	5.08	130	D
---	TPH - WD-40	5.08	25	UD

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3898	2.6746	78.9	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ORGANIC ANALYSIS DATA SHEET
EPA-8015B/FFP

VW-35-NN-5

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	2106339-30	File ID:	05MAR015.D
Sampled:	02/24/21 14:15	Prepared:	03/04/21 16:00	Analyzed:	03/05/21 11:05
Solids:		Preparation:	EPA 3550B	Initial/Final:	30.5 g / 5 ml
Batch:	B101942	Sequence:	2104411	Calibration:	2103009
Instrument:	GC-13				

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
---	TPH - Light Naptha	0.984	20	U
---	TPH - Aviation Gas	0.984	20	U
---	TPH - Stoddard Solvent	0.984	5.0	U
---	TPH - Heavy Naptha	0.984	5.0	U
---	TPH - Gasoline	0.984	5.0	U
---	TPH - Jet Fuel (JP4)	0.984	5.0	U
---	TPH - Jet Fuel (JP5)	0.984	4.6	U
---	TPH - Jet Fuel (JP8)	0.984	5.0	U
---	TPH - Kerosene	0.984	1.4	U
---	TPH - Diesel (FFP)	0.984	2.2	U
---	TPH - Fuel Oil #6	0.984	5.0	U
---	TPH - Crude Oil	0.984	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	0.984	8.5	J
---	TPH - WD-40	0.984	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.2787	4.0739	124	30 - 130	

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B101942
Batch Matrix: Solids
Preparation: EPA 3550B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-N-2	2106339-01	05MAR022.D	03/04/21 16:00	
VW-35-N-5	2106339-02	05MAR007.D	03/04/21 16:00	
VW-35-N-7.5	2106339-03	05MAR008.D	03/04/21 16:00	
VW-35-E-2	2106339-04	05MAR009.D	03/04/21 16:00	
VW-35-E-5	2106339-05	05MAR010.D	03/04/21 16:00	
VW-35-W-2	2106339-06	05MAR003.D	03/04/21 16:00	
VW-35-W-5	2106339-07	05MAR013.D	03/04/21 16:00	
VW-35-S-2	2106339-08	05MAR020.D	03/04/21 16:00	
VW-35-S-5	2106339-09	05MAR016.D	03/04/21 16:00	
VW-35-S-5-FD	2106339-10	05MAR019.D	03/04/21 16:00	
VW-35-SS-2	2106339-26	05MAR017.D	03/04/21 16:00	
VW-35-SS-5	2106339-27	05MAR018.D	03/04/21 16:00	
VW-35-SS-5-FD	2106339-28	05MAR014.D	03/04/21 16:00	
VW-35-NN-2	2106339-29	05MAR021.D	03/04/21 16:00	
VW-35-NN-5	2106339-30	05MAR015.D	03/04/21 16:00	
Blank	B101942-BLK1	05MAR001.D	03/04/21 16:00	
LCS	B101942-BS1	05MAR002.D	03/04/21 16:00	
VW-35-W-2	B101942-MS1	05MAR004.D	03/04/21 16:00	
VW-35-W-2	B101942-MSD1	05MAR005.D	03/04/21 16:00	

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Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-8015B/FFP

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B101942-BLK1	File ID:	05MAR001.D
Prepared:	03/04/21 16:00	Preparation:	EPA 3550B	Initial/Final:	30 g / 5 ml
Analyzed:	03/05/21 04:53	Instrument:	GC-13		
Batch:	B101942	Sequence:	2104411	Calibration:	2103009

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
---	TPH - Light Naptha	20	U
---	TPH - Aviation Gas	20	U
---	TPH - Stoddard Solvent	5.0	U
---	TPH - Heavy Naptha	5.0	U
---	TPH - Gasoline	5.0	U
---	TPH - Jet Fuel (JP4)	5.0	U
---	TPH - Jet Fuel (JP5)	4.6	U
---	TPH - Jet Fuel (JP8)	5.0	U
---	TPH - Kerosene	1.4	U
---	TPH - Diesel (FFP)	2.2	U
---	TPH - Fuel Oil #6	5.0	U
---	TPH - Crude Oil	2.8	U
---	TPH - Hydraulic Oil / Motor Oil	7.0	U
---	TPH - WD-40	5.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
Tetracosane (Surrogate)	3.3333	4.1897	126	30 - 130	

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Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-8015B/FFP

VW-35-W-2

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101942
Preparation: EPA 3550B
Source Sample Number: 2106339-06

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101942-MS1
Initial/Final: 29.8 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	83.893	ND	68.953	82.2	52 - 131

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
TPH - Diesel (FFP)	83.333	69.268	83.1	0.455	30	52 - 131

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

LCS RECOVERY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B101942
Laboratory ID: B101942-BS1
Preparation: EPA 3550B
Initial/Final: 30 g / 5 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
TPH - Diesel (FFP)	83.333	82.698	99.2	64 - 124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2104360	Instrument:	GC-13
Matrix:	Solids	Calibration:	2103009

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2104360-CAL6	10FEB006.D	02/10/21 07:05
Cal Standard	2104360-CAL5	10FEB007.D	02/10/21 07:28
Cal Standard	2104360-CAL4	10FEB008.D	02/10/21 07:50
Cal Standard	2104360-CAL3	10FEB009.D	02/10/21 08:12
Cal Standard	2104360-CAL2	10FEB010.D	02/10/21 08:35
Cal Standard	2104360-CAL1	10FEB011.D	02/10/21 08:58
Initial Cal Check	2104360-ICV1	10FEB012.D	02/10/21 09:43
Initial Cal Blank	2104360-ICB1	10FEB013.D	02/10/21 10:05

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Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Sequence: 2104411
Instrument: GC-13
Matrix: Solids
Calibration: 2103009

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2104411-CCV8	04MAR048.D	03/05/21 01:39
Calibration Blank	2104411-CCB5	04MAR050.D	03/05/21 02:25
Blank	B101942-BLK1	05MAR001.D	03/05/21 04:53
LCS	B101942-BS1	05MAR002.D	03/05/21 05:16
VW-35-W-2	2106339-06	05MAR003.D	03/05/21 05:40
VW-35-W-2	B101942-MS1	05MAR004.D	03/05/21 06:43
VW-35-W-2	B101942-MSD1	05MAR005.D	03/05/21 07:06
VW-35-N-5	2106339-02	05MAR007.D	03/05/21 07:52
VW-35-N-7.5	2106339-03	05MAR008.D	03/05/21 08:15
VW-35-E-2	2106339-04	05MAR009.D	03/05/21 08:37
VW-35-E-5	2106339-05	05MAR010.D	03/05/21 09:00
Calibration Check	2104411-CCV1	05MAR011.D	03/05/21 09:23
Calibration Blank	2104411-CCB1	05MAR012.D	03/05/21 09:46
VW-35-W-5	2106339-07	05MAR013.D	03/05/21 10:09
VW-35-SS-5-FD	2106339-28	05MAR014.D	03/05/21 10:42
VW-35-NN-5	2106339-30	05MAR015.D	03/05/21 11:05
VW-35-S-5	2106339-09	05MAR016.D	03/05/21 11:28
VW-35-SS-2	2106339-26	05MAR017.D	03/05/21 11:51
VW-35-SS-5	2106339-27	05MAR018.D	03/05/21 12:14
VW-35-S-5-FD	2106339-10	05MAR019.D	03/05/21 12:37
VW-35-S-2	2106339-08	05MAR020.D	03/05/21 12:59
VW-35-NN-2	2106339-29	05MAR021.D	03/05/21 13:22
VW-35-N-2	2106339-01	05MAR022.D	03/05/21 13:45
Calibration Check	2104411-CCV2	05MAR024.D	03/05/21 14:31
Calibration Blank	2104411-CCB2	05MAR025.D	03/05/21 14:53

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Instrument ID:	GC-13	Calibration:	2103009
Lab File ID:	10FEB012.D	Calibration Date:	02/10/21 07:05
Sequence:	2104360	Injection Date:	02/10/21
Lab Sample ID:	2104360-ICV1	Injection Time:	09:43

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	L	500000	521980	44.69441	45.81426		4.4	15
TPH - Hydraulic Oil / Motor Oil	L	1000000	1004000	29.02644	27.09571		0.4	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Instrument ID:	GC-13	Calibration:	2103009
Lab File ID:	04MAR048.D	Calibration Date:	02/10/21 07:05
Sequence:	2104411	Injection Date:	03/05/21
Lab Sample ID:	2104411-CCV8	Injection Time:	01:39

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	L	500000	484960	44.69441	42.44594		-3.0	15
TPH - Hydraulic Oil / Motor Oil	L	1000000	1134900	29.02644	30.4115		13.5	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Instrument ID:	GC-13	Calibration:	2103009
Lab File ID:	05MAR011.D	Calibration Date:	02/10/21 07:05
Sequence:	2104411	Injection Date:	03/05/21
Lab Sample ID:	2104411-CCV1	Injection Time:	09:23

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	L	500000	504120	44.69441	44.18904		0.8	15
TPH - Hydraulic Oil / Motor Oil	L	1000000	1148800	29.02644	30.7638		14.9	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Project Number: 60632793.6
Project Manager: Andy Shepard

CONTINUING CALIBRATION CHECK

EPA-8015B/FFP

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Instrument ID:	GC-13	Calibration:	2103009
Lab File ID:	05MAR024.D	Calibration Date:	02/10/21 07:05
Sequence:	2104411	Injection Date:	03/05/21
Lab Sample ID:	2104411-CCV2	Injection Time:	14:31

	(1) CAL	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT (2)	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
TPH - Diesel (FFP)	L	500000	482650	44.69441	42.23552		-3.5	15
TPH - Hydraulic Oil / Motor Oil	L	1000000	1145000	29.02644	30.66726		14.5	15

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

(1): Cal Type (Calibration Type): A = Average; L = Linear Regression; Q = Quadratic Regression

(2): % Diff (of Response Factors) reported when Cal Type = A; %Drift (of Conc) reported when Cal Type = L or Q

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Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Sequence: 2104360
Instrument: GC-13
Matrix: Solids
Calibration: 2103009

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Cal Standard (2104360-CAL6)			Lab File ID: 10FEB006.D		Analyzed: 02/10/21 07:05			
Tetracosane (Surrogate)	40000	95.7		8.97	8.966667	0.0033	+/-1.0	
Cal Standard (2104360-CAL5)			Lab File ID: 10FEB007.D		Analyzed: 02/10/21 07:28			
Tetracosane (Surrogate)	30000	102		8.97	8.966667	0.0033	+/-1.0	
Cal Standard (2104360-CAL4)			Lab File ID: 10FEB008.D		Analyzed: 02/10/21 07:50			
Tetracosane (Surrogate)	20000	111		8.97	8.966667	0.0033	+/-1.0	
Cal Standard (2104360-CAL3)			Lab File ID: 10FEB009.D		Analyzed: 02/10/21 08:12			
Tetracosane (Surrogate)	10000	112		8.96	8.966667	-0.0067	+/-1.0	
Cal Standard (2104360-CAL2)			Lab File ID: 10FEB010.D		Analyzed: 02/10/21 08:35			
Tetracosane (Surrogate)	5000.0	101		8.96	8.966667	-0.0067	+/-1.0	
Cal Standard (2104360-CAL1)			Lab File ID: 10FEB011.D		Analyzed: 02/10/21 08:58			
Tetracosane (Surrogate)	2000.0	138		8.97	8.966667	0.0033	+/-1.0	
Initial Cal Check (2104360-ICV1)			Lab File ID: 10FEB012.D		Analyzed: 02/10/21 09:43			
Tetracosane (Surrogate)	20000	93.8	85 - 115	8.97	8.966667	0.0033	+/-1.0	
Initial Cal Blank (2104360-ICB1)			Lab File ID: 10FEB013.D		Analyzed: 02/10/21 10:05			
Tetracosane (Surrogate)			30 - 130		8.966667	Null Found	+/-1.0	

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Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104411
Matrix: Solids

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: GC-13
Calibration: 2103009

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (2104411-CCV8)			Lab File ID: 04MAR048.D		Analyzed: 03/05/21 01:39			
Tetracosane (Surrogate)	20000	92.2	85 - 115	8.94	8.966667	-0.0267	+/-1.0	
Calibration Blank (2104411-CCB5)			Lab File ID: 04MAR050.D		Analyzed: 03/05/21 02:25			
Tetracosane (Surrogate)			30 - 130		8.966667	Null Found	+/-1.0	
Blank (B101942-BLK1)			Lab File ID: 05MAR001.D		Analyzed: 03/05/21 04:53			
Tetracosane (Surrogate)	3.3333	126	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
LCS (B101942-BS1)			Lab File ID: 05MAR002.D		Analyzed: 03/05/21 05:16			
Tetracosane (Surrogate)	3.3333	124	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-W-2 (2106339-06)			Lab File ID: 05MAR003.D		Analyzed: 03/05/21 05:40			
Tetracosane (Surrogate)	3.3670	90.3	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
Matrix Spike (B101942-MS1)			Lab File ID: 05MAR004.D		Analyzed: 03/05/21 06:43			
Tetracosane (Surrogate)	3.3557	115	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
Matrix Spike Dup (B101942-MSD1)			Lab File ID: 05MAR005.D		Analyzed: 03/05/21 07:06			
Tetracosane (Surrogate)	3.3333	114	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-N-5 (2106339-02)			Lab File ID: 05MAR007.D		Analyzed: 03/05/21 07:52			
Tetracosane (Surrogate)	3.3003	103	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-N-7.5 (2106339-03)			Lab File ID: 05MAR008.D		Analyzed: 03/05/21 08:15			
Tetracosane (Surrogate)	3.3557	91.4	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-E-2 (2106339-04)			Lab File ID: 05MAR009.D		Analyzed: 03/05/21 08:37			
Tetracosane (Surrogate)	3.2787	67.8	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-E-5 (2106339-05)			Lab File ID: 05MAR010.D		Analyzed: 03/05/21 09:00			
Tetracosane (Surrogate)	3.2895	98.2	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
Calibration Check (2104411-CCV1)			Lab File ID: 05MAR011.D		Analyzed: 03/05/21 09:23			
Tetracosane (Surrogate)	20000	102	85 - 115	8.94	8.966667	-0.0267	+/-1.0	
Calibration Blank (2104411-CCB1)			Lab File ID: 05MAR012.D		Analyzed: 03/05/21 09:46			
Tetracosane (Surrogate)			30 - 130		8.966667	Null Found	+/-1.0	

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Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104411
Matrix: Solids

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: GC-13
Calibration: 2103009

Surrogate Compound	Spike Level mg/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
VW-35-W-5 (2106339-07)			Lab File ID: 05MAR013.D		Analyzed: 03/05/21 10:09			
Tetracosane (Surrogate)	3.2787	109	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-SS-5-FD (2106339-28)			Lab File ID: 05MAR014.D		Analyzed: 03/05/21 10:42			
Tetracosane (Surrogate)	3.3445	110	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-NN-5 (2106339-30)			Lab File ID: 05MAR015.D		Analyzed: 03/05/21 11:05			
Tetracosane (Surrogate)	3.2787	124	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-S-5 (2106339-09)			Lab File ID: 05MAR016.D		Analyzed: 03/05/21 11:28			
Tetracosane (Surrogate)	3.2787	118	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-SS-2 (2106339-26)			Lab File ID: 05MAR017.D		Analyzed: 03/05/21 11:51			
Tetracosane (Surrogate)	3.3898	108	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-SS-5 (2106339-27)			Lab File ID: 05MAR018.D		Analyzed: 03/05/21 12:14			
Tetracosane (Surrogate)	3.3223	113	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-S-5-FD (2106339-10)			Lab File ID: 05MAR019.D		Analyzed: 03/05/21 12:37			
Tetracosane (Surrogate)	3.3445	118	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-S-2 (2106339-08)			Lab File ID: 05MAR020.D		Analyzed: 03/05/21 12:59			
Tetracosane (Surrogate)	3.3898	68.3	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-NN-2 (2106339-29)			Lab File ID: 05MAR021.D		Analyzed: 03/05/21 13:22			
Tetracosane (Surrogate)	3.3898	78.9	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
VW-35-N-2 (2106339-01)			Lab File ID: 05MAR022.D		Analyzed: 03/05/21 13:45			
Tetracosane (Surrogate)	9.2593	48.8	30 - 130	8.94	8.966667	-0.0267	+/-1.0	
Calibration Check (2104411-CCV2)			Lab File ID: 05MAR024.D		Analyzed: 03/05/21 14:31			
Tetracosane (Surrogate)	20000	98.5	85 - 115	8.94	8.966667	-0.0267	+/-1.0	
Calibration Blank (2104411-CCB2)			Lab File ID: 05MAR025.D		Analyzed: 03/05/21 14:53			
Tetracosane (Surrogate)			30 - 130		8.966667	Null Found	+/-1.0	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL CALIBRATION STANDARDS

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104360
Calibration: 2103009

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: GC-13

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
1A08007	8015B Diesel/MOTOR OIL IC6	2104360-CAL6	10FEB006.D	02/10/21 07:05
1A08006	8015B Diesel/MOTOR OIL IC5	2104360-CAL5	10FEB007.D	02/10/21 07:28
1A08005	8015B Diesel/MOTOR OIL IC4	2104360-CAL4	10FEB008.D	02/10/21 07:50
1A08004	8015B Diesel/MOTOR OIL IC3	2104360-CAL3	10FEB009.D	02/10/21 08:12
1A08003	8015B Diesel/MOTOR OIL IC2	2104360-CAL2	10FEB010.D	02/10/21 08:35
1A08002	8015B Diesel/MOTOR OIL IC1	2104360-CAL1	10FEB011.D	02/10/21 08:58

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Calibration: 2103009
Instrument: GC-13
Matrix: Solids
Calibration Date: 02/10/21 07:05

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF	ug/kg	RF
TPH - Diesel (FFP)	40000	57.61708	200000	36.28721	400000	39.78445	500000	43.60418	800000	47.19519	1000000	43.67833
TPH - Hydraulic Oil / Motor Oil	100000	38.81831	500000	27.43874	800000	25.86171	1000000	29.15772	1500000	27.55279	2000000	25.3294
Tetracosane (Surrogate)	2000	56.5965	5000	41.18	10000	45.595	20000	45.3957	30000	41.51233	40000	39.12777

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL CALIBRATION DATA (Continued)

EPA-8015B/FFP

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Calibration: 2103009
Matrix: Solids

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: GC-13
Calibration Date: 02/10/21 07:05

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear COD	Quad COD	LIMIT	Q
TPH - Diesel (FFP)	44.69441	16.44947	6.97	1.728566E-02	0.992162		0.99	
TPH - Hydraulic Oil / Motor Oil	29.02644	17.17558	11.94	0.0235798	0.9919374		0.99	
Tetracosane (Surrogate)	44.90122	13.94997	8.966667	5.956773E-02	0.9938156		0.99	

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

HOLDING TIME SUMMARY

EPA-8015B/FFP

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
VW-35-N-2	02/22/21 11:20	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 13:45	1.00	40.00	
VW-35-N-5	02/22/21 11:55	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 07:52	1.00	40.00	
VW-35-N-7.5	02/22/21 13:35	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 08:15	1.00	40.00	
VW-35-E-2	02/22/21 14:30	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 08:37	1.00	40.00	
VW-35-E-5	02/22/21 14:40	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 09:00	1.00	40.00	
VW-35-W-2	02/22/21 16:05	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 05:40	1.00	40.00	
VW-35-W-5	02/22/21 16:15	02/25/21 09:25	03/04/21 16:00	10.00	14.00	03/05/21 10:09	1.00	40.00	
VW-35-S-2	02/23/21 07:55	02/25/21 09:25	03/04/21 16:00	9.00	14.00	03/05/21 12:59	1.00	40.00	
VW-35-S-5	02/23/21 08:05	02/25/21 09:25	03/04/21 16:00	9.00	14.00	03/05/21 11:28	1.00	40.00	
VW-35-S-5-FD	02/23/21 08:10	02/25/21 09:25	03/04/21 16:00	9.00	14.00	03/05/21 12:37	1.00	40.00	
VW-35-SS-2	02/24/21 12:55	02/25/21 09:25	03/04/21 16:00	8.00	14.00	03/05/21 11:51	1.00	40.00	
VW-35-SS-5	02/24/21 13:10	02/25/21 09:25	03/04/21 16:00	8.00	14.00	03/05/21 12:14	1.00	40.00	
VW-35-SS-5-FD	02/24/21 13:15	02/25/21 09:25	03/04/21 16:00	8.00	14.00	03/05/21 10:42	1.00	40.00	
VW-35-NN-2	02/24/21 14:10	02/25/21 09:25	03/04/21 16:00	8.00	14.00	03/05/21 13:22	1.00	40.00	
VW-35-NN-5	02/24/21 14:15	02/25/21 09:25	03/04/21 16:00	8.00	14.00	03/05/21 11:05	1.00	40.00	

* Holding time not met

Note: If Prep or Analysis are performed within the hour (if holding time is based on hours) or within the day (if holding time is based on days), then the sample is not flagged as outside holding times. Calculated number of days are based on date received or date prepared depending on the test.

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:10:20PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

BC LABORATORIES, INC.

Work Order Number: 2106339

Laboratory Documentation Requirements
For Data Validation of
Metals Analysis (using ppm units)

Prepared By

BC Laboratories

For AECOM - Sacramento

60632793.6

All pages have been paginated and results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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EPA-6020

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PE_EL4_210305-146 (Blank) 108
PE_EL4_210305-147 (Standard 1) 111
PE_EL4_210305-148 (Standard 2) 114
PE_EL4_210305-153 (Blank) 117
PE_EL4_210305-154 (Standard 1) 121
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Case Narrative

Sample Receipt

Work Order: 2106339
COC Number:
Default Cooler was received at 5.4 °C
Samples were checked for preservation. Where applicable, sample preservation was adjusted in the laboratory.

Requested Analysis

Method	Instrument
EPA-6020 (TTLC)	PE-EL4

Sample Qualifier Summary

There were no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Method Blanks

There were no detections in the Method Blank(s).

Calibration

Initial calibration criteria for respective analysis were met. Frequency criteria for initial and continuing calibrations were met. Accuracy criteria for initial and continuing calibrations were met.

Matrix Spikes

Source Samples Used For QC

Batch	Method	Source Lab Number	Client Sample Name
B101595	EPA-6020 (TTLC)	2106339-06	VW-35-W-2
B101596	EPA-6020 (TTLC)	2106339-20	WB11-5

Precision and accuracy requirements were within QC limits.

LCS

The LCS recoveries were within QC limits.

Post Spikes

Post spike recovery was not within the control limits.

Lab Number	Method	Analyte
B101595-PS1	EPA-6020 (TTLC)	Arsenic
B101595-PS1	EPA-6020 (TTLC)	Lead

Interference Checks

The Interference Check recoveries were within QC limits.

Chain of Custody and Cooler Receipt Form for 2106339 Page 1 of 7

AECOM

CHAIN OF CUSTODY

21-06339

Page 1 of 3

Lab: BC Laboratories

TAT: 6-day

RUSH!

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 60632793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

CHK BY: MV1
DISTRIBUTION: MA FLP RT2 PAE JLP SLM
SUB OUT ☐

Analyses Requested

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	Arsenic (SW6020)	Lead (SW6020)	TPH	Sample Condition/Comments	Preservative
VW-35-N-2 -1	22-Feb-21	1120	soil	1	x	x	x		N
VW-35-N-5 -2	22-Feb-21	1155	soil	1	x	x	x		N
VW-35-N-7.5 -3	22-Feb-21	1335	soil	1	x	x	x		N
VW-35-E-2 -4	22-Feb-21	1430	soil	1	x	x	x		N
VW-35-E-5 -5	22-Feb-21	1440	soil	1	x	x	x		N
VW-35-W-2 -6	22-Feb-21	1605	soil	1	x	x	x		N
VW-35-W-5 -7	22-Feb-21	1615	soil	1	x	x	x	MS/MSD	N
VW-35-S-2 -8	23-Feb-21	0755	soil	1	x	x	x		N
VW-35-S-5 -9	23-Feb-21	0805	soil	1	x	x	x		N
VW-35-S-5-FD -10	23-Feb-21	0810	soil	1	x	x	x		N
VW-31-S-5 -11	23-Feb-21	0940	soil	1	x				N
VW-31-S-5-FD -12	23-Feb-21	0945	soil	1	x				N
WB08-DOCK -13	23-Feb-21	1105	soil	1	x				N
VW-31-S-2 -14	23-Feb-21	0935	soil	1	x				N

Relinquished by: Brian Weeks *Date/Time* 2/24/21 @ 1430
Relinquished by: [signature] *Date/Time* 2/24/21 @ 1700
Relinquished by: *Date/Time*
Relinquished by: [signature] *Date/Time* 2/24/21 1915
Method of Shipment:

Received by: [signature] *Date/Time* 2/24/21 @ 1700
Received by: [signature] *Date/Time* 2/24/21 1900
Received by: [signature] *Date/Time* 2-25-21 925
Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 2 of 7

AECOM

CHAIN OF CUSTODY

21-0639

RUSH!

Page 2 of 3

Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Company: Andy Shepard (andy.shepard@aecom.com)
Mailing Address: AECOM
City, State, Zip: 2020 L Street, Suite 400
Telephone No.: Sacramento, CA 95811
Fax No.: 916.296.3943
916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 60632793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

Sample Identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Cont's	Analyses Requested: Arsenic (SW6020)	Lead (SW6020)	TPH	Sample Condition/Comments	Preservative
WB08-1.5 -13	23-Feb-21	1125	soil	1	x				N
WB09-DOCK -14	23-Feb-21	1405	soil	1	x				N
WB09-1.5 -15	23-Feb-21	1410	soil	1	x				N
WB10-7.5 -16	23-Feb-21	1510	soil	1	x				N
WB10-10 -19	23-Feb-21	1515	soil	1	x			MS/MSD	N
WB11-5 -20	24-Feb-21	0830	soil	1	x				N
WB11-7.5 -21	24-Feb-21	0840	soil	1	x				N
WB11-10 -22	24-Feb-21	0850	soil	1	x				N
WB12-5 -23	24-Feb-21	0925	soil	1	x				N
WB12-7.5 -24	24-Feb-21	0930	soil	1	x				N
WB12-10 -25	24-Feb-21	0940	soil	1	x				N
VW-35-SS-2 -26	24-Feb-21	1255	soil	1	x	x	x		N
VW-35-SS-5 -27	24-Feb-21	1310	soil	1	x	x	x		N
VW-35-SS-5-FD -28	24-Feb-21	1315	soil	1	x	x	x		N

Relinquished by: Brian Weeks Date/Time 2/24/21 @ 1430 Received by: Date/Time 2/24/21 @ 1430

Relinquished by: Date/Time 2/24/21 @ 1700 Received by: Date/Time 2/24/21 1906

Relinquished by: Date/Time 2/24/21 1915 Received by: Date/Time 2/25/21 915

Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 3 of 7

Page 3 of 3

AECOM

CHAIN OF CUSTODY

21-0339

RUSH

Lab: BC Laboratories

TAT: 6-day

Report results to:
Name: Keegan George (Keegan.George@smud.org)
Andy Shepard (andy.shepard@aecom.com)
Company: AECOM
Mailing Address: 2020 L Street, Suite 400
City, State, Zip: Sacramento, CA 95811
Telephone No.: 916.296.3943
Fax No.: 916.414.5850

Project Information
Site Address: SMUD 59th Street
AECOM No.: 606327793.6

Special instructions and/or specific regulatory requirements:

CLP Required.

Sample Identification	Date Sampled	Time Sampled	Matrix (Soil/Sediment)	No. of Containers	Analyses Requested: Arsenic (SW6020)	Lead (SW6020)	TPH	Sample Condition/Comments	Preservative
VW-35-NN-2 -29	24-Feb-21	1410	soil	1	x	x	x		N
VW-35-NN-5 -30	24-Feb-21	1415	soil	1	x	x	x		N
WB11-5-FD -31	24-Feb-21	0835	soil	1	x	x			

Relinquished by: Date/Time 2/24/21 @ 1430 Received by: Date/Time 2/24/21 @ 1700

Relinquished by: Date/Time 2/24/21 @ 1900 Received by: Date/Time 2/25/21 925

Relinquished by: Date/Time 2/24/21 1915 Received by:

Method of Shipment: Sample Condition on Rcpt:

Chain of Custody and Cooler Receipt Form for 2106339 Page 4 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 9

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2106339 Page 5 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☒ (Specify) CLS	Other ☐ (Specify)	W / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 20									
	11	12	13	14	15	16	17	18	19	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 2106339 Page 6 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS 21	22	23	24	25	26	27	28	29	~~10~~ 30
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A	A	A	A	A	A	A	A	A	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 3/1/21 0850 Rev 21 05/23/2016

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 2106339 Page 7 of 7

BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 Of 4

Submission #: 21-06339

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GLS	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: glass Thermometer ID: 274 Date/Time 2-25-21 925

Temperature: (A) 5.4 °C / (C) 5.4 °C Analyst Init TKJ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	A									
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CMS Date/Time: 3/1/21 0850

A = Actual / C = Corrected

Rev 21 05/23/2016

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AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911

SDG: **2106339**
Class: **METALS-PPM**
Method: **EPA-6020**

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSES DATA PACKAGE COVER PAGE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
SDG: 2106339
Project: SMUD 59th St.-CLP III

Client Sample Id:	Lab Sample Id:
VW-35-N-2	2106339-01
VW-35-N-5	2106339-02
VW-35-N-7.5	2106339-03
VW-35-E-2	2106339-04
VW-35-E-5	2106339-05
VW-35-W-2	2106339-06
VW-35-W-5	2106339-07
VW-35-S-2	2106339-08
VW-35-S-5	2106339-09
VW-35-S-5-FD	2106339-10
VW-31-S-5	2106339-11
VW-31-S-5-FD	2106339-12
WB08-DOCK	2106339-13
VW-31-S-2	2106339-14
WB08-1.5	2106339-15
WB09-DOCK	2106339-16
WB09-1.5	2106339-17
WB10-7.5	2106339-18
WB10-10	2106339-19
WB11-5	2106339-20
WB11-7.5	2106339-21
WB11-10	2106339-22
WB12-5	2106339-23
WB12-7.5	2106339-24
WB12-10	2106339-25
VW-35-SS-2	2106339-26
VW-35-SS-5	2106339-27
VW-35-SS-5-FD	2106339-28
VW-35-NN-2	2106339-29
VW-35-NN-5	2106339-30
WB11-5-FD	2106339-31

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Sara Guron Name: Sara Guron

Date: 03-19-2021 Title: QA/QC Manager

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Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD DETECTION AND REPORTING LIMITS

EPA-6020

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Instrument: PE-EL4

Analyte	MDL	PQL	Units
Arsenic	0.17	0.5	mg/kg
Lead	0.12	0.25	mg/kg

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-N-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-01
File ID: PE_EL4_210305-209
Sampled: 02/22/21 11:20
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:07
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	44	0.935		EPA-6020
7439-92-1	Lead	130	0.935		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-N-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-02
File ID: PE_EL4_210305-210
Sampled: 02/22/21 11:55
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:09
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	180	0.98		EPA-6020
7439-92-1	Lead	10	0.98		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-N-7.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-03
File ID: PE_EL4_210305-211
Sampled: 02/22/21 13:35
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:12
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.4	0.99		EPA-6020
7439-92-1	Lead	7.7	0.99		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-E-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-04
File ID: PE_EL4_210305-212
Sampled: 02/22/21 14:30
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:14
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	50	0.98		EPA-6020
7439-92-1	Lead	13	0.98		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-E-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-05
File ID: PE_EL4_210305-213
Sampled: 02/22/21 14:40
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:16
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.04 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.1	0.962		EPA-6020
7439-92-1	Lead	10	0.962		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-W-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-06
File ID: PE_EL4_210305-190
Sampled: 02/22/21 16:05
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 21:20
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	61	1		EPA-6020
7439-92-1	Lead	11	1		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-W-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-07
File ID: PE_EL4_210305-214
Sampled: 02/22/21 16:15
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:19
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.4	0.98		EPA-6020
7439-92-1	Lead	6.6	0.98		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-S-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-08
File ID: PE_EL4_210305-215
Sampled: 02/23/21 07:55
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:21
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.01 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	280	0.99		EPA-6020
7439-92-1	Lead	13	0.99		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-S-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-09
File ID: PE_EL4_210305-221
Sampled: 02/23/21 08:05
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:39
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	8.5	1		EPA-6020
7439-92-1	Lead	6.5	1		EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-S-5-FD

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-10
File ID: PE_EL4_210305-222
Sampled: 02/23/21 08:10
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:41
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.6	0.952		EPA-6020
7439-92-1	Lead	6.7	0.952		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-31-S-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-11
File ID: PE_EL4_210305-223
Sampled: 02/23/21 09:40
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:43
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.0	0.935		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-31-S-5-FD

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-12
File ID: PE_EL4_210305-224
Sampled: 02/23/21 09:45
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:46
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.0	0.909	D	EPA-6020

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB08-DOCK

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-13
File ID: PE_EL4_210305-225
Sampled: 02/23/21 11:05
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:48
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.4	0.926		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-31-S-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-14
File ID: PE_EL4_210305-226
Sampled: 02/23/21 09:35
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:50
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.02 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	150	0.98		EPA-6020

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Sacramento, CA 95811

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB08-1.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-15
File ID: PE_EL4_210305-227
Sampled: 02/23/21 11:25
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 22:53
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	12	0.926		EPA-6020

AECOM - Sacramento
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Sacramento, CA 95811

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB09-DOCK

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-16
File ID: PE_EL4_210305-233
Sampled: 02/23/21 14:05
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:08
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.2	0.935		EPA-6020

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Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB09-1.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-17
File ID: PE_EL4_210305-234
Sampled: 02/23/21 14:10
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:10
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.05 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.4	0.952		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB10-7.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-18
File ID: PE_EL4_210305-235
Sampled: 02/23/21 15:10
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:13
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	65	0.943		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB10-10

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-19
File ID: PE_EL4_210305-236
Sampled: 02/23/21 15:15
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:15
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.07 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	55	0.935		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB11-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-20
File ID: PE_EL4_210305-251
Sampled: 02/24/21 08:30
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:56
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.3	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB11-7.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-21
File ID: PE_EL4_210305-237
Sampled: 02/24/21 08:40
Prepared: 03/02/21 13:37
Analyzed: 03/05/21 23:17
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B101595
Sequence: 2104473
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	5.8	0.926		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB11-10

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-22
File ID: PE_EL4_210305-261
Sampled: 02/24/21 08:50
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:19
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.08 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.1	0.926		EPA-6020

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Project Manager: Andy Shepard

INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB12-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-23
File ID: PE_EL4_210305-262
Sampled: 02/24/21 09:25
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:22
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	15	1		EPA-6020

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Project Number: 60632793.6
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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB12-7.5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-24
File ID: PE_EL4_210305-263
Sampled: 02/24/21 09:30
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:24
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	6.7	0.909	D	EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB12-10

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-25
File ID: PE_EL4_210305-264
Sampled: 02/24/21 09:40
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:26
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	3.6	0.971		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-SS-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-26
File ID: PE_EL4_210305-265
Sampled: 02/24/21 12:55
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:29
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	94	0.909	D	EPA-6020
7439-92-1	Lead	7.9	0.909	D	EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-SS-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-27
File ID: PE_EL4_210305-269
Sampled: 02/24/21 13:10
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:38
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.3	1		EPA-6020
7439-92-1	Lead	6.6	1		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-SS-5-FD

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-28
File ID: PE_EL4_210305-270
Sampled: 02/24/21 13:15
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:40
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.06 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.1	0.943		EPA-6020
7439-92-1	Lead	6.5	0.943		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-NN-2

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-29
File ID: PE_EL4_210305-271
Sampled: 02/24/21 14:10
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:43
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.03 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	100	0.971		EPA-6020
7439-92-1	Lead	55	0.971		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

VW-35-NN-5

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-30
File ID: PE_EL4_210305-272
Sampled: 02/24/21 14:15
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:45
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1.04 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.4	0.962		EPA-6020
7439-92-1	Lead	6.8	0.962		EPA-6020

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INORGANIC ANALYSIS DATA SHEET
EPA-6020

WB11-5-FD

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Laboratory ID: 2106339-31
File ID: PE_EL4_210305-273
Sampled: 02/24/21 08:35
Prepared: 03/02/21 13:37
Analyzed: 03/06/21 00:47
Solids: 0.00
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml
Batch: B101596
Sequence: 2104474
Calibration: UNASSIGNED
Instrument: PE-EL4

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7440-38-2	Arsenic	4.1	1		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B101595 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-N-2	2106339-01	PE_EL4_210305-209	03/02/21 13:37	
VW-35-N-5	2106339-02	PE_EL4_210305-210	03/02/21 13:37	
VW-35-N-7.5	2106339-03	PE_EL4_210305-211	03/02/21 13:37	
VW-35-E-2	2106339-04	PE_EL4_210305-212	03/02/21 13:37	
VW-35-E-5	2106339-05	PE_EL4_210305-213	03/02/21 13:37	
VW-35-W-2	2106339-06	PE_EL4_210305-190	03/02/21 13:37	
VW-35-W-5	2106339-07	PE_EL4_210305-214	03/02/21 13:37	
VW-35-S-2	2106339-08	PE_EL4_210305-215	03/02/21 13:37	
VW-35-S-5	2106339-09	PE_EL4_210305-221	03/02/21 13:37	
VW-35-S-5-FD	2106339-10	PE_EL4_210305-222	03/02/21 13:37	
VW-31-S-5	2106339-11	PE_EL4_210305-223	03/02/21 13:37	
VW-31-S-5-FD	2106339-12	PE_EL4_210305-224	03/02/21 13:37	
WB08-DOCK	2106339-13	PE_EL4_210305-225	03/02/21 13:37	
VW-31-S-2	2106339-14	PE_EL4_210305-226	03/02/21 13:37	
WB08-1.5	2106339-15	PE_EL4_210305-227	03/02/21 13:37	
WB09-DOCK	2106339-16	PE_EL4_210305-233	03/02/21 13:37	
WB09-1.5	2106339-17	PE_EL4_210305-234	03/02/21 13:37	
WB10-7.5	2106339-18	PE_EL4_210305-235	03/02/21 13:37	
WB10-10	2106339-19	PE_EL4_210305-236	03/02/21 13:37	
WB11-7.5	2106339-21	PE_EL4_210305-237	03/02/21 13:37	
Blank	B101595-BLK1	PE_EL4_210305-189	03/02/21 13:37	
LCS	B101595-BS1	PE_EL4_210305-199	03/02/21 13:37	
VW-35-W-2	B101595-DUP1	PE_EL4_210305-191	03/02/21 13:37	
VW-35-W-2	B101595-MS1	PE_EL4_210305-200	03/02/21 13:37	

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Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B101595 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
VW-35-W-2	B101595-MSD1	PE_EL4_210305-201	03/02/21 13:37	
VW-35-W-2	B101595-PS1	PE_EL4_210305-202	03/02/21 13:37	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Project Number: 60632793.6
Project Manager: Andy Shepard

PREPARATION BATCH SUMMARY

EPA-6020

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Batch: B101596 Batch Matrix: Solids
Preparation: EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
WB11-5	2106339-20	PE_EL4_210305-251	03/02/21 13:37	
WB11-10	2106339-22	PE_EL4_210305-261	03/02/21 13:37	
WB12-5	2106339-23	PE_EL4_210305-262	03/02/21 13:37	
WB12-7.5	2106339-24	PE_EL4_210305-263	03/02/21 13:37	
WB12-10	2106339-25	PE_EL4_210305-264	03/02/21 13:37	
VW-35-SS-2	2106339-26	PE_EL4_210305-265	03/02/21 13:37	
VW-35-SS-5	2106339-27	PE_EL4_210305-269	03/02/21 13:37	
VW-35-SS-5-FD	2106339-28	PE_EL4_210305-270	03/02/21 13:37	
VW-35-NN-2	2106339-29	PE_EL4_210305-271	03/02/21 13:37	
VW-35-NN-5	2106339-30	PE_EL4_210305-272	03/02/21 13:37	
WB11-5-FD	2106339-31	PE_EL4_210305-273	03/02/21 13:37	
Blank	B101596-BLK1	PE_EL4_210305-250	03/02/21 13:37	
LCS	B101596-BS1	PE_EL4_210305-254	03/02/21 13:37	
WB11-5	B101596-DUP1	PE_EL4_210305-252	03/02/21 13:37	
WB11-5	B101596-MS1	PE_EL4_210305-255	03/02/21 13:37	
WB11-5	B101596-MSD1	PE_EL4_210305-256	03/02/21 13:37	
WB11-5	B101596-PS1	PE_EL4_210305-257	03/02/21 13:37	[Spk] 1g->250ml; 250ml->250ml; Spiked 9.8ml

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Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B101595-BLK1	File ID:	PE_EL4_210305-189
Prepared:	03/02/21 13:37	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	03/05/21 21:17	Instrument:	PE-EL4		
Batch:	B101595	Sequence:	2104473	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U
7439-92-1	Lead	0.12	U

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

METHOD BLANK DATA SHEET
EPA-6020

Laboratory:	BC Laboratories			SDG:	2106339
Client:	AECOM - Sacramento $AECS			Project:	SMUD 59th St.-CLP III
Matrix:	Solids	Laboratory ID:	B101596-BLK1	File ID:	PE_EL4_210305-250
Prepared:	03/02/21 13:37	Preparation:	EPA 3050B	Initial/Final:	1 g / 250 ml
Analyzed:	03/05/21 23:54	Instrument:	PE-EL4		
Batch:	B101596	Sequence:	2104474	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7440-38-2	Arsenic	0.17	U
7439-92-1	Lead	0.12	U

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

VW-35-W-2

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101595
Preparation: EPA 3050B
Source Sample Name: VW-35-W-2

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101595-DUP1
Lab Source ID: 2106339-06
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	61.120		58.569		4.26		EPA-6020
Lead	20	10.589		9.9962		5.76		EPA-6020

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

WB11-5

DUPLICATES

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101596
Preparation: EPA 3050B
Source Sample Name: WB11-5

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101596-DUP1
Lab Source ID: 2106339-20
Initial/Final: 1 g / 250 ml
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Arsenic	20	4.3075		3.9922		7.60		EPA-6020
Lead	20	7.5550		7.4608		1.26		EPA-6020

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

VW-35-W-2

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101595
Preparation: EPA 3050B
Source Sample Number: 2106339-06

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101595-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	61.120	84.554	93.7	75 - 125
Lead	25.000	10.589	35.902	101	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	82.686	86.3	2.23	20	75 - 125
Lead	25.000	35.147	98.2	2.13	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA-6020

WB11-5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101596
Preparation: EPA 3050B
Source Sample Number: 2106339-20

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101596-MS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. #	QC LIMITS REC.
Arsenic	25.000	4.3075	27.258	91.8	75 - 125
Lead	25.000	7.5550	33.214	103	75 - 125

COMPOUND	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic	25.000	28.397	96.4	4.09	20	75 - 125
Lead	25.000	34.383	107	3.46	20	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
SDG: 2106339
Client: AECOM - Sacramento $AECS
Project: SMUD 59th St.-CLP III
Matrix: Solids
Batch: B101595
Laboratory ID: B101595-BS1
Preparation: EPA 3050B
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	25.618	102	75 - 125
Lead	25.000	27.231	109	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

LCS RECOVERY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101596
Preparation: EPA 3050B

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101596-BS1
Initial/Final: 1 g / 250 ml

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. #	QC LIMITS REC.
Arsenic	25.000	24.412	97.6	75 - 125
Lead	25.000	24.942	99.8	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104473
Matrix: Solids

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: PE-EL4
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2104473-ICV2	PE_EL4_210305-089	03/05/21 15:29
Initial Cal Blank	2104473-ICB2	PE_EL4_210305-090	03/05/21 15:32
MRL Check	2104473-CRL3	PE_EL4_210305-091	03/05/21 15:36
Calibration Check	2104473-CCV7	PE_EL4_210305-095	03/05/21 15:48
Calibration Blank	2104473-CCB7	PE_EL4_210305-096	03/05/21 15:51
Interference Check A	2104473-IFA1	PE_EL4_210305-097	03/05/21 15:55
Interference Check B	2104473-IFB1	PE_EL4_210305-098	03/05/21 15:57
Calibration Check	2104473-CCV8	PE_EL4_210305-107	03/05/21 16:18
Calibration Blank	2104473-CCB8	PE_EL4_210305-108	03/05/21 16:22
Calibration Check	2104473-CCVF	PE_EL4_210305-187	03/05/21 21:11
Calibration Blank	2104473-CCBF	PE_EL4_210305-188	03/05/21 21:15
Blank	B101595-BLK1	PE_EL4_210305-189	03/05/21 21:17
VW-35-W-2	2106339-06	PE_EL4_210305-190	03/05/21 21:20
VW-35-W-2	B101595-DUP1	PE_EL4_210305-191	03/05/21 21:22
Calibration Check	2104473-CCVG	PE_EL4_210305-197	03/05/21 21:36
Calibration Blank	2104473-CCBG	PE_EL4_210305-198	03/05/21 21:40
LCS	B101595-BS1	PE_EL4_210305-199	03/05/21 21:42
VW-35-W-2	B101595-MS1	PE_EL4_210305-200	03/05/21 21:45
VW-35-W-2	B101595-MSD1	PE_EL4_210305-201	03/05/21 21:47
VW-35-W-2	B101595-PS1	PE_EL4_210305-202	03/05/21 21:49
Calibration Check	2104473-CCVH	PE_EL4_210305-207	03/05/21 22:01
Calibration Blank	2104473-CCBH	PE_EL4_210305-208	03/05/21 22:05
VW-35-N-2	2106339-01	PE_EL4_210305-209	03/05/21 22:07
VW-35-N-5	2106339-02	PE_EL4_210305-210	03/05/21 22:09
VW-35-N-7.5	2106339-03	PE_EL4_210305-211	03/05/21 22:12
VW-35-E-2	2106339-04	PE_EL4_210305-212	03/05/21 22:14

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Sequence: 2104473
Matrix: Solids

SDG: 2106339
Project: SMUD 59th St.-CLP III
Instrument: PE-EL4
Calibration: UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
VW-35-E-5	2106339-05	PE_EL4_210305-213	03/05/21 22:16
VW-35-W-5	2106339-07	PE_EL4_210305-214	03/05/21 22:19
VW-35-S-2	2106339-08	PE_EL4_210305-215	03/05/21 22:21
Calibration Check	2104473-CCVI	PE_EL4_210305-219	03/05/21 22:31
Calibration Blank	2104473-CCBI	PE_EL4_210305-220	03/05/21 22:35
VW-35-S-5	2106339-09	PE_EL4_210305-221	03/05/21 22:39
VW-35-S-5-FD	2106339-10	PE_EL4_210305-222	03/05/21 22:41
VW-31-S-5	2106339-11	PE_EL4_210305-223	03/05/21 22:43
VW-31-S-5-FD	2106339-12	PE_EL4_210305-224	03/05/21 22:46
WB08-DOCK	2106339-13	PE_EL4_210305-225	03/05/21 22:48
VW-31-S-2	2106339-14	PE_EL4_210305-226	03/05/21 22:50
WB08-1.5	2106339-15	PE_EL4_210305-227	03/05/21 22:53
Calibration Check	2104473-CCVJ	PE_EL4_210305-231	03/05/21 23:02
Calibration Blank	2104473-CCBJ	PE_EL4_210305-232	03/05/21 23:06
WB09-DOCK	2106339-16	PE_EL4_210305-233	03/05/21 23:08
WB09-1.5	2106339-17	PE_EL4_210305-234	03/05/21 23:10
WB10-7.5	2106339-18	PE_EL4_210305-235	03/05/21 23:13
WB10-10	2106339-19	PE_EL4_210305-236	03/05/21 23:15
WB11-7.5	2106339-21	PE_EL4_210305-237	03/05/21 23:17
Calibration Check	2104473-CCVK	PE_EL4_210305-240	03/05/21 23:24
Calibration Blank	2104473-CCBK	PE_EL4_210305-241	03/05/21 23:28

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2104474	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	2104474-ICV2	PE_EL4_210305-089	03/05/21 15:29
Initial Cal Blank	2104474-ICB2	PE_EL4_210305-090	03/05/21 15:32
MRL Check	2104474-CRL3	PE_EL4_210305-091	03/05/21 15:36
Calibration Check	2104474-CCV7	PE_EL4_210305-095	03/05/21 15:48
Calibration Blank	2104474-CCB7	PE_EL4_210305-096	03/05/21 15:51
Interference Check A	2104474-IFA1	PE_EL4_210305-097	03/05/21 15:55
Interference Check B	2104474-IFB1	PE_EL4_210305-098	03/05/21 15:57
Calibration Check	2104474-CCV8	PE_EL4_210305-107	03/05/21 16:18
Calibration Blank	2104474-CCB8	PE_EL4_210305-108	03/05/21 16:22
Calibration Check	2104474-CCVL	PE_EL4_210305-248	03/05/21 23:49
Calibration Blank	2104474-CCBL	PE_EL4_210305-249	03/05/21 23:51
Blank	B101596-BLK1	PE_EL4_210305-250	03/05/21 23:54
WB11-5	2106339-20	PE_EL4_210305-251	03/05/21 23:56
WB11-5	B101596-DUP1	PE_EL4_210305-252	03/05/21 23:58
LCS	B101596-BS1	PE_EL4_210305-254	03/06/21 00:03
WB11-5	B101596-MS1	PE_EL4_210305-255	03/06/21 00:05
WB11-5	B101596-MSD1	PE_EL4_210305-256	03/06/21 00:08
WB11-5	B101596-PS1	PE_EL4_210305-257	03/06/21 00:10
Calibration Check	2104474-CCVM	PE_EL4_210305-259	03/06/21 00:15
Calibration Blank	2104474-CCBM	PE_EL4_210305-260	03/06/21 00:17
WB11-10	2106339-22	PE_EL4_210305-261	03/06/21 00:19
WB12-5	2106339-23	PE_EL4_210305-262	03/06/21 00:22
WB12-7.5	2106339-24	PE_EL4_210305-263	03/06/21 00:24
WB12-10	2106339-25	PE_EL4_210305-264	03/06/21 00:26
VW-35-SS-2	2106339-26	PE_EL4_210305-265	03/06/21 00:29
Calibration Check	2104474-CCVN	PE_EL4_210305-267	03/06/21 00:33

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA-6020

Laboratory:	BC Laboratories	SDG:	2106339
Client:	AECOM - Sacramento $AECS	Project:	SMUD 59th St.-CLP III
Sequence:	2104474	Instrument:	PE-EL4
Matrix:	Solids	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	2104474-CCBN	PE_EL4_210305-268	03/06/21 00:36
VW-35-SS-5	2106339-27	PE_EL4_210305-269	03/06/21 00:38
VW-35-SS-5-FD	2106339-28	PE_EL4_210305-270	03/06/21 00:40
VW-35-NN-2	2106339-29	PE_EL4_210305-271	03/06/21 00:43
VW-35-NN-5	2106339-30	PE_EL4_210305-272	03/06/21 00:45
WB11-5-FD	2106339-31	PE_EL4_210305-273	03/06/21 00:47
Calibration Check	2104474-CCVO	PE_EL4_210305-275	03/06/21 00:52
Calibration Blank	2104474-CCBO	PE_EL4_210305-276	03/06/21 00:55

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Project: SMUD 59th St.-CLP III
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Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2104473

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2104473-ICB2	Arsenic	0.28700	2.0	ug/L		EPA-6020
	Lead	-0.0060000	1.0	ug/L		EPA-6020
2104473-CCB7	Arsenic	0.025000	2.0	ug/L		EPA-6020
	Lead	-0.0060000	1.0	ug/L		EPA-6020
2104473-CCB8	Arsenic	0.067000	2.0	ug/L		EPA-6020
	Lead	0.037000	1.0	ug/L		EPA-6020
2104473-CCBF	Arsenic	0.50500	2.0	ug/L		EPA-6020
	Lead	0.019000	1.0	ug/L		EPA-6020
2104473-CCBG	Arsenic	0.12600	2.0	ug/L		EPA-6020
	Lead	0.018000	1.0	ug/L		EPA-6020
2104473-CCBH	Arsenic	0.26300	2.0	ug/L		EPA-6020
	Lead	0.0080000	1.0	ug/L		EPA-6020
2104473-CCBI	Arsenic	0.088000	2.0	ug/L		EPA-6020
	Lead	0.0060000	1.0	ug/L		EPA-6020
2104473-CCBJ	Arsenic	0.11000	2.0	ug/L		EPA-6020
	Lead	0.0020000	1.0	ug/L		EPA-6020
2104473-CCBK	Arsenic	0.19300	2.0	ug/L		EPA-6020

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Project Number: 60632793.6
Project Manager: Andy Shepard

BLANKS
EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2104474

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	PQL	Units	C	Method
2104474-ICB2	Arsenic	0.28700	2.0	ug/L		EPA-6020
	Lead	-0.0060000	1.0	ug/L		EPA-6020
2104474-CCB7	Arsenic	0.025000	2.0	ug/L		EPA-6020
	Lead	-0.0060000	1.0	ug/L		EPA-6020
2104474-CCB8	Arsenic	0.067000	2.0	ug/L		EPA-6020
	Lead	0.037000	1.0	ug/L		EPA-6020
2104474-CCBL	Arsenic	-0.43300	2.0	ug/L		EPA-6020
	Lead	0.011000	1.0	ug/L		EPA-6020
2104474-CCBM	Arsenic	-0.15200	2.0	ug/L		EPA-6020
	Lead	0.0090000	1.0	ug/L		EPA-6020
2104474-CCBN	Arsenic	-0.19000	2.0	ug/L		EPA-6020
	Lead	0.0060000	1.0	ug/L		EPA-6020
2104474-CCBO	Arsenic	-0.18000	2.0	ug/L		EPA-6020
	Lead	0.010000	1.0	ug/L		EPA-6020

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Control Limt: +/- 10.00%

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2104473

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2104473-ICV2	Arsenic	125.00	115.82	92.7	ug/L	EPA-6020
	Lead	125.00	124.72	99.8	ug/L	EPA-6020
2104473-CCV7	Arsenic	100.00	95.849	95.8	ug/L	EPA-6020
	Lead	100.00	99.647	99.6	ug/L	EPA-6020
2104473-CCV8	Arsenic	100.00	94.614	94.6	ug/L	EPA-6020
	Lead	100.00	98.428	98.4	ug/L	EPA-6020
2104473-CCVF	Arsenic	100.00	95.122	95.1	ug/L	EPA-6020
	Lead	100.00	101.58	102	ug/L	EPA-6020
2104473-CCVG	Arsenic	100.00	97.942	97.9	ug/L	EPA-6020
	Lead	100.00	102.04	102	ug/L	EPA-6020
2104473-CCVH	Arsenic	100.00	96.388	96.4	ug/L	EPA-6020
	Lead	100.00	99.110	99.1	ug/L	EPA-6020
2104473-CCVI	Arsenic	100.00	97.052	97.1	ug/L	EPA-6020
	Lead	100.00	99.410	99.4	ug/L	EPA-6020
2104473-CCVJ	Arsenic	100.00	98.807	98.8	ug/L	EPA-6020
	Lead	100.00	102.47	102	ug/L	EPA-6020
2104473-CCVK	Arsenic	100.00	101.78	102	ug/L	EPA-6020

* Values outside of QC limits

AECOM - Sacramento
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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Control Limt: +/- 10.00%

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED
Sequence: 2104474

Lab Sample ID	Analyte	True	Found	%R	Units	Method
2104474-ICV2	Arsenic	125.00	115.82	92.7	ug/L	EPA-6020
	Lead	125.00	124.72	99.8	ug/L	EPA-6020
2104474-CCV7	Arsenic	100.00	95.849	95.8	ug/L	EPA-6020
	Lead	100.00	99.647	99.6	ug/L	EPA-6020
2104474-CCV8	Arsenic	100.00	94.614	94.6	ug/L	EPA-6020
	Lead	100.00	98.428	98.4	ug/L	EPA-6020
2104474-CCVL	Arsenic	100.00	100.93	101	ug/L	EPA-6020
	Lead	100.00	101.05	101	ug/L	EPA-6020
2104474-CCVM	Arsenic	100.00	96.165	96.2	ug/L	EPA-6020
	Lead	100.00	99.328	99.3	ug/L	EPA-6020
2104474-CCVN	Arsenic	100.00	95.852	95.9	ug/L	EPA-6020
	Lead	100.00	98.578	98.6	ug/L	EPA-6020
2104474-CCVO	Arsenic	100.00	98.567	98.6	ug/L	EPA-6020
	Lead	100.00	98.648	98.6	ug/L	EPA-6020

* Values outside of QC limits

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Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

VW-35-W-2

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101595
Preparation: EPA 3050B

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101595-PS1
Lab Source ID: 2106339-06
Initial/Final: 0.0392 g / 9.8 ml

Source Sample Name: VW-35-W-2
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	
Arsenic	75 - 125	383.13	244.48	102.04	136	*
Lead	75 - 125	184.93	42.357	102.04	140	*

* Values outside of QC limits

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Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

POST DIGEST SPIKE SAMPLE RECOVERY

EPA-6020

WB11-5

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Matrix: Solids
Batch: B101596
Preparation: EPA 3050B

SDG: 2106339
Project: SMUD 59th St.-CLP III
Laboratory ID: B101596-PS1
Lab Source ID: 2106339-20
Initial/Final: 0.0392 g / 10 ml

Source Sample Name: WB11-5
% Solids:

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Arsenic	75 - 125	114.55	16.885	100.00	97.7
Lead	75 - 125	130.56	29.616	100.00	101

* Values outside of QC limits

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2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2104473

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2104473-IFA1	Arsenic		0.47400		ug/L
	Lead		0.087000		ug/L
2104473-IFB1	Arsenic	20.000	20.18	101	ug/L
	Lead		0.10400		ug/L

* Values outside of QC limits

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

ICP INTERFERENCE CHECK SAMPLE

EPA-6020

Laboratory: BC Laboratories
Client: AECOM - Sacramento $AECS
Instrument ID: PE-EL4
Sequence: 2104474

SDG: 2106339
Project: SMUD 59th St.-CLP III
Calibration: UNASSIGNED

Lab Sample ID	Analyte	True	Found	%R	Units
2104474-IFA1	Arsenic		0.47400		ug/L
	Lead		0.087000		ug/L
2104474-IFB1	Arsenic	20.000	20.18	101	ug/L
	Lead		0.10400		ug/L

* Values outside of QC limits

Raw Data From Instrument PE-EL4

Raw Data - Calibration Standards

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 11:25:32
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\Dataset\2021 MAR (04-07)\Blank.610
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	12.000				ug/L
|	B	11	1616.812				ug/L
|	Al	27	6435.627				ug/L
| >	Sc	45	882283.044				ug/L
|	V	51	4850.968				ug/L
|	Cr	52	7066.080				ug/L
|	Cr	53	38160.061				ug/L
|	Mn	55	4557.834				ug/L
|	Co	59	2751.529				ug/L
⌊	Ni	60	448.011				ug/L
⌈	Cu	63	910.268				ug/L
|	Cu	65	443.122				ug/L
|	Zn	66	360.452				ug/L
|	Zn	68	1278.312				ug/L
| >	Ge	72	720456.444				ug/L
|	As	75	39.415				ug/L
|	Se	77	3117.868				ug/L
|	Se	82	18.290				ug/L
⌊	Sr	88	466.680				ug/L
⌈	Mo	98	973.573				ug/L
| >	Rh	103	551730.395				ug/L
⌊	Ag	107	253.337				ug/L
⌈	Cd	111	-24.992				ug/L
|	Cd	114	-125.229				ug/L
| >	In	115	802043.000				ug/L
|	Sn	120	616.391				ug/L
⌊	Sb	121	70.000				ug/L
⌈	Ba	137	70.568				ug/L
|	Ba	138	462.580				ug/L
| >	Tb	159	1351564.450				ug/L
|	Tl	205	146.668				ug/L
⌊	Pb	208	310.002				ug/L
⌈	Hg	200	70.096				ug/L
|	Hg	201	45.333				ug/L
| >	Bi	209	619997.921				ug/L
⌊	U	238	83.334				ug/L
	C	13	12328.397				ug/L
	W	184	193.326				ug/L
	Pd	106	85.235				ug/L
	Kr	83	944.383				ug/L
⌈	Na	23	39298.338				ug/L
|	Mg	24	1933.552				ug/L

K	39	131700.993	ug/L
Ca	44	5034.736	ug/L
Ti	47	306.672	ug/L
Sc-1	45	882283.044	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000169	0.000	0.999998	Linear Thru Zero
B	11.009	0.000334	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006297	0.000	0.999915	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008180	0.000	0.999998	Linear Thru Zero
Cr	51.941	0.007209	0.000	0.999996	Linear Thru Zero
Cr	52.941	0.000858	0.000	0.999967	Linear Thru Zero
Mn	54.938	0.011130	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007994	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001484	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003838	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001838	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000733	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000524	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000740	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000050	0.000	0.999801	Linear Thru Zero
Se	81.917	0.000067	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000082	0.000	0.434185	Linear Thru Zero
Mo	97.906	0.005177	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007520	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001002	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002223	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005959	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003239	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001461	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009321	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009426	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012072	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000860	0.000	0.999999	Linear Thru Zero
Hg	200.970	0.000496	0.000	0.999995	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025749	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5898.068429	0.000	0.999990	Linear Thru Zero
Mg	23.985	3849.586792	0.000	0.999989	Linear Thru Zero
K	38.964	6434.891009	0.000	0.999989	Linear Thru Zero
Ca	43.956	201.800602	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 11:27:52
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\Dataset\2021 MAR (04-07)\Blank.610
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	132.668	**1.000**	0.15	15.0	ug/L
	B	11	8390.537	**20.000**	1.29	6.4	ug/L
	Al	27	141509.977	**20.000**	1.45	7.2	ug/L
>	Sc	45	878708.731				ug/L
	V	51	23379.346	**3.000**	0.81	26.9	ug/L
	Cr	52	25582.632	**3.000**	0.33	11.1	ug/L
	Cr	53	41129.615	**3.000**	0.79	26.4	ug/L
	Mn	55	14374.702	**1.000**	0.15	14.6	ug/L
	Co	59	12039.079	**1.000**	0.06	5.9	ug/L
	Ni	60	3374.626	**2.000**	0.18	9.2	ug/L
	Cu	63	7239.773	**2.000**	0.11	5.4	ug/L
	Cu	65	3505.120	**2.000**	0.08	3.9	ug/L
	Zn	66	3224.573	**5.000**	0.33	6.6	ug/L
	Zn	68	3238.355	**5.000**	0.28	5.6	ug/L
>	Ge	72	719635.887				ug/L
	As	75	1370.870	**2.000**	0.01	0.6	ug/L
	Se	77	3116.534	**2.000**	37.98	1898.9	ug/L
	Se	82	153.568	**2.000**	0.84	42.1	ug/L
	Sr	88	3667.425	**0.200**	0.05	26.1	ug/L
	Mo	98	3428.604	**1.000**	0.11	11.2	ug/L
>	Rh	103	548127.957				ug/L
	Ag	107	4591.160	**1.000**	0.01	0.9	ug/L
	Cd	111	763.239	**1.000**	0.21	21.4	ug/L
	Cd	114	1551.640	**1.000**	0.11	11.0	ug/L
>	In	115	804053.541				ug/L
	Sn	120	5398.142	**1.000**	0.08	7.6	ug/L
	Sb	121	5144.792	**2.000**	0.19	9.7	ug/L
	Ba	137	1914.050	**1.000**	0.05	4.6	ug/L
	Ba	138	12744.110	**1.000**	0.06	5.5	ug/L
>	Tb	159	1330222.799				ug/L
	Tl	205	12488.579	**1.000**	0.03	2.8	ug/L
	Pb	208	17006.255	**1.000**	0.06	6.1	ug/L
	Hg	200	148.204	**0.200**	0.03	14.9	ug/L
	Hg	201	88.667	**0.200**	0.07	35.9	ug/L
>	Bi	209	604195.297				ug/L
	U	238	14378.029	**1.000**	0.06	5.8	ug/L
	C	13	11483.924				ug/L
	W	184	176.664				ug/L
	Pd	106	163.990				ug/L
	Kr	83	875.709				ug/L
	Na	23	365003.515	**100.000**	0.75	0.7	ug/L
	Mg	24	212413.161	**100.000**	1.27	1.3	ug/L

K	39	480092.499	**100.000**	2.05	2.1	ug/L
Ca	44	16434.847	**100.000**	3.23	3.2	ug/L
Ti	47	186.669				ug/L
Sc-1	45	878708.731				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000137	0.000	1.000000	Linear Thru Zero
B	11.009	0.000387	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007709	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007041	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007065	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001196	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011259	0.000	1.000000	Linear Thru Zero
Co	58.933	0.010607	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001673	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004402	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002129	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000797	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000546	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000925	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000002	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000095	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.022350	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004492	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007917	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000985	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002091	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005957	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003163	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001388	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009252	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009283	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012576	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000658	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000374	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023719	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3257.051768	0.000	1.000000	Linear Thru Zero
Mg	23.985	2104.796094	0.000	1.000000	Linear Thru Zero
K	38.964	3483.915056	0.000	1.000000	Linear Thru Zero
Ca	43.956	114.001113	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 11:30:13
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\Dataset\2021 MAR (04-07)\Blank.610
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	14384.042	**100.002**	3.63	3.6	ug/L
|	B	11	300572.887	**999.956**	33.18	3.3	ug/L
|	Al	27	1342597.275	**249.622**	2.31	0.9	ug/L
| >	Sc	45	858769.966				ug/L
|	V	51	680727.901	**100.009**	2.02	2.0	ug/L
|	Cr	52	603520.419	**99.998**	2.21	2.2	ug/L
|	Cr	53	106969.127	**99.958**	3.14	3.1	ug/L
|	Mn	55	2336533.942	**250.000**	6.69	2.7	ug/L
|	Co	59	668123.634	**99.996**	2.29	2.3	ug/L
⌊	Ni	60	307656.779	**249.997**	6.44	2.6	ug/L
⌈	Cu	63	681852.979	**249.998**	9.46	3.8	ug/L
|	Cu	65	327019.103	**249.998**	10.21	4.1	ug/L
|	Zn	66	128685.024	**249.991**	12.54	5.0	ug/L
|	Zn	68	92276.140	**249.995**	14.23	5.7	ug/L
| >	Ge	72	700721.390				ug/L
|	As	75	128815.106	**249.996**	13.50	5.4	ug/L
|	Se	77	12057.494	**250.015**	14.14	5.7	ug/L
|	Se	82	11622.374	**249.993**	8.10	3.2	ug/L
⌊	Sr	88	1800.184	**19.550**	6.55	33.5	ug/L
⌈	Mo	98	292858.321	**100.002**	7.63	7.6	ug/L
| >	Rh	103	550585.506				ug/L
⌊	Ag	107	426690.160	**100.000**	6.74	6.7	ug/L
⌈	Cd	111	81859.208	**100.000**	5.87	5.9	ug/L
|	Cd	114	182238.599	**100.001**	6.39	6.4	ug/L
| >	In	115	817467.591				ug/L
|	Sn	120	509031.260	**100.000**	5.97	6.0	ug/L
⌊	Sb	121	265409.024	**100.001**	6.92	6.9	ug/L
⌈	Ba	137	199308.441	**100.001**	7.16	7.2	ug/L
|	Ba	138	1273999.268	**100.000**	7.92	7.9	ug/L
| >	Tb	159	1357580.703				ug/L
|	Tl	205	1282469.019	**100.000**	7.46	7.5	ug/L
⌊	Pb	208	4107409.185	**250.000**	17.96	7.2	ug/L
⌈	Hg	200	9841.050	**20.000**	1.22	6.1	ug/L
|	Hg	201	5637.081	**20.000**	1.39	6.9	ug/L
| >	Bi	209	596856.047				ug/L
⌊	U	238	1518880.549	**100.001**	6.52	6.5	ug/L
	C	13	11734.263				ug/L
	W	184	459.998				ug/L
	Pd	106	-222.591				ug/L
	Kr	83	886.043				ug/L
⌈	Na	23	58714245.183	**10000.445**	22.12	0.2	ug/L
|	Mg	24	38197310.627	**10000.449**	54.25	0.5	ug/L

K	39	62579376.360	**10000.442**	163.00	1.6	ug/L
Ca	44	1958413.128	**10000.416**	69.92	0.7	ug/L
Ti	47	193.336				ug/L
Sc-1	45	858769.966				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000167	0.000	0.999998	Linear Thru Zero
B	11.009	0.000348	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006234	0.000	0.999821	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007871	0.000	0.999995	Linear Thru Zero
Cr	51.941	0.006948	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000814	0.000	0.999901	Linear Thru Zero
Mn	54.938	0.010862	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007750	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001431	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003888	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001865	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000733	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000520	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000735	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000052	0.000	0.999971	Linear Thru Zero
Se	81.917	0.000066	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000099	0.000	0.406140	Linear Thru Zero
Mo	97.906	0.005309	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007756	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001003	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002234	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006230	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003252	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001473	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009421	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009484	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012149	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000821	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000470	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025512	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5867.233666	0.000	0.999990	Linear Thru Zero
Mg	23.985	3819.366251	0.000	0.999990	Linear Thru Zero
K	38.964	6244.491479	0.000	0.999990	Linear Thru Zero
Ca	43.956	195.329706	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 11:53:30
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.003
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	8.000				ug/L
|	B	11	1520.128				ug/L
|	Al	27	7019.377				ug/L
| >	Sc	45	865389.023				ug/L
|	V	51	6419.525				ug/L
|	Cr	52	6712.489				ug/L
|	Cr	53	37463.845				ug/L
|	Mn	55	4224.319				ug/L
|	Co	59	2702.625				ug/L
⌊	Ni	60	468.679				ug/L
⌈	Cu	63	957.828				ug/L
|	Cu	65	481.791				ug/L
|	Zn	66	415.121				ug/L
|	Zn	68	1280.090				ug/L
| >	Ge	72	662911.749				ug/L
|	As	75	298.101				ug/L
|	Se	77	3025.504				ug/L
|	Se	82	62.912				ug/L
⌊	Sr	88	366.676				ug/L
⌈	Mo	98	691.700				ug/L
| >	Rh	103	517577.751				ug/L
⌊	Ag	107	300.005				ug/L
⌈	Cd	111	-9.838				ug/L
|	Cd	114	-118.719				ug/L
| >	In	115	765549.848				ug/L
|	Sn	120	683.232				ug/L
⌊	Sb	121	40.000				ug/L
⌈	Ba	137	137.883				ug/L
|	Ba	138	799.251				ug/L
| >	Tb	159	1274759.833				ug/L
|	Tl	205	63.334				ug/L
⌊	Pb	208	250.001				ug/L
⌈	Hg	200	74.523				ug/L
|	Hg	201	42.000				ug/L
| >	Bi	209	571543.795				ug/L
⌊	U	238	23.333				ug/L
	C	13	10385.971				ug/L
	W	184	126.659				ug/L
	Pd	106	73.235				ug/L
	Kr	83	815.870				ug/L
⌈	Na	23	32605.061				ug/L
|	Mg	24	2153.591				ug/L

K	39	119709.755	ug/L
Ca	44	4461.106	ug/L
Ti	47	193.335	ug/L
Sc-1	45	865389.023	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000167	0.000	0.999998	Linear Thru Zero
B	11.009	0.000348	0.000	0.999998	Linear Thru Zero
Al	26.982	0.006234	0.000	0.999821	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007871	0.000	0.999995	Linear Thru Zero
Cr	51.941	0.006948	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000814	0.000	0.999901	Linear Thru Zero
Mn	54.938	0.010862	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007750	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001431	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003888	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001865	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000733	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000520	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000735	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000052	0.000	0.999971	Linear Thru Zero
Se	81.917	0.000066	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000099	0.000	0.406140	Linear Thru Zero
Mo	97.906	0.005309	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007756	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001003	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002234	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006230	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003252	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001473	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009421	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009484	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012149	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000821	0.000	0.999998	Linear Thru Zero
Hg	200.970	0.000470	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025512	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5867.233666	0.000	0.999990	Linear Thru Zero
Mg	23.985	3819.366251	0.000	0.999990	Linear Thru Zero
K	38.964	6244.491479	0.000	0.999990	Linear Thru Zero
Ca	43.956	195.329706	0.000	0.999991	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 11:55:51
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.003
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	152.001	**1.000**	0.23	23.1	ug/L
|	B	11	8317.136	**20.000**	0.90	4.5	ug/L
|	Al	27	141973.462	**20.000**	0.79	4.0	ug/L
| >	Sc	45	871154.152				ug/L
|	V	51	26854.780	**3.000**	0.48	16.0	ug/L
|	Cr	52	24830.537	**3.000**	0.11	3.7	ug/L
|	Cr	53	39549.292	**3.000**	1.78	59.4	ug/L
|	Mn	55	15009.056	**1.000**	0.08	8.4	ug/L
|	Co	59	11965.651	**1.000**	0.07	6.7	ug/L
⌊	Ni	60	3363.289	**2.000**	0.02	1.0	ug/L
⌈	Cu	63	7234.878	**2.000**	0.08	3.8	ug/L
|	Cu	65	3442.874	**2.000**	0.10	4.9	ug/L
|	Zn	66	3219.237	**5.000**	0.07	1.4	ug/L
|	Zn	68	3225.462	**5.000**	0.13	2.7	ug/L
| >	Ge	72	695575.983				ug/L
|	As	75	1257.051	**2.000**	0.69	34.3	ug/L
|	Se	77	3141.876	**2.000**	11.07	553.4	ug/L
|	Se	82	143.481	**2.000**	0.98	49.1	ug/L
⌊	Sr	88	3200.584	**0.200**	0.06	28.6	ug/L
⌈	Mo	98	3251.797	**1.000**	0.11	10.5	ug/L
| >	Rh	103	545940.789				ug/L
⌊	Ag	107	4604.500	**1.000**	0.05	5.4	ug/L
⌈	Cd	111	691.875	**1.000**	0.21	21.0	ug/L
|	Cd	114	1382.337	**1.000**	0.05	5.4	ug/L
| >	In	115	816035.061				ug/L
|	Sn	120	5331.521	**1.000**	0.08	8.0	ug/L
⌊	Sb	121	4754.583	**2.000**	0.09	4.5	ug/L
⌈	Ba	137	2134.722	**1.000**	0.03	2.7	ug/L
|	Ba	138	13103.242	**1.000**	0.06	5.9	ug/L
| >	Tb	159	1347967.664				ug/L
|	Tl	205	12608.747	**1.000**	0.06	6.2	ug/L
⌊	Pb	208	16866.253	**1.000**	0.06	5.9	ug/L
⌈	Hg	200	148.332	**0.200**	0.06	29.2	ug/L
|	Hg	201	87.334	**0.200**	0.03	13.9	ug/L
| >	Bi	209	586740.683				ug/L
⌊	U	238	14471.518	**1.000**	0.06	6.1	ug/L
	C	13	10055.582				ug/L
	W	184	156.659				ug/L
	Pd	106	139.927				ug/L
	Kr	83	751.198				ug/L
⌈	Na	23	363513.792	**100.000**	2.16	2.2	ug/L
|	Mg	24	211553.328	**100.000**	0.90	0.9	ug/L

K	39	479204.578	**100.000**	3.56	3.6	ug/L
Ca	44	16494.961	**100.000**	4.34	4.3	ug/L
Ti	47	260.004				ug/L
Sc-1	45	871154.152				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000166	0.000	1.000000	Linear Thru Zero
B	11.009	0.000390	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007749	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007825	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006919	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000700	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.012366	0.000	1.000000	Linear Thru Zero
Co	58.933	0.010625	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001660	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004483	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002114	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000801	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000541	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000675	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000020	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000055	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.020295	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004636	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007869	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000862	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.001849	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005656	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002884	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001476	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009110	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009318	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012338	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000615	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000376	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.024650	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3309.087314	0.000	1.000000	Linear Thru Zero
Mg	23.985	2093.997374	0.000	1.000000	Linear Thru Zero
K	38.964	3594.948226	0.000	1.000000	Linear Thru Zero
Ca	43.956	120.338550	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 11:58:11
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.003
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	14479.532	**100.000**	7.08	7.1	ug/L
|	B	11	312061.148	**999.977**	66.81	6.7	ug/L
|	Al	27	1331318.591	**249.633**	17.39	7.0	ug/L
| >	Sc	45	843586.036				ug/L
|	V	51	660338.554	**99.999**	6.71	6.7	ug/L
|	Cr	52	586367.313	**100.000**	5.05	5.1	ug/L
|	Cr	53	102154.334	**100.009**	8.55	8.5	ug/L
|	Mn	55	2287157.945	**249.999**	14.27	5.7	ug/L
|	Co	59	653409.486	**99.996**	4.89	4.9	ug/L
⌊	Ni	60	300510.357	**249.997**	13.17	5.3	ug/L
⌈	Cu	63	662631.411	**249.998**	12.47	5.0	ug/L
|	Cu	65	315005.629	**249.998**	13.69	5.5	ug/L
|	Zn	66	121487.869	**249.988**	10.84	4.3	ug/L
|	Zn	68	88504.517	**249.995**	11.95	4.8	ug/L
| >	Ge	72	679432.336				ug/L
|	As	75	122144.720	**250.001**	9.61	3.8	ug/L
|	Se	77	11543.327	**250.023**	19.83	7.9	ug/L
|	Se	82	11183.676	**250.003**	10.11	4.0	ug/L
⌊	Sr	88	2066.903	**19.681**	1.70	8.7	ug/L
⌈	Mo	98	284516.431	**100.001**	5.46	5.5	ug/L
| >	Rh	103	538189.713				ug/L
⌊	Ag	107	409522.375	**100.000**	4.71	4.7	ug/L
⌈	Cd	111	78815.512	**100.001**	3.37	3.4	ug/L
|	Cd	114	177675.503	**100.002**	3.14	3.1	ug/L
| >	In	115	802028.396				ug/L
|	Sn	120	491574.377	**100.001**	4.18	4.2	ug/L
⌊	Sb	121	257524.680	**100.004**	3.94	3.9	ug/L
⌈	Ba	137	197518.316	**100.000**	3.15	3.2	ug/L
|	Ba	138	1263351.251	**100.000**	3.84	3.8	ug/L
| >	Tb	159	1356780.800				ug/L
|	Tl	205	1251005.471	**100.000**	5.88	5.9	ug/L
⌊	Pb	208	4005733.535	**250.000**	15.13	6.1	ug/L
⌈	Hg	200	9586.961	**20.000**	1.93	9.7	ug/L
|	Hg	201	5512.340	**20.000**	1.67	8.4	ug/L
| >	Bi	209	585548.451				ug/L
⌊	U	238	1493942.326	**100.000**	7.83	7.8	ug/L
	C	13	10706.350				ug/L
	W	184	433.335				ug/L
	Pd	106	-487.582				ug/L
	Kr	83	810.370				ug/L
⌈	Na	23	57902710.280	**10000.428**	183.30	1.8	ug/L
|	Mg	24	37691008.494	**10000.444**	213.26	2.1	ug/L

	K	39	61800111.915	**10000.417**	211.64	2.1	ug/L
	Ca	44	1956974.786	**10000.384**	86.63	0.9	ug/L
	Ti	47	213.336				ug/L
	Sc-1	45	843586.036				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000172	0.000	1.000000	Linear Thru Zero
B	11.009	0.000369	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006303	0.000	0.999832	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007770	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006882	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000780	0.000	0.999995	Linear Thru Zero
Mn	54.938	0.010844	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007726	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001425	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003905	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001857	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000714	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000515	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000719	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000050	0.000	0.999937	Linear Thru Zero
Se	81.917	0.000066	0.000	0.999999	Linear Thru Zero
Sr	87.906	0.000127	0.000	0.531375	Linear Thru Zero
Mo	97.906	0.005285	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007618	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000984	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002219	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006127	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003213	0.000	0.999998	Linear Thru Zero
Ba	136.905	0.001456	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009313	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009231	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011823	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000814	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000468	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025561	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5786.762754	0.000	0.999991	Linear Thru Zero
Mg	23.985	3768.718018	0.000	0.999990	Linear Thru Zero
K	38.964	6167.782933	0.000	0.999991	Linear Thru Zero
Ca	43.956	195.243878	0.000	0.999993	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 14:40:58
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.063
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	9.333				ug/L
|	B	11	1303.427				ug/L
|	Al	27	8390.540				ug/L
| >	Sc	45	877666.494				ug/L
|	V	51	6632.924				ug/L
|	Cr	52	6869.262				ug/L
|	Cr	53	40024.585				ug/L
|	Mn	55	4324.363				ug/L
|	Co	59	2704.849				ug/L
⌊	Ni	60	484.680				ug/L
⌈	Cu	63	978.719				ug/L
|	Cu	65	455.567				ug/L
|	Zn	66	364.896				ug/L
|	Zn	68	1292.536				ug/L
| >	Ge	72	677223.830				ug/L
|	As	75	319.376				ug/L
|	Se	77	3003.496				ug/L
|	Se	82	71.044				ug/L
⌊	Sr	88	466.679				ug/L
⌈	Mo	98	650.739				ug/L
| >	Rh	103	522039.993				ug/L
⌊	Ag	107	263.337				ug/L
⌈	Cd	111	-9.082				ug/L
|	Cd	114	-131.551				ug/L
| >	In	115	784792.359				ug/L
|	Sn	120	649.896				ug/L
⌊	Sb	121	86.667				ug/L
⌈	Ba	137	115.211				ug/L
|	Ba	138	721.239				ug/L
| >	Tb	159	1327871.400				ug/L
|	Tl	205	43.333				ug/L
⌊	Pb	208	270.002				ug/L
⌈	Hg	200	62.139				ug/L
|	Hg	201	38.667				ug/L
| >	Bi	209	560990.420				ug/L
⌊	U	238	16.667				ug/L
	C	13	11700.865				ug/L
	W	184	186.661				ug/L
	Pd	106	94.829				ug/L
	Kr	83	800.702				ug/L
⌈	Na	23	32718.792				ug/L
|	Mg	24	2553.692				ug/L

	K	39	116076.410	ug/L
	Ca	44	4447.758	ug/L
	Ti	47	313.339	ug/L
	Sc-1	45	877666.494	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000172	0.000	1.000000	Linear Thru Zero
B	11.009	0.000369	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006303	0.000	0.999832	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007770	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006882	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000780	0.000	0.999995	Linear Thru Zero
Mn	54.938	0.010844	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007726	0.000	0.999993	Linear Thru Zero
Ni	59.933	0.001425	0.000	0.999999	Linear Thru Zero
Cu	62.930	0.003905	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001857	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000714	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000515	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000719	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000050	0.000	0.999937	Linear Thru Zero
Se	81.917	0.000066	0.000	0.999999	Linear Thru Zero
Sr	87.906	0.000127	0.000	0.531375	Linear Thru Zero
Mo	97.906	0.005285	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007618	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000984	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002219	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006127	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003213	0.000	0.999998	Linear Thru Zero
Ba	136.905	0.001456	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009313	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009231	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011823	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000814	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000468	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025561	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5786.762754	0.000	0.999991	Linear Thru Zero
Mg	23.985	3768.718018	0.000	0.999990	Linear Thru Zero
K	38.964	6167.782933	0.000	0.999991	Linear Thru Zero
Ca	43.956	195.243878	0.000	0.999993	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 14:43:19
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.063
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	171.335	**1.000**	0.14	14.0	ug/L
|	B	11	8096.938	**20.000**	1.75	8.7	ug/L
|	Al	27	156231.098	**20.000**	1.42	7.1	ug/L
| >	Sc	45	895232.663				ug/L
|	V	51	25203.933	**3.000**	1.00	33.4	ug/L
|	Cr	52	25776.497	**3.000**	0.24	8.0	ug/L
|	Cr	53	40684.315	**3.000**	24.76	825.4	ug/L
|	Mn	55	15306.210	**1.000**	0.06	6.2	ug/L
|	Co	59	12070.230	**1.000**	0.08	8.2	ug/L
⌊	Ni	60	3333.945	**2.000**	0.16	7.9	ug/L
⌈	Cu	63	7533.342	**2.000**	0.09	4.7	ug/L
|	Cu	65	3610.050	**2.000**	0.08	4.1	ug/L
|	Zn	66	3612.718	**5.000**	0.34	6.8	ug/L
|	Zn	68	3588.264	**5.000**	0.47	9.3	ug/L
| >	Ge	72	719260.186				ug/L
|	As	75	1240.888	**2.000**	0.36	17.8	ug/L
|	Se	77	2942.476	**2.000**	1.32	66.2	ug/L
|	Se	82	147.259	**2.000**	0.40	20.1	ug/L
⌊	Sr	88	4467.770	**0.200**	0.03	14.7	ug/L
⌈	Mo	98	3198.088	**1.000**	0.01	1.3	ug/L
| >	Rh	103	550729.516				ug/L
⌊	Ag	107	4787.927	**1.000**	0.02	2.4	ug/L
⌈	Cd	111	760.270	**1.000**	0.16	16.2	ug/L
|	Cd	114	1533.762	**1.000**	0.05	4.6	ug/L
| >	In	115	815514.878				ug/L
|	Sn	120	5168.094	**1.000**	0.04	3.9	ug/L
⌊	Sb	121	5054.739	**2.000**	0.14	7.1	ug/L
⌈	Ba	137	2147.342	**1.000**	0.07	6.7	ug/L
|	Ba	138	13633.972	**1.000**	0.05	5.3	ug/L
| >	Tb	159	1347562.618				ug/L
|	Tl	205	12468.546	**1.000**	0.06	6.1	ug/L
⌊	Pb	208	16942.892	**1.000**	0.07	7.0	ug/L
⌈	Hg	200	161.298	**0.200**	0.04	20.7	ug/L
|	Hg	201	87.334	**0.200**	0.02	11.8	ug/L
| >	Bi	209	601012.885				ug/L
⌊	U	238	14060.882	**1.000**	0.05	5.3	ug/L
	C	13	13837.210				ug/L
	W	184	109.985				ug/L
	Pd	106	148.765				ug/L
	Kr	83	930.548				ug/L
⌈	Na	23	388320.875	**100.000**	1.25	1.3	ug/L
|	Mg	24	224621.216	**100.000**	0.65	0.6	ug/L

	K	39	483884.506	**100.000**	0.95	1.0	ug/L
	Ca	44	17463.437	**100.000**	4.63	4.6	ug/L
	Ti	47	293.338				ug/L
	Sc-1	45	895232.663				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000180	0.000	1.000000	Linear Thru Zero
B	11.009	0.000379	0.000	1.000000	Linear Thru Zero
Al	26.982	0.008269	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.006901	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007009	0.000	1.000000	Linear Thru Zero
Cr	52.941	-0.000046	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.012198	0.000	1.000000	Linear Thru Zero
Co	58.933	0.010432	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001590	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004521	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002176	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000899	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000618	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000630	0.000	1.000000	Linear Thru Zero
Se	76.920	-0.000168	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000050	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.027736	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004562	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008193	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000949	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002051	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005515	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003050	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001510	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009589	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009237	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012393	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000788	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000381	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023386	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3556.020827	0.000	1.000000	Linear Thru Zero
Mg	23.985	2220.675238	0.000	1.000000	Linear Thru Zero
K	38.964	3678.080954	0.000	1.000000	Linear Thru Zero
Ca	43.956	130.156791	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 14:45:39
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.063
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	16094.237	**100.000**	7.83	7.8	ug/L
|	B	11	320284.448	**999.991**	92.46	9.2	ug/L
|	Al	27	1393095.839	**249.546**	17.98	7.2	ug/L
| >	Sc	45	864085.810				ug/L
|	V	51	683422.879	**100.011**	8.05	8.0	ug/L
|	Cr	52	612172.176	**100.000**	8.63	8.6	ug/L
|	Cr	53	107690.938	**100.095**	13.81	13.8	ug/L
|	Mn	55	2348290.132	**250.000**	17.38	7.0	ug/L
|	Co	59	673743.162	**99.997**	8.29	8.3	ug/L
⌊	Ni	60	309493.372	**249.998**	20.80	8.3	ug/L
⌈	Cu	63	692307.064	**249.998**	11.47	4.6	ug/L
|	Cu	65	330994.733	**249.998**	13.02	5.2	ug/L
|	Zn	66	132258.099	**249.982**	16.40	6.6	ug/L
|	Zn	68	95337.680	**249.986**	18.88	7.6	ug/L
| >	Ge	72	695826.151				ug/L
|	As	75	130527.857	**250.003**	20.68	8.3	ug/L
|	Se	77	11896.948	**250.069**	14.59	5.8	ug/L
|	Se	82	11721.569	**250.004**	15.05	6.0	ug/L
⌊	Sr	88	1866.876	**19.459**	9.47	48.6	ug/L
⌈	Mo	98	292295.947	**100.001**	7.15	7.2	ug/L
| >	Rh	103	544610.837				ug/L
⌊	Ag	107	418781.559	**99.999**	5.58	5.6	ug/L
⌈	Cd	111	81022.038	**100.000**	7.83	7.8	ug/L
|	Cd	114	183224.740	**100.001**	6.91	6.9	ug/L
| >	In	115	822972.221				ug/L
|	Sn	120	496004.034	**100.001**	7.34	7.3	ug/L
⌊	Sb	121	267660.731	**100.003**	8.20	8.2	ug/L
⌈	Ba	137	199642.884	**100.000**	7.26	7.3	ug/L
|	Ba	138	1274224.550	**100.000**	7.16	7.2	ug/L
| >	Tb	159	1375397.797				ug/L
|	Tl	205	1280154.499	**100.000**	5.97	6.0	ug/L
⌊	Pb	208	4110942.633	**250.000**	17.57	7.0	ug/L
⌈	Hg	200	9757.493	**20.000**	0.89	4.5	ug/L
|	Hg	201	5660.431	**20.000**	0.37	1.9	ug/L
| >	Bi	209	607238.893				ug/L
⌊	U	238	1524702.362	**100.001**	5.74	5.7	ug/L
	C	13	12525.316				ug/L
	W	184	376.665				ug/L
	Pd	106	-411.326				ug/L
	Kr	83	900.211				ug/L
⌈	Na	23	61484447.035	**10000.421**	189.68	1.9	ug/L
|	Mg	24	39585450.252	**10000.439**	116.75	1.2	ug/L

K	39	63564560.426	**10000.420**	172.14	1.7	ug/L
Ca	44	1991600.167	**10000.345**	275.89	2.8	ug/L
Ti	47	306.672				ug/L
Sc-1	45	864085.810				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000187	0.000	1.000000	Linear Thru Zero
B	11.009	0.000371	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006442	0.000	0.999743	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007859	0.000	0.999993	Linear Thru Zero
Cr	51.941	0.007032	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000794	0.000	0.999497	Linear Thru Zero
Mn	54.938	0.010883	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007794	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001435	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003977	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001901	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000759	0.000	0.999993	Linear Thru Zero
Zn	67.925	0.000541	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000750	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000051	0.000	0.999403	Linear Thru Zero
Se	81.917	0.000067	0.000	0.999998	Linear Thru Zero
Sr	87.906	0.000102	0.000	0.346710	Linear Thru Zero
Mo	97.906	0.005363	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007694	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000987	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002233	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006033	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003259	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001455	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009288	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009331	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011991	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000799	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000463	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025163	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6144.913935	0.000	0.999991	Linear Thru Zero
Mg	23.985	3958.115912	0.000	0.999990	Linear Thru Zero
K	38.964	6344.581751	0.000	0.999991	Linear Thru Zero
Ca	43.956	198.708386	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 15:06:58
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.073
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	12.000				ug/L
|	B	11	1386.773				ug/L
|	Al	27	9114.570				ug/L
| >	Sc	45	899811.554				ug/L
|	V	51	9899.149				ug/L
|	Cr	52	7349.639				ug/L
|	Cr	53	36854.594				ug/L
|	Mn	55	5408.277				ug/L
|	Co	59	2940.476				ug/L
⌊	Ni	60	496.680				ug/L
⌈	Cu	63	1060.062				ug/L
|	Cu	65	520.904				ug/L
|	Zn	66	445.789				ug/L
|	Zn	68	1506.347				ug/L
| >	Ge	72	735930.257				ug/L
|	As	75	343.812				ug/L
|	Se	77	2871.620				ug/L
|	Se	82	63.270				ug/L
⌊	Sr	88	400.009				ug/L
⌈	Mo	98	766.830				ug/L
| >	Rh	103	554952.209				ug/L
⌊	Ag	107	283.338				ug/L
⌈	Cd	111	-15.726				ug/L
|	Cd	114	-132.313				ug/L
| >	In	115	805909.774				ug/L
|	Sn	120	799.823				ug/L
⌊	Sb	121	76.667				ug/L
⌈	Ba	137	125.188				ug/L
|	Ba	138	778.554				ug/L
| >	Tb	159	1341125.545				ug/L
|	Tl	205	110.001				ug/L
⌊	Pb	208	283.335				ug/L
⌈	Hg	200	86.395				ug/L
|	Hg	201	64.667				ug/L
| >	Bi	209	622452.080				ug/L
⌊	U	238	43.333				ug/L
	C	13	15356.298				ug/L
	W	184	146.660				ug/L
	Pd	106	93.625				ug/L
	Kr	83	1081.564				ug/L
⌈	Na	23	32598.355				ug/L
|	Mg	24	2453.666				ug/L

K	39	127312.009	ug/L
Ca	44	5581.716	ug/L
Ti	47	346.674	ug/L
Sc-1	45	899811.554	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000187	0.000	1.000000	Linear Thru Zero
B	11.009	0.000371	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006442	0.000	0.999743	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007859	0.000	0.999993	Linear Thru Zero
Cr	51.941	0.007032	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000794	0.000	0.999497	Linear Thru Zero
Mn	54.938	0.010883	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007794	0.000	0.999994	Linear Thru Zero
Ni	59.933	0.001435	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003977	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001901	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000759	0.000	0.999993	Linear Thru Zero
Zn	67.925	0.000541	0.000	0.999996	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000750	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000051	0.000	0.999403	Linear Thru Zero
Se	81.917	0.000067	0.000	0.999998	Linear Thru Zero
Sr	87.906	0.000102	0.000	0.346710	Linear Thru Zero
Mo	97.906	0.005363	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007694	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000987	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002233	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006033	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003259	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001455	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009288	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009331	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011991	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000799	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000463	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025163	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6144.913935	0.000	0.999991	Linear Thru Zero
Mg	23.985	3958.115912	0.000	0.999990	Linear Thru Zero
K	38.964	6344.581751	0.000	0.999991	Linear Thru Zero
Ca	43.956	198.708386	0.000	0.999994	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 15:09:19
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.073
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	164.002	**1.000**	0.29	28.7	ug/L
	B	11	8477.292	**20.000**	0.49	2.5	ug/L
	Al	27	152888.728	**20.000**	1.61	8.0	ug/L
>	Sc	45	901757.242				ug/L
	V	51	18594.517	**3.000**	1.36	45.3	ug/L
	Cr	52	24934.190	**3.000**	0.40	13.4	ug/L
	Cr	53	43668.040	**3.000**	0.32	10.7	ug/L
	Mn	55	15029.080	**1.000**	0.09	9.1	ug/L
	Co	59	12065.782	**1.000**	0.10	9.8	ug/L
	Ni	60	3314.604	**2.000**	0.17	8.3	ug/L
	Cu	63	7180.169	**2.000**	0.16	8.1	ug/L
	Cu	65	3407.305	**2.000**	0.20	10.0	ug/L
	Zn	66	3360.177	**5.000**	0.47	9.3	ug/L
	Zn	68	3374.404	**5.000**	0.67	13.4	ug/L
>	Ge	72	688753.643				ug/L
	As	75	1128.674	**2.000**	0.32	16.1	ug/L
	Se	77	2982.323	**2.000**	1.53	76.7	ug/L
	Se	82	156.022	**2.000**	1.24	61.9	ug/L
	Sr	88	3734.118	**0.200**	0.04	20.5	ug/L
	Mo	98	3290.479	**1.000**	0.06	6.4	ug/L
>	Rh	103	540982.278				ug/L
	Ag	107	4661.198	**1.000**	0.06	6.3	ug/L
	Cd	111	655.682	**1.000**	0.21	21.4	ug/L
	Cd	114	1479.823	**1.000**	0.09	9.2	ug/L
>	In	115	807591.295				ug/L
	Sn	120	5248.142	**1.000**	0.16	15.8	ug/L
	Sb	121	4918.002	**2.000**	0.29	14.4	ug/L
	Ba	137	2149.392	**1.000**	0.05	4.9	ug/L
	Ba	138	13698.786	**1.000**	0.06	6.1	ug/L
>	Tb	159	1334331.522				ug/L
	Tl	205	12328.356	**1.000**	0.05	5.0	ug/L
	Pb	208	16058.956	**1.000**	0.04	4.0	ug/L
	Hg	200	148.503	**0.200**	0.05	27.4	ug/L
	Hg	201	104.001	**0.200**	0.07	33.8	ug/L
>	Bi	209	582488.857				ug/L
	U	238	13540.076	**1.000**	0.07	6.5	ug/L
	C	13	11570.705				ug/L
	W	184	129.994				ug/L
	Pd	106	154.469				ug/L
	Kr	83	804.202				ug/L
	Na	23	385581.581	**100.000**	1.55	1.6	ug/L
	Mg	24	223345.342	**100.000**	3.17	3.2	ug/L

K	39	472950.836	**100.000**	0.71	0.7	ug/L
Ca	44	16468.263	**100.000**	7.93	7.9	ug/L
Ti	47	240.003				ug/L
Sc-1	45	901757.242				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000170	0.000	1.000000	Linear Thru Zero
B	11.009	0.000393	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007992	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.003250	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006523	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.002498	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010688	0.000	1.000000	Linear Thru Zero
Co	58.933	0.010145	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001566	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004508	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.002130	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000858	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000574	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000589	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000222	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000072	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.024439	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004698	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.008111	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000840	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002006	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005552	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003018	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001520	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009704	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009170	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.011832	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000587	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000377	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023239	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3529.832265	0.000	1.000000	Linear Thru Zero
Mg	23.985	2208.916758	0.000	1.000000	Linear Thru Zero
K	38.964	3456.388274	0.000	1.000000	Linear Thru Zero
Ca	43.956	108.865477	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 15:11:39
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.073
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	14749.961	**100.000**	4.04	4.0	ug/L
|	B	11	303582.228	**999.967**	56.15	5.6	ug/L
|	Al	27	1361794.632	**249.634**	9.69	3.9	ug/L
| >	Sc	45	833773.215				ug/L
|	V	51	672300.309	**100.053**	4.73	4.7	ug/L
|	Cr	52	591343.815	**100.006**	5.12	5.1	ug/L
|	Cr	53	104278.488	**99.823**	5.09	5.1	ug/L
|	Mn	55	2271716.979	**250.000**	11.65	4.7	ug/L
|	Co	59	646905.575	**99.997**	4.93	4.9	ug/L
⌊	Ni	60	300950.248	**249.999**	11.47	4.6	ug/L
⌈	Cu	63	671328.428	**249.998**	12.20	4.9	ug/L
|	Cu	65	320688.414	**249.998**	12.23	4.9	ug/L
|	Zn	66	128873.267	**249.987**	16.74	6.7	ug/L
|	Zn	68	93063.187	**249.994**	15.61	6.2	ug/L
| >	Ge	72	679316.563				ug/L
|	As	75	127480.494	**250.003**	18.46	7.4	ug/L
|	Se	77	11735.741	**249.950**	15.88	6.4	ug/L
|	Se	82	11501.031	**249.999**	10.97	4.4	ug/L
⌊	Sr	88	2233.609	**19.653**	1.80	9.2	ug/L
⌈	Mo	98	282428.249	**100.001**	8.60	8.6	ug/L
| >	Rh	103	525417.337				ug/L
⌊	Ag	107	404031.017	**99.999**	5.67	5.7	ug/L
⌈	Cd	111	78531.397	**100.001**	6.42	6.4	ug/L
|	Cd	114	177565.675	**100.001**	5.95	5.9	ug/L
| >	In	115	797442.573				ug/L
|	Sn	120	481436.745	**100.001**	5.40	5.4	ug/L
⌊	Sb	121	258092.591	**100.003**	5.54	5.5	ug/L
⌈	Ba	137	194048.903	**100.000**	7.07	7.1	ug/L
|	Ba	138	1239830.437	**100.000**	6.65	6.7	ug/L
| >	Tb	159	1316821.464				ug/L
|	Tl	205	1235451.825	**100.000**	6.40	6.4	ug/L
⌊	Pb	208	3969309.309	**250.000**	16.71	6.7	ug/L
⌈	Hg	200	9693.424	**20.001**	1.06	5.3	ug/L
|	Hg	201	5489.657	**20.000**	1.33	6.7	ug/L
| >	Bi	209	584838.273				ug/L
⌊	U	238	1471313.010	**100.001**	6.46	6.5	ug/L
	C	13	11997.973				ug/L
	W	184	376.660				ug/L
	Pd	106	-543.623				ug/L
	Kr	83	888.210				ug/L
⌈	Na	23	60010870.499	**10000.411**	104.23	1.0	ug/L
|	Mg	24	38834379.537	**10000.431**	200.41	2.0	ug/L

K	39	62401720.217	**10000.445**	179.01	1.8	ug/L
Ca	44	1973728.926	**10000.447**	71.90	0.7	ug/L
Ti	47	253.337				ug/L
Sc-1	45	833773.215				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000177	0.000	1.000000	Linear Thru Zero
B	11.009	0.000363	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006506	0.000	0.999833	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007952	0.000	0.999843	Linear Thru Zero
Cr	51.941	0.007013	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000843	0.000	0.998270	Linear Thru Zero
Mn	54.938	0.010878	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007730	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001442	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003950	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001887	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000757	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000540	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000749	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000054	0.000	0.999685	Linear Thru Zero
Se	81.917	0.000067	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000140	0.000	0.498831	Linear Thru Zero
Mo	97.906	0.005370	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007694	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000986	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002230	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006036	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003239	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001478	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009441	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009411	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012097	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000823	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000465	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025212	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5997.580440	0.000	0.999992	Linear Thru Zero
Mg	23.985	3883.025176	0.000	0.999991	Linear Thru Zero
K	38.964	6227.163743	0.000	0.999990	Linear Thru Zero
Ca	43.956	196.805927	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 17:58:44
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.139
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	15.333				ug/L
|	B	11	1023.392				ug/L
|	Al	27	11080.082				ug/L
| >	Sc	45	782370.550				ug/L
|	V	51	5776.366				ug/L
|	Cr	52	5831.870				ug/L
|	Cr	53	35412.229				ug/L
|	Mn	55	4080.918				ug/L
|	Co	59	2424.769				ug/L
⌊	Ni	60	444.011				ug/L
⌈	Cu	63	1388.995				ug/L
|	Cu	65	718.695				ug/L
|	Zn	66	467.123				ug/L
|	Zn	68	1088.510				ug/L
| >	Ge	72	629206.204				ug/L
|	As	75	52.706				ug/L
|	Se	77	2624.045				ug/L
|	Se	82	24.936				ug/L
⌊	Sr	88	400.010				ug/L
⌈	Mo	98	531.972				ug/L
| >	Rh	103	482529.424				ug/L
⌊	Ag	107	283.338				ug/L
⌈	Cd	111	2.415				ug/L
|	Cd	114	-109.976				ug/L
| >	In	115	712628.246				ug/L
|	Sn	120	629.980				ug/L
⌊	Sb	121	70.000				ug/L
⌈	Ba	137	104.515				ug/L
|	Ba	138	771.881				ug/L
| >	Tb	159	1188213.528				ug/L
|	Tl	205	40.000				ug/L
⌊	Pb	208	696.684				ug/L
⌈	Hg	200	53.984				ug/L
|	Hg	201	27.333				ug/L
| >	Bi	209	521665.665				ug/L
⌊	U	238	36.667				ug/L
	C	13	10939.914				ug/L
	W	184	106.661				ug/L
	Pd	106	106.146				ug/L
	Kr	83	774.366				ug/L
⌈	Na	23	27715.530				ug/L
|	Mg	24	2667.062				ug/L

K	39	118109.194	ug/L
Ca	44	4134.287	ug/L
Ti	47	180.002	ug/L
Sc-1	45	782370.550	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000177	0.000	1.000000	Linear Thru Zero
B	11.009	0.000363	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006506	0.000	0.999833	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007952	0.000	0.999843	Linear Thru Zero
Cr	51.941	0.007013	0.000	0.999998	Linear Thru Zero
Cr	52.941	0.000843	0.000	0.998270	Linear Thru Zero
Mn	54.938	0.010878	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007730	0.000	0.999995	Linear Thru Zero
Ni	59.933	0.001442	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003950	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001887	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000757	0.000	0.999996	Linear Thru Zero
Zn	67.925	0.000540	0.000	0.999999	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000749	0.000	0.999999	Linear Thru Zero
Se	76.920	0.000054	0.000	0.999685	Linear Thru Zero
Se	81.917	0.000067	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.000140	0.000	0.498831	Linear Thru Zero
Mo	97.906	0.005370	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007694	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000986	0.000	0.999999	Linear Thru Zero
Cd	113.904	0.002230	0.000	0.999999	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006036	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003239	0.000	0.999999	Linear Thru Zero
Ba	136.905	0.001478	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009441	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009411	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012097	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000823	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000465	0.000	0.999998	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.025212	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5997.580440	0.000	0.999992	Linear Thru Zero
Mg	23.985	3883.025176	0.000	0.999991	Linear Thru Zero
K	38.964	6227.163743	0.000	0.999990	Linear Thru Zero
Ca	43.956	196.805927	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 18:01:04
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.139
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	137.334	**1.000**	0.15	14.9	ug/L
|	B	11	6772.525	**20.000**	1.30	6.5	ug/L
|	Al	27	112657.160	**20.000**	0.91	4.5	ug/L
| >	Sc	45	783002.640				ug/L
|	V	51	22698.768	**3.000**	0.18	6.1	ug/L
|	Cr	52	22167.005	**3.000**	0.13	4.3	ug/L
|	Cr	53	38487.977	**3.000**	2.17	72.2	ug/L
|	Mn	55	12915.836	**1.000**	0.07	6.9	ug/L
|	Co	59	8370.527	**1.000**	0.11	10.7	ug/L
⌊	Ni	60	2514.348	**2.000**	0.08	4.2	ug/L
⌈	Cu	63	5718.243	**2.000**	0.17	8.6	ug/L
|	Cu	65	2703.513	**2.000**	0.11	5.5	ug/L
|	Zn	66	2498.566	**5.000**	0.29	5.8	ug/L
|	Zn	68	2532.353	**5.000**	0.45	9.0	ug/L
| >	Ge	72	609624.926				ug/L
|	As	75	883.236	**2.000**	0.59	29.3	ug/L
|	Se	77	2655.721	**2.000**	1.36	67.9	ug/L
|	Se	82	128.317	**2.000**	0.44	21.8	ug/L
⌊	Sr	88	2867.128	**0.200**	0.04	18.3	ug/L
⌈	Mo	98	2791.287	**1.000**	0.02	1.8	ug/L
| >	Rh	103	471490.333				ug/L
⌊	Ag	107	3777.452	**1.000**	0.04	4.2	ug/L
⌈	Cd	111	696.285	**1.000**	0.11	10.7	ug/L
|	Cd	114	1367.971	**1.000**	0.13	13.2	ug/L
| >	In	115	701450.663				ug/L
|	Sn	120	4781.174	**1.000**	0.10	10.4	ug/L
⌊	Sb	121	3403.971	**2.000**	0.17	8.5	ug/L
⌈	Ba	137	1694.714	**1.000**	0.01	0.7	ug/L
|	Ba	138	10783.617	**1.000**	0.06	5.8	ug/L
| >	Tb	159	1149412.331				ug/L
|	Tl	205	10836.457	**1.000**	0.06	6.1	ug/L
⌊	Pb	208	14571.209	**1.000**	0.05	5.1	ug/L
⌈	Hg	200	117.878	**0.200**	0.04	19.7	ug/L
|	Hg	201	74.667	**0.200**	0.07	34.9	ug/L
| >	Bi	209	515618.133				ug/L
⌊	U	238	12465.208	**1.000**	0.04	4.5	ug/L
	C	13	10576.153				ug/L
	W	184	123.322				ug/L
	Pd	106	67.149				ug/L
	Kr	83	712.361				ug/L
⌈	Na	23	337449.054	**100.000**	0.82	0.8	ug/L
|	Mg	24	205067.174	**100.000**	0.74	0.7	ug/L

K	39	428542.595	**100.000**	1.88	1.9	ug/L
Ca	44	13463.296	**100.000**	1.58	1.6	ug/L
Ti	47	213.336				ug/L
Sc-1	45	783002.640				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000156	0.000	1.000000	Linear Thru Zero
B	11.009	0.000368	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006494	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007190	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006959	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001325	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011301	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007608	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001323	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003594	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001649	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000672	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000486	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000678	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000094	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000085	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.020310	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004817	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007427	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000992	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002112	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005949	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002383	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001386	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008746	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009410	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012108	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000622	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000466	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.024146	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3097.335241	0.000	1.000000	Linear Thru Zero
Mg	23.985	2024.001113	0.000	1.000000	Linear Thru Zero
K	38.964	3104.334006	0.000	1.000000	Linear Thru Zero
Ca	43.956	93.290088	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 18:03:25
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.139
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	13465.300	**100.001**	4.42	4.4	ug/L
|	B	11	286770.266	**1000.022**	31.19	3.1	ug/L
|	Al	27	1235242.613	**250.041**	14.48	5.8	ug/L
| >	Sc	45	736067.811				ug/L
|	V	51	581845.367	**100.008**	6.34	6.3	ug/L
|	Cr	52	513911.280	**99.999**	6.11	6.1	ug/L
|	Cr	53	92525.302	**99.942**	11.02	11.0	ug/L
|	Mn	55	2019362.470	**250.000**	17.10	6.8	ug/L
|	Co	59	572944.764	**100.000**	7.20	7.2	ug/L
⌊	Ni	60	264135.107	**250.001**	18.18	7.3	ug/L
⌈	Cu	63	586743.236	**250.002**	7.92	3.2	ug/L
|	Cu	65	279452.996	**250.002**	9.27	3.7	ug/L
|	Zn	66	111671.255	**250.011**	10.41	4.2	ug/L
|	Zn	68	80094.894	**250.010**	10.20	4.1	ug/L
| >	Ge	72	586544.358				ug/L
|	As	75	106624.644	**250.001**	11.59	4.6	ug/L
|	Se	77	10018.184	**249.987**	9.02	3.6	ug/L
|	Se	82	9866.052	**249.996**	6.38	2.6	ug/L
⌊	Sr	88	1500.129	**19.586**	5.51	28.1	ug/L
⌈	Mo	98	245183.229	**100.001**	4.74	4.7	ug/L
| >	Rh	103	461841.494				ug/L
⌊	Ag	107	356388.680	**100.000**	4.16	4.2	ug/L
⌈	Cd	111	69767.747	**100.000**	4.59	4.6	ug/L
|	Cd	114	155367.300	**100.001**	4.22	4.2	ug/L
| >	In	115	696162.438				ug/L
|	Sn	120	428834.759	**100.000**	3.39	3.4	ug/L
⌊	Sb	121	220853.846	**100.010**	3.61	3.6	ug/L
⌈	Ba	137	168059.526	**100.000**	3.38	3.4	ug/L
|	Ba	138	1083277.051	**100.001**	4.04	4.0	ug/L
| >	Tb	159	1167159.123				ug/L
|	Tl	205	1084363.688	**100.000**	4.72	4.7	ug/L
⌊	Pb	208	3527668.412	**250.000**	10.51	4.2	ug/L
⌈	Hg	200	8694.544	**20.001**	0.87	4.4	ug/L
|	Hg	201	4841.289	**20.000**	0.43	2.2	ug/L
| >	Bi	209	507845.737				ug/L
⌊	U	238	1255551.988	**100.000**	4.39	4.4	ug/L
	C	13	10155.677				ug/L
	W	184	356.662				ug/L
	Pd	106	-250.714				ug/L
	Kr	83	697.193				ug/L
⌈	Na	23	54378940.304	**10000.430**	218.05	2.2	ug/L
|	Mg	24	35159497.827	**10000.424**	135.73	1.4	ug/L

K	39	55303549.778	**10000.437**	154.91	1.5	ug/L
Ca	44	1765777.288	**10000.470**	238.97	2.4	ug/L
Ti	47	220.003				ug/L
Sc-1	45	736067.811				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000183	0.000	0.999999	Linear Thru Zero
B	11.009	0.000389	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006667	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007846	0.000	0.999997	Linear Thru Zero
Cr	51.941	0.006920	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000808	0.000	0.999815	Linear Thru Zero
Mn	54.938	0.010976	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007770	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001436	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003995	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001903	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000759	0.000	0.999997	Linear Thru Zero
Zn	67.925	0.000540	0.000	0.999998	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000728	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000052	0.000	0.999978	Linear Thru Zero
Se	81.917	0.000067	0.000	0.999998	Linear Thru Zero
Sr	87.906	0.000098	0.000	0.434836	Linear Thru Zero
Mo	97.906	0.005303	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007718	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001003	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002235	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006156	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003174	0.000	0.999988	Linear Thru Zero
Ba	136.905	0.001440	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009285	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009301	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012100	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000851	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000474	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.024741	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5434.888722	0.000	0.999991	Linear Thru Zero
Mg	23.985	3515.533923	0.000	0.999991	Linear Thru Zero
K	38.964	5518.302661	0.000	0.999990	Linear Thru Zero
Ca	43.956	176.156013	0.000	0.999989	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 19:46:53
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.146
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	183.335				ug/L
|	B	11	833.372				ug/L
|	Al	27	14334.645				ug/L
|>	Sc	45	902916.629				ug/L
|	V	51	20556.322				ug/L
|	Cr	52	11724.224				ug/L
|	Cr	53	35860.592				ug/L
|	Mn	55	9781.933				ug/L
|	Co	59	3100.531				ug/L
⌊	Ni	60	912.046				ug/L
⌈	Cu	63	2696.400				ug/L
|	Cu	65	1445.893				ug/L
|	Zn	66	1280.535				ug/L
|	Zn	68	2909.800				ug/L
|>	Ge	72	986946.312				ug/L
|	As	75	-386.502				ug/L
|	Se	77	2697.734				ug/L
|	Se	82	-15.130				ug/L
⌊	Sr	88	666.693				ug/L
⌈	Mo	98	765.573				ug/L
|>	Rh	103	737327.999				ug/L
⌊	Ag	107	623.355				ug/L
⌈	Cd	111	131.460				ug/L
|	Cd	114	-257.136				ug/L
|>	In	115	879409.649				ug/L
|	Sn	120	1184.623				ug/L
⌊	Sb	121	296.672				ug/L
⌈	Ba	137	344.475				ug/L
|	Ba	138	1113.870				ug/L
|>	Tb	159	1389250.577				ug/L
|	Tl	205	243.337				ug/L
⌊	Pb	208	1280.032				ug/L
⌈	Hg	200	210.494				ug/L
|	Hg	201	202.669				ug/L
|>	Bi	209	972603.830				ug/L
⌊	U	238	166.668				ug/L
	C	13	44716.373				ug/L
	W	184	1173.176				ug/L

	Pd	106	253.999	ug/L
	Kr	83	4290.179	ug/L
⌈	Na	23	31160.097	ug/L
|	Mg	24	3453.994	ug/L
|	K	39	168921.704	ug/L
|	Ca	44	18806.118	ug/L
|	Ti	47	946.716	ug/L
⌊	Sc-1	45	902916.629	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
⌈	Be	9		
|	B	11		
|	Al	27		
| >	Sc	45		
|	V	51		
|	Cr	52		
|	Cr	53		
|	Mn	55		
|	Co	59		
⌊	Ni	60		
⌈	Cu	63		
|	Cu	65		
|	Zn	66		
|	Zn	68		
| >	Ge	72		
|	As	75		
|	Se	77		
|	Se	82		
⌊	Sr	88		
⌈	Mo	98		
| >	Rh	103		
⌊	Ag	107		
⌈	Cd	111		
|	Cd	114		
| >	In	115		
|	Sn	120		
⌊	Sb	121		
⌈	Ba	137		
|	Ba	138		
| >	Tb	159		
|	Tl	205		
⌊	Pb	208		
⌈	Hg	200		
|	Hg	201		
| >	Bi	209		
⌊	U	238		
	C	13		

	W	184
	Pd	106
	Kr	83
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	44
|	Ti	47
⌊	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000000	0.000	0.000000	Linear Thru Zero
B	11.009	0.000000	0.000	0.000000	Linear Thru Zero
Al	26.982	0.000000	0.000	0.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.000000	0.000	0.000000	Linear Thru Zero
Cr	51.941	0.000000	0.000	0.000000	Linear Thru Zero
Cr	52.941	0.000000	0.000	0.000000	Linear Thru Zero
Mn	54.938	0.000000	0.000	0.000000	Linear Thru Zero
Co	58.933	0.000000	0.000	0.000000	Linear Thru Zero
Ni	59.933	0.000000	0.000	0.000000	Linear Thru Zero
Cu	62.930	0.000000	0.000	0.000000	Linear Thru Zero
Cu	64.928	0.000000	0.000	0.000000	Linear Thru Zero
Zn	65.926	0.000000	0.000	0.000000	Linear Thru Zero
Zn	67.925	0.000000	0.000	0.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000000	0.000	0.000000	Linear Thru Zero
Se	76.920	0.000000	0.000	0.000000	Linear Thru Zero
Se	81.917	0.000000	0.000	0.000000	Linear Thru Zero
Sr	87.906	0.000000	0.000	0.000000	Linear Thru Zero
Mo	97.906	0.000000	0.000	0.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.000000	0.000	0.000000	Linear Thru Zero
Cd	110.904	0.000000	0.000	0.000000	Linear Thru Zero
Cd	113.904	0.000000	0.000	0.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.000000	0.000	0.000000	Linear Thru Zero
Sb	120.904	0.000000	0.000	0.000000	Linear Thru Zero
Ba	136.905	0.000000	0.000	0.000000	Linear Thru Zero
Ba	137.905	0.000000	0.000	0.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.000000	0.000	0.000000	Linear Thru Zero
Pb	207.977	0.000000	0.000	0.000000	Linear Thru Zero
Hg	199.968	0.000000	0.000	0.000000	Linear Thru Zero
Hg	200.970	0.000000	0.000	0.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.000000	0.000	0.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	0.000000	0.000	0.000000	Linear Thru Zero

Mg	23.985	0.000000	0.000	0.000000	Linear Thru Zero
K	38.964	0.000000	0.000	0.000000	Linear Thru Zero
Ca	43.956	0.000000	0.000	0.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 19:49:13
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.146
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	386.675	**1.000**	0.07	6.9	ug/L
	B	11	7403.016	**20.000**	1.69	8.5	ug/L
	Al	27	141844.875	**20.000**	1.53	7.6	ug/L
>	Sc	45	936459.337				ug/L
	V	51	42550.703	**3.000**	0.52	17.4	ug/L
	Cr	52	33384.550	**3.000**	0.18	6.1	ug/L
	Cr	53	39170.922	**3.000**	2.41	80.2	ug/L
	Mn	55	19434.087	**1.000**	0.08	8.4	ug/L
	Co	59	10873.166	**1.000**	0.07	6.9	ug/L
	Ni	60	3974.869	**2.000**	0.18	8.8	ug/L
	Cu	63	9514.311	**2.000**	0.13	6.7	ug/L
	Cu	65	4716.335	**2.000**	0.11	5.4	ug/L
	Zn	66	5625.296	**5.000**	0.36	7.3	ug/L
	Zn	68	5886.794	**5.000**	0.49	9.8	ug/L
>	Ge	72	1022177.537				ug/L
	As	75	1964.638	**2.000**	0.37	18.7	ug/L
	Se	77	3047.511	**2.000**	1.11	55.6	ug/L
	Se	82	90.391	**2.000**	1.39	69.4	ug/L
	Sr	88	3100.529	**0.200**	0.02	10.9	ug/L
	Mo	98	4217.478	**1.000**	0.13	12.8	ug/L
>	Rh	103	769757.825				ug/L
	Ag	107	6485.650	**1.000**	0.11	11.2	ug/L
	Cd	111	1421.298	**1.000**	0.00	0.1	ug/L
	Cd	114	2828.025	**1.000**	0.02	1.7	ug/L
>	In	115	967042.631				ug/L
	Sn	120	6783.915	**1.000**	0.08	7.9	ug/L
	Sb	121	7636.542	**2.000**	0.03	1.5	ug/L
	Ba	137	2437.634	**1.000**	0.00	0.4	ug/L
	Ba	138	15005.683	**1.000**	0.06	5.8	ug/L
>	Tb	159	1488307.188				ug/L
	Tl	205	17573.642	**1.000**	0.06	5.7	ug/L
	Pb	208	24913.294	**1.000**	0.06	5.6	ug/L
	Hg	200	336.871	**0.200**	0.02	11.0	ug/L
	Hg	201	280.671	**0.200**	0.14	68.5	ug/L
>	Bi	209	987871.096				ug/L
	U	238	22872.073	**1.000**	0.07	7.2	ug/L
	C	13	38012.679				ug/L
	W	184	906.530				ug/L
	Pd	106	235.366				ug/L
	Kr	83	3621.389				ug/L
	Na	23	378721.836	**100.000**	1.39	1.4	ug/L
	Mg	24	247819.739	**100.000**	1.81	1.8	ug/L

	K	39	545213.726	**100.000**	1.05	1.0	ug/L
	Ca	44	26017.327	**100.000**	28.14	28.1	ug/L
	Ti	47	780.034				ug/L
	Sc-1	45	936459.337				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000210	0.000	1.000000	Linear Thru Zero
B	11.009	0.000350	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006799	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007603	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007570	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000722	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.009949	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008197	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001622	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003295	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001577	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000843	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000564	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001159	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000126	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000052	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.011835	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004461	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007610	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001320	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.003216	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005677	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003780	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001390	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009295	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011650	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015840	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000626	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000389	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023044	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3475.617391	0.000	1.000000	Linear Thru Zero
Mg	23.985	2443.657447	0.000	1.000000	Linear Thru Zero
K	38.964	3762.920217	0.000	1.000000	Linear Thru Zero
Ca	43.956	72.112088	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 19:51:34
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.146
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	24371.294	**100.002**	10.01	10.0	ug/L
|	B	11	323310.359	**999.989**	101.96	10.2	ug/L
|	Al	27	1572541.931	**249.948**	25.43	10.2	ug/L
| >	Sc	45	951728.038				ug/L
|	V	51	824405.563	**100.009**	9.42	9.4	ug/L
|	Cr	52	721654.646	**99.999**	10.22	10.2	ug/L
|	Cr	53	119500.628	**100.015**	11.18	11.2	ug/L
|	Mn	55	2491048.878	**250.000**	22.99	9.2	ug/L
|	Co	59	773711.235	**100.000**	9.14	9.1	ug/L
⌊	Ni	60	396825.553	**250.000**	21.85	8.7	ug/L
⌈	Cu	63	969608.856	**250.003**	20.43	8.2	ug/L
|	Cu	65	464709.810	**250.003**	21.95	8.8	ug/L
|	Zn	66	231462.512	**250.010**	18.08	7.2	ug/L
|	Zn	68	166445.574	**250.016**	18.16	7.3	ug/L
| >	Ge	72	981701.398				ug/L
|	As	75	271819.078	**249.999**	13.90	5.6	ug/L
|	Se	77	19599.798	**249.987**	14.71	5.9	ug/L
|	Se	82	22351.806	**250.007**	6.86	2.7	ug/L
⌊	Sr	88	2166.933	**19.698**	6.12	31.1	ug/L
⌈	Mo	98	386650.966	**100.001**	9.38	9.4	ug/L
| >	Rh	103	752984.103				ug/L
⌊	Ag	107	579652.649	**100.000**	8.44	8.4	ug/L
⌈	Cd	111	127413.898	**100.000**	7.52	7.5	ug/L
|	Cd	114	283212.647	**99.999**	6.57	6.6	ug/L
| >	In	115	968373.429				ug/L
|	Sn	120	603608.723	**100.001**	7.48	7.5	ug/L
⌊	Sb	121	439540.689	**100.007**	7.59	7.6	ug/L
⌈	Ba	137	236044.550	**100.001**	12.50	12.5	ug/L
|	Ba	138	1522071.004	**100.001**	12.56	12.6	ug/L
| >	Tb	159	1558302.189				ug/L
|	Tl	205	1799238.152	**100.000**	10.61	10.6	ug/L
⌊	Pb	208	5926649.220	**250.000**	26.26	10.5	ug/L
⌈	Hg	200	17528.820	**20.001**	1.45	7.2	ug/L
|	Hg	201	10061.568	**20.001**	1.60	8.0	ug/L
| >	Bi	209	954297.719				ug/L
⌊	U	238	2242874.964	**100.000**	8.72	8.7	ug/L
	C	13	32079.899				ug/L
	W	184	949.899				ug/L
	Pd	106	-363.968				ug/L
	Kr	83	2946.978				ug/L
⌈	Na	23	63345485.723	**10000.451**	229.96	2.3	ug/L
|	Mg	24	45523603.089	**10000.463**	146.96	1.5	ug/L

K	39	72616948.438	**10000.481**	108.86	1.1	ug/L
Ca	44	2144940.659	**10000.661**	138.14	1.4	ug/L
Ti	47	586.686				ug/L
Sc-1	45	951728.038				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000256	0.000	0.999998	Linear Thru Zero
B	11.009	0.000341	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006586	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008479	0.000	0.999995	Linear Thru Zero
Cr	51.941	0.007495	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000864	0.000	0.999988	Linear Thru Zero
Mn	54.938	0.010481	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008136	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001672	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003951	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001894	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000940	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000668	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001111	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000069	0.000	0.999978	Linear Thru Zero
Se	81.917	0.000091	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000078	0.000	0.552524	Linear Thru Zero
Mo	97.906	0.005148	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007722	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001317	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002933	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006233	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004544	0.000	0.999994	Linear Thru Zero
Ba	136.905	0.001524	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009837	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011626	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015316	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000910	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000518	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023590	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6331.147010	0.000	0.999990	Linear Thru Zero
Mg	23.985	4551.804095	0.000	0.999989	Linear Thru Zero
K	38.964	7244.454520	0.000	0.999988	Linear Thru Zero
Ca	43.956	212.599405	0.000	0.999978	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 20:07:03
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.154
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	38.667				ug/L
|	B	11	1170.076				ug/L
|	Al	27	15443.125				ug/L
| >	Sc	45	1099332.833				ug/L
|	V	51	7493.695				ug/L
|	Cr	52	9955.452				ug/L
|	Cr	53	47922.679				ug/L
|	Mn	55	6879.270				ug/L
|	Co	59	3445.099				ug/L
⌊	Ni	60	657.357				ug/L
⌈	Cu	63	2449.219				ug/L
|	Cu	65	1167.631				ug/L
|	Zn	66	792.479				ug/L
|	Zn	68	2147.365				ug/L
| >	Ge	72	943858.236				ug/L
|	As	75	409.305				ug/L
|	Se	77	3618.220				ug/L
|	Se	82	80.645				ug/L
⌊	Sr	88	666.692				ug/L
⌈	Mo	98	1068.827				ug/L
| >	Rh	103	753500.441				ug/L
⌊	Ag	107	420.010				ug/L
⌈	Cd	111	-4.889				ug/L
|	Cd	114	-192.216				ug/L
| >	In	115	1045706.684				ug/L
|	Sn	120	1066.220				ug/L
⌊	Sb	121	186.669				ug/L
⌈	Ba	137	235.667				ug/L
|	Ba	138	1240.415				ug/L
| >	Tb	159	1747006.443				ug/L
|	Tl	205	96.667				ug/L
⌊	Pb	208	836.681				ug/L
⌈	Hg	200	139.031				ug/L
|	Hg	201	84.667				ug/L
| >	Bi	209	901355.926				ug/L
⌊	U	238	113.334				ug/L
	C	13	17199.591				ug/L
	W	184	359.952				ug/L
	Pd	106	147.053				ug/L
	Kr	83	1499.290				ug/L
⌈	Na	23	33013.261				ug/L
|	Mg	24	3587.374				ug/L

K	39	151247.824	ug/L
Ca	44	7569.820	ug/L
Ti	47	420.010	ug/L
Sc-1	45	1099332.833	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000256	0.000	0.999998	Linear Thru Zero
B	11.009	0.000341	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006586	0.000	0.999997	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008479	0.000	0.999995	Linear Thru Zero
Cr	51.941	0.007495	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000864	0.000	0.999988	Linear Thru Zero
Mn	54.938	0.010481	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008136	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001672	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003951	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001894	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000940	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000668	0.000	0.999995	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.001111	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000069	0.000	0.999978	Linear Thru Zero
Se	81.917	0.000091	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000078	0.000	0.552524	Linear Thru Zero
Mo	97.906	0.005148	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007722	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001317	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002933	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006233	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.004544	0.000	0.999994	Linear Thru Zero
Ba	136.905	0.001524	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009837	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.011626	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.015316	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000910	0.000	0.999995	Linear Thru Zero
Hg	200.970	0.000518	0.000	0.999997	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.023590	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6331.147010	0.000	0.999990	Linear Thru Zero
Mg	23.985	4551.804095	0.000	0.999989	Linear Thru Zero
K	38.964	7244.454520	0.000	0.999988	Linear Thru Zero
Ca	43.956	212.599405	0.000	0.999978	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 20:09:24
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.154
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	249.337	**1.000**	0.14	13.6	ug/L
	B	11	7906.773	**20.000**	1.16	5.8	ug/L
	Al	27	144711.499	**20.000**	1.87	9.4	ug/L
>	Sc	45	1048183.950				ug/L
	V	51	37110.747	**3.000**	0.43	14.5	ug/L
	Cr	52	32518.078	**3.000**	0.26	8.8	ug/L
	Cr	53	48760.846	**3.000**	1.30	43.5	ug/L
	Mn	55	18014.530	**1.000**	0.08	8.2	ug/L
	Co	59	11685.310	**1.000**	0.02	2.3	ug/L
	Ni	60	3754.109	**2.000**	0.13	6.7	ug/L
	Cu	63	8697.049	**2.000**	0.13	6.5	ug/L
	Cu	65	4218.312	**2.000**	0.11	5.7	ug/L
	Zn	66	4026.226	**5.000**	0.30	6.0	ug/L
	Zn	68	4443.308	**5.000**	0.59	11.7	ug/L
>	Ge	72	940379.200				ug/L
	As	75	1851.114	**2.000**	0.42	21.1	ug/L
	Se	77	3683.746	**2.000**	4.00	200.1	ug/L
	Se	82	155.600	**2.000**	0.84	42.0	ug/L
	Sr	88	3600.754	**0.200**	0.07	35.1	ug/L
	Mo	98	4368.028	**1.000**	0.12	11.9	ug/L
>	Rh	103	746683.546				ug/L
	Ag	107	5688.453	**1.000**	0.00	0.3	ug/L
	Cd	111	1125.635	**1.000**	0.15	14.6	ug/L
	Cd	114	2357.973	**1.000**	0.06	5.7	ug/L
>	In	115	1047546.654				ug/L
	Sn	120	7082.380	**1.000**	0.09	8.9	ug/L
	Sb	121	5965.294	**2.000**	0.06	2.8	ug/L
	Ba	137	2530.769	**1.000**	0.10	9.5	ug/L
	Ba	138	16439.959	**1.000**	0.07	7.2	ug/L
>	Tb	159	1705064.468				ug/L
	Tl	205	17777.377	**1.000**	0.05	4.9	ug/L
	Pb	208	23715.205	**1.000**	0.04	4.3	ug/L
	Hg	200	234.126	**0.200**	0.02	10.7	ug/L
	Hg	201	177.335	**0.200**	0.13	63.2	ug/L
>	Bi	209	868793.960				ug/L
	U	238	22811.961	**1.000**	0.05	4.8	ug/L
	C	13	16661.922				ug/L
	W	184	293.293				ug/L
	Pd	106	167.498				ug/L
	Kr	83	1505.958				ug/L
	Na	23	400576.276	**100.000**	4.10	4.1	ug/L
	Mg	24	248397.681	**100.000**	3.88	3.9	ug/L

	K	39	553143.750	**100.000**	4.78	4.8	ug/L
	Ca	44	19968.592	**100.000**	5.76	5.8	ug/L
	Ti	47	413.343				ug/L
	Sc-1	45	1048183.950				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000203	0.000	1.000000	Linear Thru Zero
B	11.009	0.000325	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006226	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.009574	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007357	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000989	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.010967	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008020	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001497	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003333	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001628	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000689	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000492	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000768	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000045	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000040	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.015605	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004459	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007061	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001087	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002442	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005764	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002762	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001351	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.008940	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010378	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013433	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000576	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000553	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026138	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3675.630154	0.000	1.000000	Linear Thru Zero
Mg	23.985	2448.103067	0.000	1.000000	Linear Thru Zero
K	38.964	4018.959257	0.000	1.000000	Linear Thru Zero
Ca	43.956	123.987723	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 20:11:44
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.154
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	18170.141	**99.999**	5.54	5.5	ug/L
|	B	11	328031.226	**999.998**	76.10	7.6	ug/L
|	Al	27	1547724.469	**249.956**	14.30	5.7	ug/L
| >	Sc	45	1014802.026				ug/L
|	V	51	835186.357	**99.985**	7.44	7.4	ug/L
|	Cr	52	728524.189	**99.997**	6.60	6.6	ug/L
|	Cr	53	127186.903	**99.982**	9.93	9.9	ug/L
|	Mn	55	2696834.838	**250.000**	17.64	7.1	ug/L
|	Co	59	798525.637	**100.000**	6.39	6.4	ug/L
⌊	Ni	60	379619.886	**250.000**	16.33	6.5	ug/L
⌈	Cu	63	867271.911	**250.002**	9.50	3.8	ug/L
|	Cu	65	416274.328	**250.002**	9.60	3.8	ug/L
|	Zn	66	171037.773	**250.011**	11.89	4.8	ug/L
|	Zn	68	124513.753	**250.012**	12.68	5.1	ug/L
| >	Ge	72	881877.838				ug/L
|	As	75	181624.925	**250.001**	17.24	6.9	ug/L
|	Se	77	15551.964	**250.003**	20.10	8.0	ug/L
|	Se	82	15812.070	**250.007**	9.94	4.0	ug/L
⌊	Sr	88	2567.035	**19.724**	4.49	22.7	ug/L
⌈	Mo	98	379660.360	**100.002**	6.93	6.9	ug/L
| >	Rh	103	719137.229				ug/L
⌊	Ag	107	545844.437	**100.001**	6.05	6.1	ug/L
⌈	Cd	111	108523.743	**100.000**	7.48	7.5	ug/L
|	Cd	114	242189.894	**100.000**	7.68	7.7	ug/L
| >	In	115	1028620.083				ug/L
|	Sn	120	626637.384	**100.001**	7.90	7.9	ug/L
⌊	Sb	121	356466.769	**100.008**	7.07	7.1	ug/L
⌈	Ba	137	254285.288	**100.001**	3.10	3.1	ug/L
|	Ba	138	1631537.846	**100.001**	3.60	3.6	ug/L
| >	Tb	159	1690357.345				ug/L
|	Tl	205	1762770.511	**100.000**	4.13	4.1	ug/L
⌊	Pb	208	5666518.174	**250.000**	7.76	3.1	ug/L
⌈	Hg	200	13979.858	**20.001**	1.08	5.4	ug/L
|	Hg	201	8071.582	**20.000**	0.92	4.6	ug/L
| >	Bi	209	842973.163				ug/L
⌊	U	238	2227922.147	**100.000**	5.56	5.6	ug/L
	C	13	15282.852				ug/L
	W	184	659.975				ug/L
	Pd	106	-308.570				ug/L
	Kr	83	1392.773				ug/L
⌈	Na	23	65490256.540	**10000.438**	47.88	0.5	ug/L
|	Mg	24	43676103.251	**10000.439**	124.96	1.2	ug/L

K	39	72633098.996	**10000.445**	76.26	0.8	ug/L
Ca	44	2290409.463	**10000.457**	149.53	1.5	ug/L
Ti	47	373.341				ug/L
Sc-1	45	1014802.026				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000179	0.000	0.999999	Linear Thru Zero
B	11.009	0.000323	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006058	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008186	0.000	0.999987	Linear Thru Zero
Cr	51.941	0.007106	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000821	0.000	0.999981	Linear Thru Zero
Mn	54.938	0.010633	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007856	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001497	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003927	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001885	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000773	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000556	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000823	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000055	0.000	0.999999	Linear Thru Zero
Se	81.917	0.000071	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000112	0.000	0.586284	Linear Thru Zero
Mo	97.906	0.005276	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007599	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001058	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002362	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006097	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003471	0.000	0.999992	Linear Thru Zero
Ba	136.905	0.001504	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.009652	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010436	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013415	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000823	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000475	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026468	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6545.437347	0.000	0.999990	Linear Thru Zero
Mg	23.985	4367.059692	0.000	0.999990	Linear Thru Zero
K	38.964	7247.862227	0.000	0.999990	Linear Thru Zero
Ca	43.956	228.273536	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 20:57:40
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.174
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	24.000				ug/L
|	B	11	1250.086				ug/L
|	Al	27	7233.565				ug/L
| >	Sc	45	969290.158				ug/L
|	V	51	4758.182				ug/L
|	Cr	52	7976.834				ug/L
|	Cr	53	46120.103				ug/L
|	Mn	55	5118.113				ug/L
|	Co	59	2960.482				ug/L
⌊	Ni	60	477.346				ug/L
⌈	Cu	63	866.263				ug/L
|	Cu	65	449.344				ug/L
|	Zn	66	235.559				ug/L
|	Zn	68	1299.649				ug/L
| >	Ge	72	811007.538				ug/L
|	As	75	281.292				ug/L
|	Se	77	3423.645				ug/L
|	Se	82	59.520				ug/L
⌊	Sr	88	266.671				ug/L
⌈	Mo	98	761.716				ug/L
| >	Rh	103	647528.953				ug/L
⌊	Ag	107	400.009				ug/L
⌈	Cd	111	-26.274				ug/L
|	Cd	114	-165.060				ug/L
| >	In	115	943642.993				ug/L
|	Sn	120	836.452				ug/L
⌊	Sb	121	126.668				ug/L
⌈	Ba	137	41.887				ug/L
|	Ba	138	217.890				ug/L
| >	Tb	159	1576825.642				ug/L
|	Tl	205	56.667				ug/L
⌊	Pb	208	210.001				ug/L
⌈	Hg	200	70.571				ug/L
|	Hg	201	40.667				ug/L
| >	Bi	209	746965.263				ug/L
⌊	U	238	43.333				ug/L
	C	13	11754.315				ug/L
	W	184	223.314				ug/L
	Pd	106	115.381				ug/L
	Kr	83	995.222				ug/L
⌈	Na	23	22247.197				ug/L
|	Mg	24	1593.500				ug/L

K	39	130861.943		ug/L
Ca	44	4761.254		ug/L
Ti	47	233.336		ug/L
Sc-1	45	969290.158		ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000179	0.000	0.999999	Linear Thru Zero
B	11.009	0.000323	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006058	0.000	0.999998	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008186	0.000	0.999987	Linear Thru Zero
Cr	51.941	0.007106	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000821	0.000	0.999981	Linear Thru Zero
Mn	54.938	0.010633	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007856	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001497	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003927	0.000	0.999999	Linear Thru Zero
Cu	64.928	0.001885	0.000	0.999999	Linear Thru Zero
Zn	65.926	0.000773	0.000	0.999998	Linear Thru Zero
Zn	67.925	0.000556	0.000	0.999997	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000823	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000055	0.000	0.999999	Linear Thru Zero
Se	81.917	0.000071	0.000	0.999994	Linear Thru Zero
Sr	87.906	0.000112	0.000	0.586284	Linear Thru Zero
Mo	97.906	0.005276	0.000	0.999999	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007599	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001058	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002362	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006097	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003471	0.000	0.999992	Linear Thru Zero
Ba	136.905	0.001504	0.000	0.999999	Linear Thru Zero
Ba	137.905	0.009652	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010436	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013415	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000823	0.000	0.999996	Linear Thru Zero
Hg	200.970	0.000475	0.000	0.999999	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.026468	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6545.437347	0.000	0.999990	Linear Thru Zero
Mg	23.985	4367.059692	0.000	0.999990	Linear Thru Zero
K	38.964	7247.862227	0.000	0.999990	Linear Thru Zero
Ca	43.956	228.273536	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 21:00:01
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.174
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
	Be	9	172.668	**1.000**	0.07	6.7	ug/L
	B	11	8050.230	**20.000**	1.27	6.4	ug/L
	Al	27	135292.697	**20.000**	1.28	6.4	ug/L
>	Sc	45	951330.919				ug/L
	V	51	33102.272	**3.000**	0.81	26.9	ug/L
	Cr	52	27795.779	**3.000**	0.19	6.2	ug/L
	Cr	53	49082.307	**3.000**	1.07	35.8	ug/L
	Mn	55	16194.426	**1.000**	0.13	12.6	ug/L
	Co	59	10301.390	**1.000**	0.08	7.9	ug/L
	Ni	60	3127.205	**2.000**	0.24	12.0	ug/L
	Cu	63	7312.273	**2.000**	0.11	5.3	ug/L
	Cu	65	3513.123	**2.000**	0.07	3.4	ug/L
	Zn	66	3132.095	**5.000**	0.31	6.1	ug/L
	Zn	68	3290.818	**5.000**	0.47	9.3	ug/L
>	Ge	72	776242.788				ug/L
	As	75	1461.278	**2.000**	0.13	6.5	ug/L
	Se	77	3642.396	**2.000**	0.77	38.4	ug/L
	Se	82	170.917	**2.000**	0.77	38.6	ug/L
	Sr	88	3400.646	**0.200**	0.04	19.5	ug/L
	Mo	98	3907.189	**1.000**	0.13	13.5	ug/L
>	Rh	103	637263.227				ug/L
	Ag	107	5368.253	**1.000**	0.10	9.5	ug/L
	Cd	111	922.104	**1.000**	0.03	2.9	ug/L
	Cd	114	1826.032	**1.000**	0.05	5.5	ug/L
>	In	115	940772.391				ug/L
	Sn	120	6455.458	**1.000**	0.11	11.4	ug/L
	Sb	121	4961.355	**2.000**	0.19	9.7	ug/L
	Ba	137	2316.116	**1.000**	0.06	6.3	ug/L
	Ba	138	14568.152	**1.000**	0.06	5.7	ug/L
>	Tb	159	1578150.923				ug/L
	Tl	205	15002.376	**1.000**	0.05	5.3	ug/L
	Pb	208	20445.651	**1.000**	0.07	7.3	ug/L
	Hg	200	173.735	**0.200**	0.03	13.8	ug/L
	Hg	201	107.334	**0.200**	0.05	26.4	ug/L
>	Bi	209	725613.092				ug/L
	U	238	19824.933	**1.000**	0.07	7.2	ug/L
	C	13	10939.914				ug/L
	W	184	249.987				ug/L
	Pd	106	103.742				ug/L
	Kr	83	874.209				ug/L
	Na	23	381316.977	**100.000**	3.04	3.0	ug/L
	Mg	24	230724.666	**100.000**	0.92	0.9	ug/L

	K	39	508678.160	**100.000**	1.21	1.2	ug/L
	Ca	44	17389.989	**100.000**	8.12	8.1	ug/L
	Ti	47	293.338				ug/L
	Sc-1	45	951330.919				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000157	0.000	1.000000	Linear Thru Zero
B	11.009	0.000360	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006755	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.009953	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007012	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001352	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011797	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007798	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001404	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.004183	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001988	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000750	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000529	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000769	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000238	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000074	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.020341	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004978	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007833	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001009	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002120	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.006001	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002579	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001444	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009108	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009483	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012849	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000727	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000470	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027333	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3590.697796	0.000	1.000000	Linear Thru Zero
Mg	23.985	2291.311651	0.000	1.000000	Linear Thru Zero
K	38.964	3778.162169	0.000	1.000000	Linear Thru Zero
Ca	43.956	126.287348	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD

Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 21:02:21
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.174
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	13837.860	**100.000**	5.81	5.8	ug/L
|	B	11	311825.452	**999.985**	56.22	5.6	ug/L
|	Al	27	1397050.659	**249.860**	12.49	5.0	ug/L
| >	Sc	45	897009.614				ug/L
|	V	51	723000.054	**99.978**	4.44	4.4	ug/L
|	Cr	52	636367.004	**100.000**	4.52	4.5	ug/L
|	Cr	53	117437.052	**99.944**	4.58	4.6	ug/L
|	Mn	55	2442515.115	**250.000**	11.74	4.7	ug/L
|	Co	59	704975.441	**100.000**	5.29	5.3	ug/L
⌊	Ni	60	323923.755	**250.000**	12.47	5.0	ug/L
⌈	Cu	63	718956.751	**249.999**	7.36	2.9	ug/L
|	Cu	65	346896.381	**249.999**	9.60	3.8	ug/L
|	Zn	66	134107.105	**249.996**	12.60	5.0	ug/L
|	Zn	68	97090.585	**249.998**	14.74	5.9	ug/L
| >	Ge	72	742260.063				ug/L
|	As	75	134406.364	**249.999**	14.66	5.9	ug/L
|	Se	77	12627.431	**249.942**	13.77	5.5	ug/L
|	Se	82	12162.405	**249.998**	3.72	1.5	ug/L
⌊	Sr	88	1900.217	**19.642**	7.92	40.3	ug/L
⌈	Mo	98	321351.922	**100.000**	4.00	4.0	ug/L
| >	Rh	103	617103.369				ug/L
⌊	Ag	107	464239.576	**100.000**	5.24	5.2	ug/L
⌈	Cd	111	88978.088	**99.999**	5.56	5.6	ug/L
|	Cd	114	199738.446	**100.000**	5.29	5.3	ug/L
| >	In	115	934242.064				ug/L
|	Sn	120	553071.749	**100.000**	4.65	4.6	ug/L
⌊	Sb	121	289372.282	**100.007**	6.08	6.1	ug/L
⌈	Ba	137	225327.978	**100.000**	4.70	4.7	ug/L
|	Ba	138	1446306.831	**100.000**	4.70	4.7	ug/L
| >	Tb	159	1568019.013				ug/L
|	Tl	205	1497610.117	**100.000**	5.41	5.4	ug/L
⌊	Pb	208	4812172.602	**250.000**	14.31	5.7	ug/L
⌈	Hg	200	11200.623	**20.000**	0.69	3.5	ug/L
|	Hg	201	6432.276	**20.000**	0.94	4.7	ug/L
| >	Bi	209	711325.746				ug/L
⌊	U	238	1984563.545	**100.000**	4.47	4.5	ug/L
	C	13	10045.554				ug/L
	W	184	459.994				ug/L
	Pd	106	-385.862				ug/L
	Kr	83	847.706				ug/L
⌈	Na	23	60334264.107	**10000.405**	243.50	2.4	ug/L
|	Mg	24	39223326.871	**10000.416**	91.05	0.9	ug/L

K	39	65894278.482	**10000.425**	46.34	0.5	ug/L
Ca	44	2077244.138	**10000.391**	103.02	1.0	ug/L
Ti	47	320.006				ug/L
Sc-1	45	897009.614				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000154	0.000	1.000000	Linear Thru Zero
B	11.009	0.000347	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006211	0.000	0.999976	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008022	0.000	0.999974	Linear Thru Zero
Cr	51.941	0.007020	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000835	0.000	0.999827	Linear Thru Zero
Mn	54.938	0.010883	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007839	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001444	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003873	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001869	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000722	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000517	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000724	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000051	0.000	0.999574	Linear Thru Zero
Se	81.917	0.000065	0.000	0.999999	Linear Thru Zero
Sr	87.906	0.000113	0.000	0.488030	Linear Thru Zero
Mo	97.906	0.005201	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007528	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000954	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002142	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005917	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003100	0.000	0.999994	Linear Thru Zero
Ba	136.905	0.001439	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009235	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009566	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012296	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000783	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000450	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027929	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6030.957665	0.000	0.999992	Linear Thru Zero
Mg	23.985	3922.010267	0.000	0.999991	Linear Thru Zero
K	38.964	6576.061864	0.000	0.999991	Linear Thru Zero
Ca	43.956	207.240193	0.000	0.999992	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Blank

Sample Date/Time: Friday, March 05, 2021 23:35:19
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.235
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 8
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	14.667				ug/L
|	B	11	513.348				ug/L
|	Al	27	6435.638				ug/L
|>	Sc	45	805335.433				ug/L
|	V	51	3312.586				ug/L
|	Cr	52	7229.546				ug/L
|	Cr	53	35191.379				ug/L
|	Mn	55	5068.079				ug/L
|	Co	59	2487.007				ug/L
⌊	Ni	60	471.346				ug/L
⌈	Cu	63	880.487				ug/L
|	Cu	65	428.010				ug/L
|	Zn	66	220.892				ug/L
|	Zn	68	1180.077				ug/L
|>	Ge	72	685701.885				ug/L
|	As	75	534.482				ug/L
|	Se	77	2676.727				ug/L
|	Se	82	56.085				ug/L
⌊	Sr	88	300.005				ug/L
⌈	Mo	98	834.681				ug/L
|>	Rh	103	532882.946				ug/L
⌊	Ag	107	286.671				ug/L
⌈	Cd	111	-23.607				ug/L
|	Cd	114	-153.200				ug/L
|>	In	115	740783.239				ug/L
|	Sn	120	733.067				ug/L
⌊	Sb	121	120.001				ug/L
⌈	Ba	137	46.574				ug/L
|	Ba	138	239.244				ug/L
|>	Tb	159	1232245.455				ug/L
|	Tl	205	56.667				ug/L
⌊	Pb	208	133.334				ug/L
⌈	Hg	200	8.535				ug/L
|	Hg	201	26.667				ug/L
|>	Bi	209	622510.587				ug/L
⌊	U	238	26.667				ug/L
	C	13	12438.508				ug/L
	W	184	6062.270				ug/L
	Pd	106	103.902				ug/L
	Kr	83	1006.889				ug/L
⌈	Na	23	17409.996				ug/L
|	Mg	24	1686.823				ug/L

K	39	125554.555	ug/L
Ca	44	4641.190	ug/L
Ti	47	446.678	ug/L
Sc-1	45	805335.433	ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000154	0.000	1.000000	Linear Thru Zero
B	11.009	0.000347	0.000	1.000000	Linear Thru Zero
Al	26.982	0.006211	0.000	0.999976	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008022	0.000	0.999974	Linear Thru Zero
Cr	51.941	0.007020	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.000835	0.000	0.999827	Linear Thru Zero
Mn	54.938	0.010883	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007839	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001444	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003873	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001869	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000722	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000517	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000724	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000051	0.000	0.999574	Linear Thru Zero
Se	81.917	0.000065	0.000	0.999999	Linear Thru Zero
Sr	87.906	0.000113	0.000	0.488030	Linear Thru Zero
Mo	97.906	0.005201	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007528	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.000954	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002142	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005917	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003100	0.000	0.999994	Linear Thru Zero
Ba	136.905	0.001439	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009235	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009566	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012296	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000783	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000450	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027929	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	6030.957665	0.000	0.999992	Linear Thru Zero
Mg	23.985	3922.010267	0.000	0.999991	Linear Thru Zero
K	38.964	6576.061864	0.000	0.999991	Linear Thru Zero
Ca	43.956	207.240193	0.000	0.999992	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 1

Sample Date/Time: Friday, March 05, 2021 23:37:40
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.235
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 2
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	143.334	**1.000**	0.13	12.5	ug/L
|	B	11	6258.821	**20.000**	1.47	7.3	ug/L
|	Al	27	125649.751	**20.000**	1.56	7.8	ug/L
|>	Sc	45	841737.938				ug/L
|	V	51	23865.711	**3.000**	0.47	15.8	ug/L
|	Cr	52	25535.850	**3.000**	0.26	8.7	ug/L
|	Cr	53	39663.030	**3.000**	1.55	51.6	ug/L
|	Mn	55	14895.530	**1.000**	0.07	7.1	ug/L
|	Co	59	9605.077	**1.000**	0.10	10.2	ug/L
⌊	Ni	60	2963.817	**2.000**	0.13	6.3	ug/L
⌈	Cu	63	6651.323	**2.000**	0.14	7.1	ug/L
|	Cu	65	3197.451	**2.000**	0.13	6.4	ug/L
|	Zn	66	3040.953	**5.000**	0.46	9.2	ug/L
|	Zn	68	3146.767	**5.000**	0.97	19.3	ug/L
|>	Ge	72	719990.980				ug/L
|	As	75	1375.732	**2.000**	0.40	19.9	ug/L
|	Se	77	2866.952	**2.000**	5.20	260.0	ug/L
|	Se	82	126.502	**2.000**	1.06	52.8	ug/L
⌊	Sr	88	2800.436	**0.200**	0.01	6.0	ug/L
⌈	Mo	98	3145.550	**1.000**	0.20	19.7	ug/L
|>	Rh	103	550534.984				ug/L
⌊	Ag	107	4564.480	**1.000**	0.13	13.2	ug/L
⌈	Cd	111	833.414	**1.000**	0.08	7.9	ug/L
|	Cd	114	1732.945	**1.000**	0.03	3.3	ug/L
|>	In	115	803236.307				ug/L
|	Sn	120	5498.248	**1.000**	0.18	17.6	ug/L
⌊	Sb	121	4294.349	**2.000**	0.11	5.5	ug/L
⌈	Ba	137	1917.404	**1.000**	0.07	7.4	ug/L
|	Ba	138	12642.661	**1.000**	0.08	7.8	ug/L
|>	Tb	159	1334937.862				ug/L
|	Tl	205	13216.276	**1.000**	0.05	5.0	ug/L
⌊	Pb	208	17810.245	**1.000**	0.08	8.5	ug/L
⌈	Hg	200	138.395	**0.200**	0.02	9.6	ug/L
|	Hg	201	86.000	**0.200**	0.06	31.9	ug/L
|>	Bi	209	631367.650				ug/L
⌊	U	238	17446.759	**1.000**	0.09	9.3	ug/L
	C	13	12521.952				ug/L
	W	184	1813.537				ug/L
	Pd	106	92.727				ug/L
	Kr	83	1017.390				ug/L
⌈	Na	23	342626.657	**100.000**	2.76	2.8	ug/L
|	Mg	24	210143.450	**100.000**	3.94	3.9	ug/L

	K	39	464508.784	**100.000**	3.13	3.1	ug/L
	Ca	44	15119.250	**100.000**	7.30	7.3	ug/L
	Ti	47	353.340				ug/L
	Sc-1	45	841737.938				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000153	0.000	1.000000	Linear Thru Zero
B	11.009	0.000341	0.000	1.000000	Linear Thru Zero
Al	26.982	0.007082	0.000	1.000000	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.008069	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.007139	0.000	1.000000	Linear Thru Zero
Cr	52.941	0.001163	0.000	1.000000	Linear Thru Zero
Mn	54.938	0.011432	0.000	1.000000	Linear Thru Zero
Co	58.933	0.008350	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001471	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003991	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001914	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000784	0.000	1.000000	Linear Thru Zero
Zn	67.925	0.000535	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000563	0.000	1.000000	Linear Thru Zero
Se	76.920	0.000045	0.000	1.000000	Linear Thru Zero
Se	81.917	0.000046	0.000	1.000000	Linear Thru Zero
Sr	87.906	0.017213	0.000	1.000000	Linear Thru Zero
Mo	97.906	0.004199	0.000	1.000000	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007816	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001070	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002366	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005915	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.002600	0.000	1.000000	Linear Thru Zero
Ba	136.905	0.001401	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009296	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.009863	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.013236	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.001031	0.000	1.000000	Linear Thru Zero
Hg	200.970	0.000464	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027666	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	3252.166610	0.000	1.000000	Linear Thru Zero
Mg	23.985	2084.566263	0.000	1.000000	Linear Thru Zero
K	38.964	3389.542291	0.000	1.000000	Linear Thru Zero
Ca	43.956	104.780600	0.000	1.000000	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Quantitative Analysis - Summary Report

Analyst: ARD
Instrument : ICPMS (PE-EL4)

Sample ID: Standard 2

Sample Date/Time: Friday, March 05, 2021 23:40:00
Sample File: C:\Elandata\Sample\PE_EL4_210305.sam
Blank File: C:\Elandata\DataSet\2021 MAR (05-07)\Blank.235
Number of Replicates: 3
Dual Detector Mode: Dual
Method File: C:\Elandata\Method\EL4\200.8-6020 EL4_Adj Dwell time 190312.mth
Autosampler Position: 3
Report Filename PE_EL4_210305.TXT

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	**Conc. Mean**	Conc. SD	Conc. RSD	Sample Unit
⌈	Be	9	13809.148	**100.001**	3.90	3.9	ug/L
|	B	11	271412.462	**999.978**	51.38	5.1	ug/L
|	Al	27	1313214.368	**249.782**	10.53	4.2	ug/L
|>	Sc	45	839841.824				ug/L
|	V	51	664902.800	**99.998**	3.51	3.5	ug/L
|	Cr	52	586814.069	**99.997**	3.81	3.8	ug/L
|	Cr	53	103802.710	**99.959**	6.51	6.5	ug/L
|	Mn	55	2214795.965	**250.000**	7.29	2.9	ug/L
|	Co	59	643279.784	**99.999**	3.55	3.6	ug/L
⌊	Ni	60	300768.632	**250.000**	10.88	4.4	ug/L
⌈	Cu	63	680531.928	**249.999**	7.02	2.8	ug/L
|	Cu	65	325255.123	**249.999**	8.78	3.5	ug/L
|	Zn	66	131519.753	**249.994**	8.59	3.4	ug/L
|	Zn	68	95334.165	**249.999**	6.20	2.5	ug/L
|>	Ge	72	711481.522				ug/L
|	As	75	134504.977	**250.004**	7.38	3.0	ug/L
|	Se	77	11977.054	**250.002**	10.63	4.3	ug/L
|	Se	82	11932.510	**250.005**	5.78	2.3	ug/L
⌊	Sr	88	1366.776	**19.547**	7.56	38.7	ug/L
⌈	Mo	98	294052.040	**100.002**	4.53	4.5	ug/L
|>	Rh	103	568330.445				ug/L
⌊	Ag	107	423482.905	**100.000**	4.96	5.0	ug/L
⌈	Cd	111	84003.656	**100.000**	5.03	5.0	ug/L
|	Cd	114	188437.204	**100.000**	4.18	4.2	ug/L
|>	In	115	823540.426				ug/L
|	Sn	120	491099.755	**100.000**	2.68	2.7	ug/L
⌊	Sb	121	272247.138	**100.009**	3.98	4.0	ug/L
⌈	Ba	137	197677.680	**100.000**	4.46	4.5	ug/L
|	Ba	138	1269404.129	**100.000**	4.72	4.7	ug/L
|>	Tb	159	1358004.448				ug/L
|	Tl	205	1356672.348	**100.000**	4.87	4.9	ug/L
⌊	Pb	208	4333357.888	**250.000**	13.01	5.2	ug/L
⌈	Hg	200	10759.572	**20.000**	0.79	3.9	ug/L
|	Hg	201	6201.449	**20.000**	0.49	2.4	ug/L
|>	Bi	209	651966.928				ug/L
⌊	U	238	1791635.486	**100.000**	3.66	3.7	ug/L
	C	13	11417.171				ug/L
	W	184	1896.868				ug/L
	Pd	106	-353.603				ug/L
	Kr	83	947.383				ug/L
⌈	Na	23	57036259.481	**10000.430**	94.73	0.9	ug/L
|	Mg	24	37657478.551	**10000.446**	10.80	0.1	ug/L

	K	39	60814927.849	**10000.441**	48.74	0.5	ug/L
	Ca	44	1932033.988	**10000.456**	138.57	1.4	ug/L
	Ti	47	353.341				ug/L
	Sc-1	45	839841.824				ug/L

QC Calculated Values

	Analyte	Mass	Duplicate Rel. % Difference	Int Std % Recovery
	Be	9		
	B	11		
	Al	27		
>	Sc	45		
	V	51		
	Cr	52		
	Cr	53		
	Mn	55		
	Co	59		
	Ni	60		
	Cu	63		
	Cu	65		
	Zn	66		
	Zn	68		
>	Ge	72		
	As	75		
	Se	77		
	Se	82		
	Sr	88		
	Mo	98		
>	Rh	103		
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		
	Sn	120		
	Sb	121		
	Ba	137		
	Ba	138		
>	Tb	159		
	Tl	205		
	Pb	208		
	Hg	200		
	Hg	201		
>	Bi	209		
	U	238		
	C	13		
	W	184		
	Pd	106		
	Kr	83		
	Na	23		
	Mg	24		
	K	39		
	Ca	44		

	Ti	47
	Sc-1	45

Calibration File Table

Analyte	Mass	Slope	Intercept	Corr Coeff	Curve Type
Be	9.012	0.000164	0.000	1.000000	Linear Thru Zero
B	11.009	0.000323	0.000	0.999999	Linear Thru Zero
Al	26.982	0.006235	0.000	0.999941	Linear Thru Zero
Sc	44.956	0.000000	0.000	0.000000	Linear Thru Zero
V	50.944	0.007883	0.000	1.000000	Linear Thru Zero
Cr	51.941	0.006904	0.000	0.999999	Linear Thru Zero
Cr	52.941	0.000801	0.000	0.999908	Linear Thru Zero
Mn	54.938	0.010531	0.000	1.000000	Linear Thru Zero
Co	58.933	0.007636	0.000	1.000000	Linear Thru Zero
Ni	59.933	0.001432	0.000	1.000000	Linear Thru Zero
Cu	62.930	0.003823	0.000	1.000000	Linear Thru Zero
Cu	64.928	0.001827	0.000	1.000000	Linear Thru Zero
Zn	65.926	0.000739	0.000	0.999999	Linear Thru Zero
Zn	67.925	0.000529	0.000	1.000000	Linear Thru Zero
Ge	71.922	0.000000	0.000	0.000000	Linear Thru Zero
As	74.922	0.000753	0.000	0.999998	Linear Thru Zero
Se	76.920	0.000052	0.000	0.999999	Linear Thru Zero
Se	81.917	0.000067	0.000	0.999997	Linear Thru Zero
Sr	87.906	0.000076	0.000	0.404056	Linear Thru Zero
Mo	97.906	0.005164	0.000	0.999998	Linear Thru Zero
Rh	102.905	0.000000	0.000	0.000000	Linear Thru Zero
Ag	106.905	0.007456	0.000	1.000000	Linear Thru Zero
Cd	110.904	0.001021	0.000	1.000000	Linear Thru Zero
Cd	113.904	0.002292	0.000	1.000000	Linear Thru Zero
In	114.904	0.000000	0.000	0.000000	Linear Thru Zero
Sn	119.902	0.005956	0.000	1.000000	Linear Thru Zero
Sb	120.904	0.003306	0.000	0.999991	Linear Thru Zero
Ba	136.905	0.001457	0.000	1.000000	Linear Thru Zero
Ba	137.905	0.009357	0.000	1.000000	Linear Thru Zero
Tb	158.925	0.000000	0.000	0.000000	Linear Thru Zero
Tl	204.975	0.010003	0.000	1.000000	Linear Thru Zero
Pb	207.977	0.012782	0.000	1.000000	Linear Thru Zero
Hg	199.968	0.000825	0.000	0.999997	Linear Thru Zero
Hg	200.970	0.000474	0.000	1.000000	Linear Thru Zero
Bi	208.980	0.000000	0.000	0.000000	Linear Thru Zero
U	238.050	0.027501	0.000	1.000000	Linear Thru Zero
C	13.003	0.000000	0.000	0.000000	Linear Thru Zero
W	183.951	0.000000	0.000	0.000000	Linear Thru Zero
Pd	105.903	0.000000	0.000	0.000000	Linear Thru Zero
Kr	82.914	0.000000	0.000	0.000000	Linear Thru Zero
Na	22.990	5701.640001	0.000	0.999991	Linear Thru Zero
Mg	23.985	3765.411088	0.000	0.999990	Linear Thru Zero
K	38.964	6068.669417	0.000	0.999990	Linear Thru Zero
Ca	43.956	192.730485	0.000	0.999990	Linear Thru Zero
Ti	46.952	0.000000	0.000	0.000000	Linear Thru Zero
Sc-1	44.956	0.000000	0.000	0.000000	Linear Thru Zero

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

AECOM - Sacramento
2020 L St, Suite 400
Sacramento, CA 95811

Reported: 3/19/2021 12:16:31PM
Project: SMUD 59th St.-CLP III
Project Number: 60632793.6
Project Manager: Andy Shepard

Notes and Definitions

B	Blank contamination. The analyte is greater than 1/2 the PQL/LOQ/CRQL in the associated method blank.
D	The reported value is from a dilution.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration.
J	The reported value is an estimated value. Results are between the MDL and PQL/LOQ/CRQL.
U	The analyte was not detected and is reported as less than the LOD/MDL or as defined by the client.

Appendix E

Human Health Risk Assessment for the Vapor Intrusion Pathway

Human Health Risk Assessment for the Vapor Intrusion Pathway

E.1 Introduction

Presented herein is the human health risk assessment (HHRA) for the Sacramento Municipal Utility District (SMUD) 59th Street Corporation Yard (Site). The Site encompasses 19.74 acres in an area of varied land use. Residential neighborhoods are situated to the west, commercial developments are situated to the north, and United States Highway 50 is located south of the Site. A California Department of Transportation laboratory is located east of the Site. The SMUD headquarters and other buildings are located southeast of the Site. The yard is bisected by a Sacramento Regional Transit light rail line.

The Site has served as a central storage area for hazardous and non-hazardous wastes generated on-site and at off-site SMUD facilities/sites. Eight permanent buildings are present on-Site including an office building, inventory warehouse, tool issue warehouse, vehicle maintenance garage, shops building, hazardous materials building, salvage building, and a pre-fabrication building. In addition, there are areas for storage of new and refurbished electrical transformers, power poles, power cable, and hazardous wastes. However, since the relocation of SMUD's equipment yard to the East Campus Operations Center, the Site was subsequently used for office space and warehouse storage.

E.1.1 Previous Site Investigation Results

During a Resource Conservation and Recovery Act (RCRA) Facility Assessment, the California Department of Toxic Substances Control (DTSC) identified 19 solid waste management units (SWMUs) and two areas of concern (AOCs) where there was potential for past releases of hazardous waste or hazardous constituents (DTSC, 2012). After evaluating these SWMUs and AOCs, DTSC recommended that vehicle oil/water separator #1 (SWMU #1), vehicle oil/water separator #2 (SWMU #18), and the utility pole storage area (AOC #2) be included in a RCRA Facility Investigation and that no further RCRA corrective action was recommended for the other SWMUs and AOC. The utility pole storage area and vehicle oil/water separators have since been investigated and no significant contamination was identified. Underground storage tanks (USTs) formerly located on Site stored Stoddard solvent, waste oil, kerosene, gasoline, diesel, transmission fluid, motor oil, hydraulic oil, transformer oil, and waste transformer oil. No significant releases of the UST contents are known to have occurred.

A soil, groundwater, and soil vapor investigation was conducted at the Site in 2018 and 2019. The investigation findings were documented in a Site Characterization Report (SCR) (AECOM, 2019) that included a comparison of the soil, groundwater, and soil vapor analytical data to screening levels (SLs) considered protective of residential and commercial/industrial worker exposure scenarios.

Potential exposure routes for soil included inhalation of soil particulates and direct contact via incidental ingestion and dermal contact. The majority of the Site is covered with buildings and pavement; therefore, current Site workers were unlikely to be exposed to soil at the Site unless they are involved in landscape maintenance in unpaved areas or construction activities involving excavation, trenching, or pavement removal. Site personnel engaging in activities that could result in inhalation of soil particulates or direct soil contact can minimize their potential risk by reducing dust generation, wearing personal protective equipment, and following good sanitation practices. The SCR included a corrective action recommendation to address arsenic concentrations in soil above naturally-occurring (background) concentrations.

Ingestion and dermal contact were identified as potential groundwater exposure routes in the SCR. Groundwater is located at approximately 35 feet below ground surface (bgs) and there are no water wells located on Site; therefore, groundwater exposure pathways are currently incomplete for Site workers. The SCR reported that concentrations of tetrachloroethene (PCE), cobalt, copper, nickel, silver, and vanadium in groundwater were above residential and commercial/industrial direct contact SLs but below the maximum contaminant levels (United Stated Environmental Protection Agency [USEPA], 2018), if established; therefore, the concentrations in groundwater are within acceptable limits for potable use should the groundwater be extracted for such use in the future.

The SCR included a SL evaluation of soil vapor results, which included PCE and its breakdown products. Only trichloroethene (TCE) and PCE were detected in soil vapor and only PCE was detected above SLs. The SCR conducted screening using residential and commercial/industrial soil vapor screening levels (SVSLs) derived by applying a 0.001 soil attenuation factor to the DTSC Human and Ecological Risk Office (HERO) HHRA Note 3 indoor air SLs consistent with DTSC Vapor Intrusion (VI) Guidance (DTSC, 2011). DTSC has since adopted a more conservative attenuation factor of 0.03 (California Environmental Protection Agency [CalEPA], 2020) which reduced the SVSLs. Thus, additional evaluation of the potential for VI was recommended to further characterize the lateral and vertical extent of volatile organic compounds (VOCs) in soil gas in accordance with the requirements of the Corrective Action Consent Agreement, Docket Number HWCA P1-13/14-007 between SMUD and the DTSC.

E.1.2 Methodology

Current use of the Site is strictly for limited commercial and industrial purposes as most activities formerly conducted at the Site have either been transferred to other SMUD facilities or are no longer conducted by SMUD. Following remedial action for VOCs in soil vapor and arsenic in soil, SMUD's planned Site redevelopment includes a mix of residential and commercial/industrial uses compatible with existing uses in the local area.

The purpose of this assessment is to quantify risks to current and potential future human receptors from vapors in the subsurface that could migrate into air (indoor and outdoor). The human health risk evaluation followed federal and state guidance and is consistent with USEPA *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Part A* (USEPA, 1989) and DTSC *Preliminary Endangerment Assessment Guidance Manual* (DTSC, 2015) and utilizes the USEPA (2020a) Vapor Intrusion Screening Levels (VISLs) and DTSC HERO HHRA Note 3 – DTSC-Modified SLs (DTSC, 2020).

The HHRA includes the sections listed below. The tables, figure, and attachments follow the text sections.

- **E.2 Conceptual Site Model:** Identifies sources, exposure pathways, and receptors.
- **E.3 Data Evaluation:** Summarizes the available data and how it was prepared for use in the risk assessment.
- **E.4 Screening Level Comparison:** Describes the comparison of maximum detected chemical concentrations, and method detection limits (MDLs) for non-detected chemicals, to screening levels.
- **E.5 Exposure Assessment:** Details the exposure pathways, the data, and exposure parameters used to evaluate each pathway.
- **E.6 Toxicity Assessment:** Presents the toxicity criteria used in the HHRA.
- **E.7 Risk Characterization:** Presents the calculate risk for each receptor.
- **E.8 Uncertainties:** Describes the factors that introduce key uncertainties to the risk calculations and how they qualify the results.
- **E.9 Conclusions**
- **E.10 References**

E.2 Conceptual Site Model

The conceptual site model (CSM) is a key tool in developing an understanding of contamination in relation to site conditions. It includes a schematic of how chemicals were released from sources; how they migrated to different media such as groundwater, soil, and air; and the pathways by which site receptors may be exposed to the contaminants (USEPA, 1989). The exposure pathway illustrates the movements of a chemical from its source to a potentially exposed population or individual, referred to as a receptor. Receptors are identified based on their locations relative to the site and source, their activity patterns, and the presence of potential sensitive subpopulations. An exposure pathway must be complete or exposure to site chemicals cannot occur.

A complete exposure pathway must have the following five elements:

1. A source (e.g., chemical releases and leaks/spills onto soil);
2. A mechanism for release and migration of chemical (e.g., infiltration into soil);
3. An environmental/physical transport and exposure medium (e.g., soil vapor);
4. An exposure point or site of potential contact (e.g., indoor air); and
5. A receptor and route of intake (e.g., direct contact by future residents).

If one or more elements are not present, the pathway is incomplete and there is no possibility of exposure. In some cases, the exposure pathway may be complete, but may be deemed insignificant due to site-specific factors and is therefore not a candidate for further quantitative evaluation. The CSM for the Site is provided in Figure 1.

The CSM is presented in Figure 1 and illustrates potential receptor scenarios and exposure routes. The SCR (AECOM, 2019) evaluated potential exposures to soil and groundwater. Current and future use of the Site has not changed; thus, no further evaluation of potential exposures to soil and groundwater are considered herein. As shown on the CSM, the exposure media evaluated herein is limited to soil vapors migrating into indoor and outdoor air. Exposure to Site-related chemicals in outdoor air is considered *de minimus* due to dilution and mixing with ambient (outdoor) air and was not quantified herein.

Site use is currently commercial/industrial and is expected to continue into the future until contaminant concentrations in soil vapor and soil are reduced to levels that will support unrestricted uses. Thus, this HHRA considered exposures to current and future commercial/industrial workers. Potentially complete exposure pathways include inhalation of outdoor air (although diluted and insignificant) and indoor air (VI pathway).

Considering future Site redevelopment may include residential uses in addition to commercial/industrial uses, hypothetical future residential use (i.e., unrestricted use scenario) was evaluated herein to assist with risk management decisions and are expected to have exposure to impacted outdoor air (although diluted and insignificant) and indoor air (VI pathway).

Future redevelopment of the Site may expose construction workers to VOCs in outdoor air while working in an excavation trench. No well-established models are available for estimating the migration of volatiles into an excavation trench. Exposure to volatiles is expected to be *de minimus* due to mixing with outdoor air. Thus, this potentially complete, yet insignificant, exposure pathway is not quantitatively evaluated herein. The evaluation does not consider potential off-Site impacts from VOC migration in the vadose zone.

E.3 Data Evaluation

The HHRA utilized soil vapor data collected in November and December 2020 and March 2021. Samples were collected from 45 locations from 4 to 5.5 feet below ground surface with six duplicates. Three soil vapor extraction system monitoring wells were included in the analysis (SVM-1, SVM-2, and SVM-3) from 4 to 5 feet bgs. Analytical

data used in the assessment are presented in Table E-1. All soil vapor data were considered usable in the risk assessment.

Duplicate sample pairs include samples SG-VW21A-01/-02, SG-VW24A-02/-03, SG-VW32A-01/-02, SG-VW41A-01/02, SG-VW50A-01/-02, and SG-VW53A-01/-02. Duplicate samples were processed as follows:

- If both samples were reported with detected concentrations of an analyte, the average concentration was used.
- If only one sample was reported with a detected analyte concentration, the detected concentration was used.
- If both samples were reported to have non-detect concentrations of an analyte, the average MDL was used.

General statistics (e.g., detection frequency, minimum and maximum detections, and locations) are presented for detected chemicals in Tables E-2a and E-2b.

Analytes detected in soil vapor include: 1,1,1,2-tetrafluoroethane, 1,1,1-trichloroethane (TCA), 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1-difluoroethane, 1,2,4-trimethylbenzene, 1,2-dibromoethane (DBE), 1,2-dichloroethane (DCA), 1,2-dichloropropane (DCP), 1,3,5-trimethylbenzene, 1-ethyl-4-methylbenzene, 2-hexanone, acetone, benzene, bromodichloromethane (BDCM), carbon disulfide, carbon tetrachloride, chloroform, chloromethane, *cis*-1,2-dichloroethene (DCE), cyclohexane, dibromomethane, dichlorodifluoromethane, ethanol, ethylbenzene, hexane, isooctane, isopropyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, methyl tertiary-butyl ether, naphthalene, n-heptane, o-xylene, p- & m-xylenes, total xylenes, propylene, styrene, t-butyl alcohol, PCE, tetrahydrofuran, toluene, total petroleum hydrocarbons (TPH), total petroleum hydrocarbons as gasoline (TPHg), *trans*-1,2-DCE, TCE, trichlorofluoromethane, and vinyl acetate.

E.4 Screening Level Comparison

The traditional forward risk calculations involve calculating the exposure point concentration (EPC) for each medium and then calculating a dose based on receptor-specific exposure factors that can be compared to published toxicity values for known health effects. Chemicals have two general modes of health effects, cancer and noncancer, and this approach results in cancer risks for carcinogens and noncancer hazards for noncarcinogens (USEPA, 1989). For cases when standard exposure conditions apply to all receptors, direct comparison to established SLs provides similar results. The DTSC HERO HHRA Note 3 and USEPA VISLs are comprehensive sets of SLs. Both sets of SLs are protective of human health that correspond to an excess lifetime cancer risk (ELCR) of 1E-06 (i.e., probability of one in one million) or noncancer hazard quotient (HQ) of 1 (the threshold or “safe dose”), based on federal (for VISLs) and California (HERO HHRA Note 3) input variables (e.g., exposure parameters, toxicity values).

The maximum detected chemical concentrations were compared to the minimum of the cancer and noncancer SLs. SLs were obtained from the DTSC HERO HHRA Note 3 – DTSC-Modified SLs (DTSC, 2020) or, if not established, the DTSC-adopted USEPA VISLs (USEPA, 2020a). SLs were based on a residential scenario using a target cancer risk of 1E-06 and a target noncancer hazard of 1.

SVSLs were back-calculated from indoor air SLs using two attenuation factors. Attenuation factors were selected as the default value (0.03) for sub-slab soil vapor to indoor air (USEPA, 2002 and DTSC, 2020) and the DTSC default value for existing commercial buildings for sub-slab soil vapor to indoor air (DTSC, 2011). SLs were calculated using the following equation:

$$SL_{sv} = SL_{ia} \div AF$$

Where:

SL_{sv} = screening level in soil vapor (microgram per cubic meter [$\mu g/m^3$])

SL_{ia} = screening level in indoor air ($\mu g/m^3$)

AF = attenuation factor (0.03 or 0.001; unitless)

Comparison to SVSLs for detected chemicals are presented in Table E-2a (0.03 attenuation factor) and Table E-2b (0.001 attenuation factor). A comparison of MDLs for non-detect chemicals to SVSLs are presented in Table E-2c (0.03 attenuation factor) and Table E-2d (0.001 attenuation factor). Non-detect chemicals with MDLs greater than SVSLs were not carried forward to the risk characterization and are discussed in Section E.8 (Uncertainties).

The detected chemical concentration comparison was performed to identify chemicals of potential concern (COPCs) (i.e., chemicals with concentrations greater than SVSLs). Comparison of maximum detected concentrations in site media to SLs are intended to screen entire sites, not for screening out individual chemicals from the risk assessment process (DTSC, 2020). If SLs are exceeded at a site, additional evaluation is warranted.

E.4.1 0.03 Attenuation Factor COPC Screening Results

Maximum detected concentrations of 1,2-DBE, benzene, BDCM, chloroform, ethylbenzene, naphthalene, and PCE were greater than SVSLs.

E.4.2 0.001 Attenuation Factor COPC Screening Results

Maximum detected concentrations of 1,2-DBE, chloroform, and PCE were greater than SLs.

E.5 Exposure Assessment

Characteristics at the Site do not warrant any site-specific modifications to the standard exposure parameters for commercial/industrial workers and residents used in the VISLs and HERO HHRA Note 3 levels. Therefore, the receptor risk was evaluated using the Sum of Ratios approach described in the USEPA Regional Screening Level (RSL) User's Guide (USEPA, 2020b) and DTSC (2020). The ratio of the chemical concentration to the SL may be used to calculate cancer risk and noncancer health hazard. The general equations used are as follows:

Chemical-Specific ELCR =

(Maximum Detected Concentration / Cancer Endpoint SL) x (1E-06)

Chemical-Specific Noncancer HQ =

Maximum Detected Concentration / Noncancer Endpoint SL

To calculate the cumulative ELCR for each receptor, the individual ELCR for all of the detected chemicals were summed. To calculate the hazard index (HI), the individual HQs were summed.

E.6 Toxicity Assessment

Toxicity data used in the derivation of SVSLs are obtained from the following sources. Values for DTSC are calculated when a more stringent value is selected (in comparison to USEPA). The toxicity data hierarchy for DTSC HERO HHRA Note 3 includes:

1. California Code of Regulations, Title 22, Division 4.5, sections 68400.5, 69020–69022 (“Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals”), effective September 4, 2018 – Office of Environmental Health Hazard Assessment (OEHHA) values meeting regulation requirements for peer-review and California-specific aspects (sensitive subpopulations considered).
2. USEPA Integrated Risk Information System
3. Other sources (e.g., USEPA Provisional Peer Reviewed Toxicity Values, Agency for Toxic Substances and Disease Registry (ATSDR), USEPA Superfund Health Effects Assessment Summary Table, etc.)

Toxicity data hierarchy for USEPA VISLs are as follows:

1. USEPA's Integrated Risk Information System
2. The Provisional Peer Reviewed Toxicity Values derived by USEPAs Superfund Health Risk Technical Support Center for the USEPA Superfund program.
3. USEPA's Office of Pesticide Programs Human Health Benchmarks for Pesticides.
4. The ATSDR minimal risk levels.
5. The California Environmental Protection Agency OEHHA provides toxicity values for the State of California.
6. Screening toxicity values in an appendix to certain provisional peer-reviewed toxicity value assessments.
7. The USEPA Superfund program's Health Effects Assessment Summary Table.

E.7 Risk Characterization

Tables E-3a and E-3b present the risk assessment results for the future residents and current and future commercial/industrial workers, respectively.

This section discusses the risk characterization process and the context by which the results should be considered. Results are presented considering the 0.03 and 0.001 attenuation factors.

The risk characterization is the presentation of the quantitative risk results with supporting definitions, context, and site applicability. Per USEPA (1991), a cancer risk of 1E-06 or less is considered *de minimis* risk (i.e., the probability of an individual developing cancer from this exposure is one in a million and may be interpreted as negligible or essentially cannot be differentiated from the background level of risk). A comparison of the one in a million cancer risk threshold to the current background risk for all types of cancer in the United States population of 1 in 2 (5E-01) for men and 1 in 3 (3E-01) for women (American Cancer Society, 2017) demonstrates the levels of protectiveness and conservatism of this threshold. A noncancer HI of less than 1 is also acceptable because the concentrations are cumulatively below harmful levels. USEPA (1991) uses the cancer risk range of 1E-04 to 1E-06 as a “target risk management range.” Risks in this range may be acceptable for risk management decisions, provided that site-related circumstances are present to mitigate the actual risks. A cancer risk greater than 1E-04 typically warrants some type of action.

The calculated risks and hazards are estimates and are based on intentionally conservative exposure scenarios and toxicity values. This HHRA utilizes standard (intentionally conservative) exposure scenarios. Exceedance of any particular risk or hazard level does not imply that adverse health effects have already occurred or will occur. The estimates are merely an indication that additional evaluation or action may be warranted.

E.7.1 Soil Vapor Exposure Risk Summary

In the following sections, risks from soil vapor exposures at the Site are presented for hypothetical future residents and current and future commercial/industrial workers using 0.03 and 0.001 attenuation factors. A summary of estimated potential cancer risks and noncancer hazards and primary risk contributors are presented in Table E-4.

E.7.1.1 Hypothetical Future Resident Results

0.03 Attenuation Factor Results. The estimated potential cumulative cancer risk for the hypothetical future resident exposed to chemicals detected in soil vapor was greater than the USEPA acceptable risk range; the estimated cumulative cancer risk was 2E-02. Risks were driven by the presence of PCE (2.1E-02), TCE (9.4E-04), chloroform (3.4E-04), 1,2-DBE (3.3E-05), 1,2-DCP (2.4E-05), benzene (1.2E-05), BDCM (9.5E-06), naphthalene (2.5E-05), and ethylbenzene (1.8E-06).

The estimated noncancer HI was greater than to the threshold value of 1; the HI was 578. Hazards were driven by the presence of TCE (215), PCE (229), *cis*-1,2-DCE (127), and 1,2-DCP (4.3).

0.001 Attenuation Factor Results. The estimated potential cumulative cancer risk for the hypothetical future resident exposed to chemicals detected in soil vapor was greater than the USEPA acceptable risk range; the estimated cumulative cancer risk was 7E-04. Risks were driven by the presence of PCE (7.0E-04), TCE (3.1E-05), chloroform (1.1E-05), and 1,2-DBE (1.1E-06).

The estimated noncancer HI was greater than the threshold value of 1; the HI was 19. Hazards were driven by the presence of PCE (7.6), TCE (7.2), and *cis*-1,2-DCE (4.2).

E.7.1.2 Current and Future Commercial/Industrial Worker

0.03 Attenuation Factor Results. The estimated potential cumulative cancer risk for the current and future commercial/industrial worker exposed to chemicals detected in soil vapor was greater than the USEPA acceptable risk range; the estimated cumulative cancer risk was 5E-03. Risks were driven by the presence of PCE (4.8E-03), TCE (1.5E-04), chloroform (7.8E-05), 1,2-DBE (7.6E-06), naphthalene (5.8E-06), 1,2-DCP (5.5E-06), benzene (2.8E-06), and BDCM (2.2E-06).

The estimated noncancer HI was greater than to the threshold value of 1; the HI was 136. Hazards were driven by the presence of PCE (53.3), TCE (51.7), and *cis*-1,2-DCE (29.2).

0.001 Attenuation Factor Results. The estimated potential cumulative cancer risk for the current and future commercial/industrial worker exposed to chemicals detected in soil vapor was greater than the USEPA acceptable risk range; the estimated cumulative cancer risk was 2E-04. Risks were driven by the presence of PCE (1.6E-04), TCE (5.0E-06), and chloroform (2.6E-06).

The estimated noncancer HI was greater than the threshold value of 1; the HI was 5. Hazards were driven by the presence of PCE (1.8) and TCE (1.7).

E.8 Uncertainties

A risk assessment involves the bringing together of multiple data sources, conservative exposure scenarios, current science in the form of toxicity data and site characteristics to quantify receptor risk within the conceptual site model. Each component brings with it inherent uncertainties that may over- or under-estimate risk, which should be weighed with the overall risk results. The following are key site-specific topics that may contribute uncertainty within the risk assessment process of this HHRA.

E.8.1 Non-detect Chemicals with Elevated Detection Limits

A large range of MDLs were reported for a number of chemicals and the majority of MDLs for most of these chemicals are below SVSLs. The uncertainty associated with the relatively few MDLs that are above SVSLs potentially under-estimates risk for the VI pathway, but any potential contribution would be minor as MDLs are

estimates of potential concentrations between zero and the MDL. An evaluation was performed of the occurrence of medium-specific results reported as non-detect, but with MDLs that exceeded the respective SLs. Analytes reported as non-detect may be present at concentrations somewhere between zero and the MDL. To evaluate the possibility that risks and hazards associated with these chemicals would be underestimated in the HHRA, non-detect results were compared to SVSLs at the MDL. Frequency of MDL exceedances are detailed in Tables E-2c and E-2d. The sections below detail MDL exceedances and the frequency of these exceedances (number of MDL exceedances / number of non-detect results).

E.8.1.1 0.03 Attenuation Factor MDL Evaluation Results

As presented in Table E-2c, 31 chemicals had MDLs greater than SVSLs (attenuation factor of 0.03) at a frequency ranging from 2 percent (%) to 100%. 1,1,1,2-Tetrachloroethane, 1,2,4-trichlorobenzene, 1,2-DCP, 1,4-dichlorobenzene, 1,4-dioxane, allyl chloride, bromoform, carbon tetrachloride, methylene chloride, TCE, and vinyl bromide had MDLs exceeding SVSLs at a frequency less than 10%. 1,1,2,2-Tetrachloroethane, 1,3-butadiene, acrylonitrile, benzene, benzyl chloride, BDCM, chloroform, ethylbenzene, hexachlorobutadiene, naphthalene, and PCE had MDLs exceeding SVSLs at a frequency ranging from 10% to 25%. 1,2,3-Trichloropropane (TCP), 1,2-dibromo-3-chloropropane, 1,2-DBE, acrolein, and vinyl chloride had MDLs exceeding SVSLs at a frequency of 100%.

Of chemicals that were not detected in soil vapor, 20 chemicals had MDLs exceeding SVSLs. These chemicals include 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-TCA, 1,2,3-TCP, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,3-butadiene, 1,4-dichlorobezene, 1,4-dioxane, acrolein, acrylonitrile, allyl chloride, benzyl chloride, bromoform, dibromochloromethane, hexachlorobutadiene, hexachloroethane, methylene chloride, vinyl bromide, and vinyl chloride.

1,2-DBE, 1,2-DCA, BDCM, carbon tetrachloride, and naphthalene had maximum MDLs greater than the maximum detected concentrations. These chemicals were evaluated using detected concentrations in soil vapor in the HHRA; however, the elevated detection limits (between zero and the MDL) represent an area of uncertainty in this assessment.

E.8.1.2 0.001 Attenuation Factor MDL Evaluation Results

As presented in Table E-2d, nine chemicals had MDLs greater than SVSLs (attenuation factor of 0.001) at a frequency ranging from 4% to 100%. 1,1,2,2-Tetrachloroethane, 1,2-DBE, 1,3-butadiene, acrolein, hexachlorobutadiene, naphthalene, and vinyl chloride had MDLs exceeding SVSLs at a frequency of 10% or less. 1,2,3-TCP and 1,2-dibromo-3-chloropropane had MDLs exceeding SVSLs at a frequency of 100%.

Of chemicals that were not detected in soil vapor, seven chemicals had MDLs exceeding SVSLs. These chemicals include 1,1,2,2-tetrachloroethane, 1,2,3-TCP, 1,2-dibromo-3-chloropropane, 1,3-butadiene, acrolein, hexachlorobutadiene, and vinyl chloride.

1,2-DBE and naphthalene had maximum MDLs greater than the maximum detected concentrations. These chemicals were evaluated using detected concentrations in soil vapor in the HHRA; however, the elevated detection limits (between zero and the MDL) represent an area of uncertainty in this assessment.

E.8.2 Limitations of the Dataset

Soil vapor data density ideally should provide adequate coverage of the smallest building footprint anticipated for the future receptors evaluated. The soil vapor sampling at the Site was well distributed to provide sufficient coverage for individual site assessment. Elevated risks were identified based on the maximum detected concentrations of the limited soil vapor dataset and therefore likely over-estimates VI risks.

The Site is larger than any future development building footprint (19.74 acres). Use of the maximum detected concentration, regardless of the location of the sample, results in a conservative estimate of potential risks. Maximum detected concentrations of individual chemicals were not always reported at the same location. Thus, risks are likely to be over-estimated.

In order to limit uncertainty associated with such a large site, point risk estimates were developed for each receptor scenario using each attenuation factor to evaluate if portions of the Site exhibit no unacceptable risks and/or hazards. For each sample location, risks and hazards were calculated using the methodology detailed above in Section E.5. The general equations used are as follows:

Chemical-Specific ELCR =

(Maximum Detected Concentration / Cancer Endpoint SL) x (1E-06)

Chemical-Specific Noncancer HQ =

Maximum Detected Concentration / Noncancer Endpoint SL

To calculate the cumulative ELCR and HI for each receptor, the individual chemical risks and hazards were summed at each sample location. Non-detect results were not included in point risk estimates. Point risk estimates are detailed in Table E-5a (Resident Attenuation Factor 0.03), Table E-5b (Resident Attenuation Factor 0.001), Table E-5c (Commercial Worker Attenuation Factor 0.03), and Table E-5d (Commercial Worker Attenuation Factor 0.001). Point risk estimates are displayed visually in SCR Addendum Figure 5-1 (Resident Attenuation Factor 0.03), Figure 5-2 (Resident Attenuation Factor 0.001), Figure 5-3 (Commercial Worker Attenuation Factor 0.03), and Figure 5-4 (Commercial Worker Attenuation Factor 0.001).

E.8.2.1 Resident Result Attenuation Factor 0.03

Point risk estimates are summarized in Table E-5a and presented in SCR Addendum Figure 5-1. Potentially unacceptable risks and/or hazards were calculated for the majority of sample locations for future residents (attenuation factor 0.03), distributed across the Site. No unacceptable risks were calculated at locations VW37, VW42, VW43, VW46, VW47, and SVM-2.

The majority of unacceptable risks and hazards were driven by the presence of benzene, chloroform, 1,2-DBE, PCE, TCE, toluene, and naphthalene.

E.8.2.2 Resident Result Attenuation Factor 0.001

Point risk estimates are summarized in Table E-5b and presented in SCR Addendum Figure 5-2. Potentially unacceptable risks and/or hazards were calculated for locations VW19 (cancer risk), VW24 (cancer risk), VW30 (cancer risk), VW48 (cancer risk), and SVM-1 (cancer risk and noncancer hazard).

Potentially unacceptable risks and hazards were driven by the presence of PCE, TCE, and chloroform.

E.8.2.3 Commercial Worker Attenuation Factor 0.03

Point risk estimates are summarized in Table E-5c and presented in SCR Addendum Figure 5-3. Potentially unacceptable risks and/or hazards were calculated for locations in the northern portion of the North Corporation Yard (VW16 through VW19, VW21 through VW27, VW29, VW30, VW44, VW45, VW52, and VW54. Locations in the southern portion of the North Corporation Yard were limited to VW34 through VW36, VW48, and SVM-1.

Potentially unacceptable risks and hazards were driven by the presence of benzene, chloroform, 1,2-DBE, PCE, TCE, and naphthalene.

E.8.2.4 Commercial Worker Attenuation Factor 0.001

Point risk estimates are summarized in Table E-5d and presented in SCR Addendum Figure 5-4. Potentially unacceptable risks and/or hazards were calculated for two locations: SVM-1 and VW30.

Potentially unacceptable risks and hazards were driven by the presence of chloroform, PCE, and TCE.

E.8.3 Chemical-Specific Considerations

BDCM, chloroform, and two other trihalomethanes: dibromochloromethane and bromoform are disinfection by-products commonly produced during the chlorination of water and wastewater and their presence in soil vapor (migrating from leaking pipes in the vadose zone or from underlying groundwater) may be intentional or inadvertent (Ivahnenko and Zogorski, 2006). The presence of these compounds in soil vapor may not be the result of Site-related activities. Thus, risks from these compounds due to Site-related activities may be overestimated.

E.8.4 Estimated Concentrations

In some instances, data were qualified with 'J' flags indicating estimated concentrations. This qualifier indicates that the measured concentration is lower than the MRL but greater than the MDL. Although the analyte is present in the sample, the concentration is an estimate and represents an area of uncertainty in this assessment.

Maximum detected concentrations of 1,2-DBE and 1,2-DCP were J flag results reported in concentrations greater than SLs. 1,2-DBE was detected in three samples and all were J flag results. 1,2-DCP was detected in one sample with a J flag result. These chemicals were identified as risk drivers in this assessment based on estimated results and risk estimates may be overestimated.

E.9 Conclusions

This risk assessment was conducted using a dual method approach utilizing two soil vapor to indoor air attenuation factors (0.03 and 0.001). The results of each method were similar, with the 0.03 attenuation factor risk numbers slightly higher due to a more conservative attenuation factor. A summary of results is provided in Table E-4.

Soil vapor exposure for the Site was evaluated using the maximum detected concentrations, which represent a general worse-case scenario. PCE, TCE, chloroform, and *cis*-1,2-DCE were the primary risk drivers yielding unacceptable risks and hazards for hypothetical future residents. Additional chemicals contributing to unacceptable risks and hazards for hypothetical future residents included 1,2-DBE, 1,2-DCP, benzene, BDCM, ethylbenzene, naphthalene, and toluene. PCE, TCE, and *cis*-1,2-DCE were the primary risk drivers yielding unacceptable risks and hazards for current and future commercial/industrial workers. Additional chemicals contributing the unacceptable risks and hazards for current and future commercial/industrial workers included chloroform, 1,2-DBE, 1,2-DCP, benzene, BDCM, and naphthalene.

E.10 References

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Tables

TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				1,1,1,2-Tetrachloroethane		1,1,1,2-Tetrafluoroethane		1,1,1-Trichloroethane		1,1,2,2-Tetrachloroethane		1,1,2-Trichloro-1,2,2-trifluoroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethene		1,1-Difluoroethane		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2,4-Trimethylbenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichloro-1,1,2,2-tetrafluoroethane	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m³	0.93	U	1	U	0.59	U	0.71	U	0.84	U	0.93	U	0.35	U	0.47	U	3	U	0.73	U	1.2	U	69		2.6	U	0.88	U	1.4	U
SG-VW17A-01	N	12/22/2020	µg/m³	0.87	U	23		0.56	U	0.67	U	0.79	U	0.87	U	0.33	U	0.44	U	2.9	U	0.69	U	1.2	U	28		2.4	U	0.83	U	1.3	U
SG-VW18A-01	N	12/22/2020	µg/m³	0.9	U	0.98	U	0.57	U	0.69	U	2.6	J	0.9	U	0.34	U	0.46	U	2.9	U	0.71	U	1.2	U	25		2.5	U	0.85	U	1.3	U
SG-VW19A-01	N	12/02/2020	µg/m³	0.96	U	1.1	U	0.62	U	0.74	U	0.87	U	0.96	U	0.36	U	0.49	U	3.2	U	0.76	U	1.3	U	29		2.7	U	5.1	J	1.4	U
SG-VW20A-01	N	11/30/2020	µg/m³	0.95	U	1	U	0.61	U	0.73	U	0.86	U	0.95	U	0.36	U	0.48	U	3.1	U	0.75	U	1.3	U	71		2.7	U	0.9	U	1.4	U
SG-VW21A-01	N	12/22/2020	µg/m³	0.95	U	1	U	7.1	J	0.73	U	0.86	U	0.95	U	0.36	U	0.48	U	3.1	U	0.75	U	1.3	U	16		2.7	U	0.9	U	1.4	U
SG-VW21A-02	FD	12/22/2020	µg/m³	0.93	U	1	U	7.8		0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	16		2.6	U	0.89	U	1.4	U
SG-VW22A-01	N	12/22/2020	µg/m³	4.7	U	5.2	U	3	U	3.6	U	4.3	U	4.7	U	1.8	U	2.4	U	16	U	3.7	U	6.4	U	23	J	13	U	4.5	U	7.1	U
SG-VW23A-01	N	12/29/2020	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	12		2.6	U	0.89	U	1.4	U
SG-VW24A-01	N	12/03/2020	µg/m³	0.95	U	1	U	0.93	J	0.73	U	2	J	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	0.84	J	2.6	U	0.9	U	1.4	U
SG-VW-25A-01	N	12/03/2020	µg/m³	0.98	U	1.1	U	0.62	U	0.75	U	0.88	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	7.7	J	2.7	U	0.93	U	1.5	U
SG-VW26A-01	N	11/30/2020	µg/m³	0.92	U	1	U	0.58	U	0.7	U	0.82	U	0.92	U	0.34	U	0.46	U	3	U	0.72	U	1.2	U	69		2.6	U	0.87	U	1.4	U
SG-VW27A-01	N	12/23/2020	µg/m³	9.3	U	10	U	5.9	U	7.1	U	8.4	U	9.3	U	3.5	U	4.7	U	30	U	7.3	U	12	U	20	J	26	U	8.8	U	14	U
SG-VW28A-01	N	12/29/2020	µg/m³	9.4	U	10	U	6	U	7.2	U	8.5	U	9.4	U	3.5	U	4.8	U	31	U	7.4	U	13	U	16	J	26	U	8.9	U	14	U
SG-VW29A-01	N	12/29/2020	µg/m³	0.98	U	1.1	U	0.63	U	0.76	U	0.89	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	18		2.7	U	0.93	U	1.5	U
SG-VW30A-01	N	12/03/2020	µg/m³	0.94	U	1	U	0.6	U	0.72	U	0.85	U	0.94	U	0.35	U	0.48	U	3.1	U	0.74	U	1.3	U	32		2.6	U	0.89	U	1.4	U
SG-VW31A-01	N	12/01/2020	µg/m³	0.97	U	1.1	U	0.62	U	0.75	U	0.87	U	0.97	U	0.37	U	0.49	U	3.2	U	0.76	U	1.3	U	9.8		2.7	U	0.92	U	1.4	U
SG-VW32A-01	N	12/04/2020	µg/m³	18	U	20	U	12	U	14	U	16	U	18	U	6.9	U	9.3	U	60	U	14	U	25	U	32	J	51	U	17	U	27	U
SG-VW32A-02	FD	12/04/2020	µg/m³	17	UJ	18	UJ	11	UJ	13	UJ	15	UJ	17	UJ	6.3	UJ	8.4	UJ	54	UJ	13	UJ	22	UJ	32	J-	46	UJ	16	UJ	25	UJ
SG-VW33A-01	N	12/29/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	7	J	2.6	U	0.9	U	1.4	U
SG-VW34A-01	N	12/02/2020	µg/m³	0.89	U	0.98	U	0.57	U	0.69	U	3.1	J	0.89	U	0.34	U	0.45	U	2.9	U	0.7	U	1.2	U	29		2.5	U	0.85	U	1.3	U
SG-VW35A-01	N	12/01/2020	µg/m³	0.93	U	1	U	1.1	J	0.71	U	0.84	U	0.93	U	0.35	U	0.47	U	3	U	0.73	U	1.2	U	20		2.6	U	0.88	U	1.4	U
SG-VW36A-01	N	12/02/2020	µg/m³	0.92	U	1	U	0.58	U	0.7	U	0.82	U	0.92	U	0.34	U	0.46	U	3	U	0.72	U	1.2	U	50		2.6	U	0.87	U	1.4	U
SG-VW37A-01	N	12/02/2020	µg/m³	0.97	U	1.1	U	0.62	U	0.75	U	0.87	U	0.97	U	0.37	U	0.49	U	3.2	U	0.76	U	1.3	U	5.2	J	2.7	U	0.92	U	1.4	U
SG-VW38A-01	N	12/04/2020	µg/m³	1	U	1.1	U	0.64	U	0.77	U	0.9	U	1	U	0.38	U	0.51	U	3.3	U	0.79	U	1.3	U	5.6	J	2.8	U	0.95	U	1.5	U
SG-VW39A-01	N	12/03/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	4	J	2.6	U	0.9	U	1.4	U
SG-VW40A-01	N	12/02/2020	µg/m³	0.99	U	1.1	U	0.63	U	0.76	U	0.89	U	0.99	U	0.37	U	0.5	U	3.2	U	0.78	U	1.3	U	27		2.8	U	0.94	U	1.5	U
SG-VW41A-01	N	12/04/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	12		2.6	U	0.9	U	1.4	U
SG-VW41A-02	FD	12/04/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	12		2.6	U	0.9	U	1.4	U
SG-VW42A-01	N	12/02/2020	µg/m³	90	U	99	U	58	U	70	U	81	U	90	U	34	U	46	U	300	U	71	U	120	U	59	U	250	U	86	U	130	U
SG-VW43A-01	N	12/22/2020	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	7.2	J	2.6	U	0.89	U	1.4	U
SG-VW44A-01	N	12/22/2020	µg/m³	0.91	U	1	U	0.58	U	0.7	U	0.82	U	0.91	U	0.34	U	0.46	U	3	U	0.72	U	1.2	U	11		2.5	U	0.86	U	1.4	U
SG-VW45A-01	N	12/23/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	35		2.6	U	0.9	U	1.4	U
SG-VW46A-01	N	12/23/2020	µg/m³	0.92	U	1	U	0.58	U	0.7	U	0.82	U	0.92	U	0.34	U	0.46	U	3	U	0.72	U	1.2	U	8.3		2.6	U	0.87	U	1.4	U
SG-VW47A-01	N	12/23/2020	µg/m³	0.92	U	1	U	0.58	U	0.7	U	0.82	U	0.92	U	0.34	U	0.46	U	3	U	0.72	U	1.2	U	0.6	U	2.6	U	0.87	U	1.4	U
SG-VW48A-01	N	12/23/2020	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	10		2.6	U	0.89	U	1.4	U
SG-VW49A-01	N	12/23/2020	µg/m³	0.95	U	1	U	0.61	U	0.73	U	0.86	U	0.95	U	0.36	U	0.48	U	3.1	U	0.75	U	1.3	U	3.5	J	2.7	U	0.9	U	1.4	U
SG-VW50A-01	N	12/23/2020	µg/m³	0.93	U	1	U	0.59	U	0.71	U	0.84	U	0.93	U	0.35	U	0.47	U	11		0.73	U	1.2	U	14		2.6	U	0.88	U	1.4	U
SG-VW50A-02	FD	12/23/2020	µg/m³	0.92	U	1	U	0.58	U	0.7	U	0.82	U	0.92	U	0.34	U	0.46	U	8.1		0.72	U	1.2	U	14		2.6	U	0.87	U	1.4	U
SG-VW51A-01	N	12/23/2020	µg/m³	0.99	U	1.1	U	0.64	U	0.77	U	0.9	U	0.99	U	0.37	U	0.51	U	3.3	U	0.78	U	1.3	U	12		2.8	U	0.95	U	1.5	U
SG-VW52A-01	N	12/22/2020	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	11		2.6	U	0.89	U	1.4	U
SG-VW53A-01	N	12/29/2020	µg/m³	0.98	U	1.1	U	0.62	U	0.75	U	0.88	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	7.4	J	2.7	U	0.93	U	1.5	U
SG-VW53A-02	FD	12/29/2020	µg/m³	0.95	U	1	U	0.6	U	0.73	U	0.85	U	0.95	U	0.36	U	0.48	U	3.1	U	0.74	U	1.3	U	9.1		2.6	U	0.9	U	1.4	U
SG-VW54A-01	N	12/29/2020	µg/m³	0.98	U	1.1	U	0.62	U	0.75	U	0.88	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	41		2.7	U	0.93	U	1.5	U
SG-VW55A-01	N	12/29/2020	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	9.3		2.6	U	0.89	U	1.4	U
SG-VW56A-01	N	12/30/2020	µg/m³	0.9	U	0.98	U	0.57	U	0.69	U	0.81	U	0.9	U	0.34	U	0.46	U	2.9	U	0.71	U	1.2	U	2.7	J	2.5	U	0.85	U	1.3	U
SG-VW57A-01	N	12/30/2020	µg/m³	0.95	U	1	U	0.61	U	0.73	U	0.86	U	0.95	U	0.36	U	0.48	U	3.1	U	0.75	U	1.3	U	4	J	2.7	U	0.9	U	1.4	U
SG-VW24A-02	N	03/03/2021	µg/m³	0.965	U	1.1	U	0.615	U	0.745	U	3	J	0.965	U	0.365	U	0.49	U	3.15	U	0.755	U	1.3	U	20.6	J	2.7	U	0.915	U	1.4	U
SG-VW30A-02	N	03/04/2021	µg/m³	0.98	U	1.1	U	0.62	U	0.75	U	0.88	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	1.8	J	2.7	U	0.93	U	1.5	U
SG-VW42A-02	N	03/04/2021	µg/m³	0.98	U	1.1	U	0.62	U	0.75	U	0.88	U	0.98	U	0.37	U	0.5	U	3.2	U	0.77	U	1.3	U	0.64	U	2.7	U	0.93	U	1.5	U
SG-VW45A-02	N	03/03/2021	µg/m³	1	U	1.1	U	0.65	U	0.78	U	0.91	U	1	U	0.38	U	0.51	U	3.3	U	0.8	U	1.4	U	0.66	U	2.8	U	4	J	1.5	U
SG-VW48A-02	N	03/03/2021	µg/m³	0.96	U	1.1	U	0.62	U	0.74	U	0.87	U	0.96	U	0.36	U	0.49	U	3.2	U	0.76	U	1.3	U	160		2.7	U	2.8	J	1.4	U
SG-VW49A-02	N	03/03/2021	µg/m³	0.93	U	1	U	0.59	U	0.71	U	0.84	U	0.93	U	0.35	U	0.47	U	3	U	0.73	U	1.2	U	0.61	U	2.6	U	0.88	U	1.4	U
SVM-1-5	N	03/03/2021	µg/m³	93	U	100	U	59	U	71	U	84	U	93	U	35	U	47	U	300	U	73	U	120	U	61	U	260	U	88	U	140	U
SVM-2-5	N	03/03/2021	µg/m³	0.93	U	1	U	0.6	U	0.72	U	0.84	U	0.93	U	0.35	U	0.47	U	3.1	U	0.73	U	1.3	U	0.61	U	2.6	U	0.89	U	1.4	U
SVM-3-5	N	12/30/2020	µg/m³	0.95	U	1	U	0.61	U	0.73	U	0.86	U	0.95	U	0.36	U	0.48	U	3.1	U	0.75	U	1.3	U	2.3	J	2.7	U	0.9	U	1.4	U

Notes:
µg/m³ =- microgram per cubic meter
Conc = concentration
FD = field duplicate
ID = identification
J = estimated concentration
J- = estimated concentration, low bias
N - normal sample
Qual - laboratory qualifier
U - nondetect result
UJ - nondetect result, estimated concentration

TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3,5-Trimethylbenzene		1,3-Butadiene		1,3-Dichlorobenzene		1,4-Dichlorobenzene		1,4-Dioxane		1-Ethyl-4-methylbenzene		2-Hexanone		Acetone		Acrolein		Acrylonitrile		Allyl chloride		Benzene	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m³	0.76	U	0.4	U	0.49	U	28		0.33	U	0.47	U	0.76	U	0.5	U	53		0.44	U	210		1.2	U	0.41	U	0.43	U	37	
SG-VW17A-01	N	12/22/2020	µg/m³	0.72	U	0.37	U	0.46	U	7	J	0.31	U	0.44	U	0.72	U	0.47	U	17		0.41	U	98		1.2	U	0.39	U	0.4	U	12	
SG-VW18A-01	N	12/22/2020	µg/m³	0.74	U	0.38	U	0.47	U	8.2		0.32	U	0.46	U	0.74	U	0.49	U	19		0.43	U	74		1.2	U	0.4	U	0.41	U	31	
SG-VW19A-01	N	12/02/2020	µg/m³	0.79	U	0.83	J	0.51	U	7.6	J	0.35	U	0.49	U	0.79	U	0.52	U	17		0.46	U	260		1.3	U	0.43	U	0.44	U	3.2	
SG-VW20A-01	N	11/30/2020	µg/m³	0.78	U	0.41	U	0.5	U	20		0.34	U	0.48	U	0.78	U	0.51	U	46		0.45	U	16		1.3	U	0.42	U	0.44	U	8.7	
SG-VW21A-01	N	12/22/2020	µg/m³	0.78	U	0.41	U	0.5	U	5.3	J	0.34	U	0.48	U	0.78	U	0.51	U	12		0.45	U	140		1.3	U	0.42	U	0.44	U	7.6	
SG-VW21A-02	FD	12/22/2020	µg/m³	0.76	U	0.4	U	0.49	U	5.1	J	0.34	U	0.47	U	0.76	U	0.5	U	12		0.44	U	160		1.3	U	0.41	U	0.43	U	7.6	
SG-VW22A-01	N	12/22/2020	µg/m³	3.9	U	2	U	2.5	U	3.1	U	1.7	U	2.4	U	3.9	U	2.6	U	16	J	2.2	U	260		6.4	U	2.1	U	2.2	U	7.5	J
SG-VW23A-01	N	12/29/2020	µg/m³	0.76	U	0.4	U	0.49	U	4.4	J	0.34	U	0.47	U	0.76	U	0.5	U	9.4		0.44	U	18		1.3	U	0.41	U	0.43	U	10	
SG-VW24A-01	N	12/03/2020	µg/m³	0.78	U	0.4	U	0.5	U	0.62	U	0.34	U	0.48	U	0.78	U	0.51	U	0.46	U	0.45	U	0.67	U	1.3	U	0.42	U	0.43	U	0.33	U
SG-VW-25A-01	N	12/03/2020	µg/m³	0.8	U	0.42	U	0.51	U	2.5	J	0.35	U	0.5	U	0.8	U	0.53	U	3.6	J	0.46	U	3.6	J	1.3	U	0.43	U	0.45	U	0.34	U
SG-VW26A-01	N	11/30/2020	µg/m³	0.75	U	0.39	U	0.48	U	22		0.33	U	0.46	U	0.75	U	0.5	U	46		0.44	U	460		1.2	U	0.4	U	0.42	U	20	
SG-VW27A-01	N	12/23/2020	µg/m³	7.6	U	4	U	4.9	U	6.1	U	3.3	U	4.7	U	7.6	U	5	U	4.6	U	4.4	U	6.5	U	12	U	4.1	U	4.3	U	39	
SG-VW28A-01	N	12/29/2020	µg/m³	7.7	U	4	U	4.9	U	6.2	U	3.4	U	4.8	U	7.7	U	5.1	U	4.6	U	4.5	U	6.6	U	13	U	4.2	U	4.3	U	3.2	U
SG-VW29A-01	N	12/29/2020	µg/m³	0.8	U	0.42	U	0.52	U	7	J	0.35	U	0.5	U	0.8	U	0.53	U	15		0.47	U	5.5	J	1.3	U	0.43	U	0.45	U	9.4	
SG-VW30A-01	N	12/03/2020	µg/m³	0.77	U	0.4	U	0.49	U	9.9		0.34	U	0.48	U	0.77	U	0.51	U	22		0.45	U	30		1.3	U	0.42	U	0.43	U	3.7	
SG-VW31A-01	N	12/01/2020	µg/m³	0.8	U	0.41	U	0.51	U	2.4	J	0.35	U	0.49	U	0.8	U	0.52	U	4.9	J	0.46	U	38		1.3	U	0.43	U	0.45	U	1.5	J
SG-VW32A-01	N	12/04/2020	µg/m³	15	U	7.8	U	9.6	U	12	U	6.6	U	9.3	U	15	U	9.9	U	9	U	8.7	U	110	J	25	U	8.1	U	8.4	U	6.3	U
SG-VW32A-02	FD	12/04/2020	µg/m³	14	UJ	7.1	UJ	8.7	UJ	11	UJ	6	UJ	8.4	UJ	14	UJ	9	UJ	17	J-	7.9	UJ	120	J-	22	UJ	7.3	UJ	7.6	UJ	5.7	UJ
SG-VW33A-01	N	12/29/2020	µg/m³	0.78	U	0.4	U	0.5	U	2.2	J	0.34	U	0.48	U	0.78	U	0.51	U	5.2	J	0.45	U	64		1.3	U	0.42	U	0.43	U	4.3	
SG-VW34A-01	N	12/02/2020	µg/m³	0.73	U	0.38	U	0.47	U	9.3		0.32	U	0.45	U	0.73	U	0.48	U	22		0.42	U	330		1.2	U	0.39	U	0.41	U	19	
SG-VW35A-01	N	12/01/2020	µg/m³	0.76	U	0.4	U	0.49	U	4.3	J	0.33	U	0.47	U	0.76	U	0.5	U	11		0.44	U	11		1.2	U	0.41	U	0.43	U	1.4	J
SG-VW36A-01	N	12/02/2020	µg/m³	0.75	U	0.39	U	0.48	U	19		0.33	U	0.46	U	0.75	U	0.5	U	37		0.44	U	75		1.2	U	0.4	U	0.42	U	23	
SG-VW37A-01	N	12/02/2020	µg/m³	0.8	U	0.41	U	0.51	U	1.4	J	0.35	U	0.49	U	0.8	U	0.52	U	2.7	J	0.46	U	10		1.3	U	0.43	U	0.45	U	0.33	U
SG-VW38A-01	N	12/04/2020	µg/m³	0.82	U	0.43	U	0.52	U	1.6	J	0.36	U	0.51	U	0.82	U	0.54	U	3	J	0.48	U	6.2	J	1.3	U	0.44	U	0.46	U	0.34	U
SG-VW39A-01	N	12/03/2020	µg/m³	0.78	U	0.4	U	0.5	U	1.8	J	0.34	U	0.48	U	0.78	U	0.51	U	2.7	J	0.45	U	5.2	J	1.3	U	0.42	U	0.43	U	0.33	U
SG-VW40A-01	N	12/02/2020	µg/m³	0.81	U	0.42	U	0.52	U	6.8	J	0.36	U	0.5	U	0.81	U	0.53	U	25		0.47	U	5.3	J	1.3	U	0.44	U	0.45	U	6	
SG-VW41A-01	N	12/04/2020	µg/m³	0.78	U	0.4	U	0.5	U	2.7	J	0.34	U	0.48	U	0.78	U	0.51	U	7.4	J	0.45	U	99		1.3	U	0.42	U	0.43	U	3.2	
SG-VW41A-02	FD	12/04/2020	µg/m³	0.78	U	0.4	U	0.5	U	3.1	J	0.34	U	0.48	U	0.78	U	0.51	U	6.7	J	0.45	U	93		1.3	U	0.42	U	0.43	U	3.4	
SG-VW42A-01	N	12/02/2020	µg/m³	74	U	38	U	47	U	59	U	33	U	46	U	74	U	49	U	44	U	43	U	64	U	120	U	40	U	41	U	31	U
SG-VW43A-01	N	12/22/2020	µg/m³	0.76	U	0.4	U	0.49	U	2.2	J	0.34	U	0.47	U	0.76	U	0.5	U	4.9		0.44	U	4.3	J	1.3	U	0.41	U	0.43	U	1.8	J
SG-VW44A-01	N	12/22/2020	µg/m³	0.74	U	0.39	U	0.48	U	3.9	J	0.33	U	0.46	U	0.74	U	0.49	U	8.2		0.43	U	140		1.2	U	0.4	U	0.42	U	7.6	
SG-VW45A-01	N	12/23/2020	µg/m³	0.78	U	0.4	U	0.5	U	11		0.34	U	0.48	U	0.78	U	0.51	U	25		0.45	U	250		1.3	U	0.42	U	0.43	U	17	
SG-VW46A-01	N	12/23/2020	µg/m³	0.75	U	0.39	U	0.48	U	2.9	J	0.33	U	0.46	U	0.75	U	0.5	U	5.6	J	0.44	U	56		1.2	U	0.4	U	0.42	U	1.8	J
SG-VW47A-01	N	12/23/2020	µg/m³	0.75	U	0.39	U	0.48	U	0.6	U	0.33	U	0.46	U	0.75	U	0.5	U	0.45	U	0.44	U	6.4	J	1.2	U	0.4	U	0.42	U	0.32	U
SG-VW48A-01	N	12/23/2020	µg/m³	0.76	U	0.4	U	0.49	U	3	J	0.34	U	0.47	U	0.76	U	0.5	U	6.4	J	0.44	U	14		1.3	U	0.41	U	0.43	U	0.32	U
SG-VW49A-01	N	12/23/2020	µg/m³	0.78	U	0.41	U	0.5	U	0.62	U	0.34	U	0.48	U	0.78	U	0.51	U	2	J	2.5	J	18		1.3	U	0.42	U	0.44	U	1	J
SG-VW50A-01	N	12/23/2020	µg/m³	0.76	U	0.4	U	0.49	U	4	J	0.33	U	0.47	U	0.76	U	0.5	U	8.9		0.44	U	110		1.2	U	0.41	U	0.43	U	2	J
SG-VW50A-02	FD	12/23/2020	µg/m³	0.75	U	0.39	U	0.48	U	4.3	J	0.33	U	0.46	U	0.75	U	0.5	U	8.9		0.44	U	100		1.2	U	0.4	U	0.42	U	1.9	J
SG-VW51A-01	N	12/23/2020	µg/m³	0.82	U	0.42	U	0.52	U	3.7	J	0.36	U	0.51	U	0.82	U	0.54	U	8.6		0.47	U	320		1.3	U	0.44	U	0.46	U	4.2	
SG-VW52A-01	N	12/22/2020	µg/m³	0.76	U	0.4	U	0.49	U	3.1	J	0.34	U	0.47	U	0.76	U	0.5	U	7.6		0.44	U	64		1.3	U	0.41	U	0.43	U	1.5	J
SG-VW53A-01	N	12/29/2020	µg/m³	0.8	U	0.42	U	0.51	U	2.3	J	0.35	U	0.5	U	0.8	U	0.53	U	4.9	J	0.46	U	13	J	1.3	U	0.43	U	0.45	U	0.34	U
SG-VW53A-02	FD	12/29/2020	µg/m³	0.78	U	0.4	U	0.5	U	2.8	J	0.34	U	0.48	U	0.78	U	0.51	U	6.2	J	0.45	U	34	J	1.3	U	0.42	U	0.43	U	1.7	J
SG-VW54A-01	N	12/29/2020	µg/m³	0.8	U	1.3	J	0.51	U	14		0.35	U	0.5	U	0.8	U	0.53	U	32		0.46	U	15		1.3	U	0.43	U	0.45	U	37	
SG-VW55A-01	N	12/29/2020	µg/m³	0.76	U	0.4	U	0.49	U	2.8	J	0.34	U	0.47	U	0.76	U	0.5	U	6.1	J	0.44	U	180		1.3	U	0.41	U	0.43	U	5.2	
SG-VW56A-01	N	12/30/2020	µg/m³	0.74	U	0.38	U	0.47	U	0.59	U	0.32	U	0.46	U	0.74	U	0.49	U	1.9	J	0.43	U	5.9	J	1.2	U	0.4	U	0.41	U	13	
SG-VW57A-01	N	12/30/2020	µg/m³	0.78	U	0.41	U	0.5	U	0.62	U	0.34	U	0.48	U	0.78	U	0.51	U	3.1	J	0.45	U	9.1		1.3	U	0.42	U	0.44	U	2	J
SG-VW24A-02	N	03/03/2021	µg/m³	0.79	U	0.41	U	0.505	U	4.35	J	0.35	U	0.49	U	0.79	U	0.52	U	9.55	J	0.46	U	6.35	J	1.3	U	0.425	U	0.445	U	1.65	J
SG-VW30A-02	N	03/04/2021	µg/m³	0.8	U	0.42	U	0.51	U	0.64	U	0.35	U	0.5	U	0.8	U	0.53	U	0.48	U	0.46	U	5	J	1.3	U	0.43	U	0.45	U	0.34	U
SG-VW42A-02	N	03/04/2021	µg/m³	0.8	U	0.42	U	0.51	U	0.64	U	0.35	U	0.5	U	0.8	U	0.53	U	0.48	U	0.46	U	2.1	J	1.3	U	0.43	U	0.45	U	0.34	U
SG-VW45A-02	N	03/03/2021	µg/m³	0.83	U	0.43	U	0.53	U	0.66	U	0.37	U	0.51	U	0.83	U	0.55	U	0.5	U	0.48	U	2.1	J	1.4	U	0.45	U	0.46	U	0.35	U
SG-VW48A-02	N	03/03/2021	µg/m³	0.79	U	0.41	U	0.51	U	32		0.35	U	0.49	U	0.79	U	0.52	U	29		0.46	U	2.1	J	1.3	U	0.43	U	0.44	U	0.33	U
SG-VW49A-02	N	03/03/2021	µg/m³	0.76	U	0.4	U	0.49	U	0.61	U	0.33	U	0.47	U	0.76	U	0.5	U	0.46	U	0.44	U	1.7	J	1.2	U	0.41	U	0.43	U	0.32	U
SVM-1-5	N	03/03/2021	µg/m³	76	U	40	U	600	J	61	U	33	U	47	U	76	U	50	U	46	U	44	U	65	U	120	U	41	U	43	U	32	U
SVM-2-5	N	03/03/2021	µg/m³	0.76	U	0.4	U	0.49	U	0.61	U	0.34	U	0.47	U	0.76	U	0.5	U	0.46	U	0.44	U	3.3	J	1.3	U	0.41	U	0.43	U	0.32	U
SVM-3-5	N	12/30/2020	µg/m³	0.78	U	0.41	U	0.5	U	0.62	U	0.34	U	0.48	U	0.78	U	0.51	U	0.47	U	0.45	U	25		1.3	U	0.42	U	0.44	U	0.33	U

Notes:
µg/m³ =- microgram per cubic meter
Conc = concentration
FD = field duplicate
ID = identification
J = estimated concentration
J- = estimated concentration, low bias
N - normal sample
Qual - laboratory qualifier
U - nondetect result
UJ - nondetect result, estimated concentration

TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				Benzyl chloride		Bromodichloro-methane		Bromoform		Bromomethane		Carbon disulfide		Carbon tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethene		cis-1,3-Dichloropropene		Cyclohexane		Dibromochloro-methane		Dibromomethane	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m³	0.4	U	0.68	U	1.3	U	0.71	U	14		0.68	U	0.61	U	0.81	U	12		0.32	U	0.49	U	0.46	U	5.9		0.65	U	0.87	U
SG-VW17A-01	N	12/22/2020	µg/m³	0.37	U	0.64	U	1.2	U	0.67	U	26		2.5	J	0.57	U	0.76	U	89		0.3	U	0.46	U	0.43	U	0.54	U	0.61	U	0.82	U
SG-VW18A-01	N	12/22/2020	µg/m³	0.38	U	0.66	U	1.3	U	0.69	U	93		0.66	U	0.59	U	0.78	U	5.3	J	0.31	U	0.47	U	0.44	U	0.56	U	0.63	U	0.84	U
SG-VW19A-01	N	12/02/2020	µg/m³	0.41	U	0.71	U	1.4	U	0.74	U	74		0.71	U	0.63	U	0.84	U	10		0.33	U	0.51	U	0.47	U	0.6	U	0.68	U	0.9	U
SG-VW20A-01	N	11/30/2020	µg/m³	0.41	U	0.7	U	1.3	U	0.73	U	30		0.7	U	0.62	U	0.83	U	0.91	J	0.33	U	0.5	U	0.47	U	0.59	U	0.67	U	0.89	U
SG-VW21A-01	N	12/22/2020	µg/m³	0.41	U	0.7	U	1.3	U	0.73	U	25		0.7	U	0.62	U	0.83	U	4.7	J	0.33	U	0.5	U	0.47	U	0.59	U	0.67	U	0.89	U
SG-VW21A-02	FD	12/22/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	26		0.69	U	0.61	U	0.81	U	6.3	J	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW22A-01	N	12/22/2020	µg/m³	2	U	3.5	U	6.7	U	3.6	U	18		3.5	U	3.1	U	4.1	U	10	J	1.6	U	2.5	U	2.3	U	2.9	U	3.3	U	4.4	U
SG-VW23A-01	N	12/29/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	34		0.69	U	0.61	U	0.81	U	3.2	J	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW24A-01	N	12/03/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	2.5	J	0.7	U	0.62	U	0.82	U	9.3		0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW-25A-01	N	12/03/2020	µg/m³	0.42	U	0.72	U	1.4	U	0.75	U	11		0.72	U	0.64	U	0.85	U	5.7	J	0.34	U	0.51	U	0.48	U	0.61	U	0.69	U	0.91	U
SG-VW26A-01	N	11/30/2020	µg/m³	0.39	U	0.68	U	1.3	U	0.7	U	11		0.68	U	0.6	U	0.8	U	0.95	J	0.32	U	0.48	U	0.45	U	0.57	U	0.64	U	0.86	U
SG-VW27A-01	N	12/23/2020	µg/m³	4	U	6.8	U	13	U	7.1	U	28	J	6.8	U	6.1	U	8.1	U	8.2	U	3.2	U	4.9	U	4.6	U	5.8	U	6.5	U	8.7	U
SG-VW28A-01	N	12/29/2020	µg/m³	4	U	6.9	U	13	U	7.2	U	26	J	6.9	U	6.2	U	8.2	U	8.3	U	3.2	U	4.9	U	4.6	U	5.9	U	6.6	U	8.8	U
SG-VW29A-01	N	12/29/2020	µg/m³	0.42	U	0.72	U	1.4	U	0.76	U	37		0.72	U	0.64	U	0.85	U	4.1	J	0.34	U	0.52	U	0.48	U	0.61	U	0.69	U	0.92	U
SG-VW30A-01	N	12/03/2020	µg/m³	0.4	U	12		1.3	U	0.72	U	15		0.69	U	0.62	U	0.82	U	650		0.32	U	0.49	U	0.46	U	0.59	U	0.66	U	0.88	U
SG-VW31A-01	N	12/01/2020	µg/m³	0.41	U	0.72	U	1.4	U	0.75	U	7.9		0.72	U	0.64	U	0.84	U	0.86	U	0.33	U	0.51	U	0.48	U	0.6	U	0.68	U	0.91	U
SG-VW32A-01	N	12/04/2020	µg/m³	7.8	U	14	U	26	U	14	U	5.7	U	14	U	12	U	16	U	16	U	6.3	U	9.6	U	9	U	11	U	13	U	17	U
SG-VW32A-02	FD	12/04/2020	µg/m³	7.1	UJ	12	UJ	23	UJ	13	UJ	5.2	UJ	12	UJ	11	UJ	14	UJ	15	UJ	5.7	UJ	8.7	UJ	8.2	UJ	10	UJ	12	UJ	16	UJ
SG-VW33A-01	N	12/29/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	11		0.7	U	0.62	U	0.82	U	0.84	U	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW34A-01	N	12/02/2020	µg/m³	0.38	U	0.66	U	1.3	U	0.69	U	300		0.66	U	0.58	U	0.77	U	2.8	J	0.71	J	0.47	U	0.44	U	6.3		0.63	U	0.83	U
SG-VW35A-01	N	12/01/2020	µg/m³	0.4	U	0.68	U	1.3	U	0.71	U	12		0.68	U	0.61	U	0.81	U	0.82	U	0.32	U	0.49	U	0.46	U	0.58	U	0.65	U	0.87	U
SG-VW36A-01	N	12/02/2020	µg/m³	0.39	U	0.68	U	1.3	U	0.7	U	11		0.68	U	0.6	U	0.8	U	0.81	U	0.32	U	0.48	U	0.45	U	0.57	U	0.64	U	2.7	J
SG-VW37A-01	N	12/02/2020	µg/m³	0.41	U	0.72	U	1.4	U	0.75	U	3.7		0.72	U	0.64	U	0.84	U	0.86	U	0.33	U	0.51	U	0.48	U	0.6	U	0.68	U	0.91	U
SG-VW38A-01	N	12/04/2020	µg/m³	0.43	U	0.74	U	1.4	U	0.77	U	1.6	J	0.74	U	0.66	U	0.87	U	0.89	U	0.34	U	0.52	U	0.49	U	0.62	U	0.71	U	0.93	U
SG-VW39A-01	N	12/03/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	2.2	J	0.7	U	0.62	U	0.82	U	3	J	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW40A-01	N	12/02/2020	µg/m³	0.42	U	0.73	U	1.4	U	0.76	U	1.4	J	0.73	U	0.65	U	0.86	U	0.87	U	0.34	U	0.52	U	0.49	U	0.62	U	0.7	U	0.92	U
SG-VW41A-01	N	12/04/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	5.5		0.7	U	0.62	U	0.82	U	0.84	U	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW41A-02	FD	12/04/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	5.9		0.7	U	0.62	U	0.82	U	0.84	U	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW42A-01	N	12/02/2020	µg/m³	38	U	67	U	130	U	70	U	28	U	67	U	59	U	78	U	80	U	31	U	47	U	44	U	56	U	64	U	84	U
SG-VW43A-01	N	12/22/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	4.5		0.69	U	0.61	U	0.81	U	0.83	U	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW44A-01	N	12/22/2020	µg/m³	0.39	U	0.67	U	1.3	U	0.7	U	13		0.67	U	0.6	U	0.79	U	20		0.31	U	0.48	U	0.45	U	0.57	U	0.64	U	0.85	U
SG-VW45A-01	N	12/23/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	20		0.7	U	0.62	U	0.82	U	2.4	J	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW46A-01	N	12/23/2020	µg/m³	0.39	U	0.68	U	1.3	U	0.7	U	8.1		0.68	U	0.6	U	0.8	U	0.81	U	0.32	U	0.48	U	0.45	U	0.57	U	0.64	U	0.86	U
SG-VW47A-01	N	12/23/2020	µg/m³	0.39	U	0.68	U	1.3	U	0.7	U	4.4		0.68	U	0.6	U	0.8	U	0.81	U	0.32	U	0.48	U	0.45	U	0.57	U	0.64	U	0.86	U
SG-VW48A-01	N	12/23/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	4.5		0.69	U	0.61	U	0.81	U	3.5	J	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW49A-01	N	12/23/2020	µg/m³	0.41	U	0.7	U	1.3	U	0.73	U	4.1		0.7	U	0.62	U	0.83	U	4.7	J	0.33	U	0.5	U	0.47	U	0.59	U	0.67	U	0.89	U
SG-VW50A-01	N	12/23/2020	µg/m³	0.4	U	0.68	U	1.3	U	0.71	U	5.6		0.68	U	0.61	U	0.81	U	2.6	J	0.32	U	0.49	U	0.46	U	0.58	U	0.65	U	0.87	U
SG-VW50A-02	FD	12/23/2020	µg/m³	0.39	U	0.68	U	1.3	U	0.7	U	5.8		0.68	U	0.6	U	0.8	U	1.7	J	0.32	U	0.48	U	0.45	U	0.57	U	0.64	U	0.86	U
SG-VW51A-01	N	12/23/2020	µg/m³	0.42	U	0.73	U	1.4	U	0.77	U	4.4		0.73	U	0.65	U	0.86	U	0.88	U	0.34	U	0.52	U	0.49	U	0.62	U	0.7	U	0.93	U
SG-VW52A-01	N	12/22/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	10		0.69	U	0.61	U	0.81	U	9		0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW53A-01	N	12/29/2020	µg/m³	0.42	U	0.72	U	1.4	U	0.75	U	11		0.72	U	0.64	U	0.85	U	0.86	U	0.34	U	0.51	U	0.48	U	0.61	U	0.69	U	0.91	U
SG-VW53A-02	FD	12/29/2020	µg/m³	0.4	U	0.7	U	1.3	U	0.73	U	12		0.7	U	0.62	U	0.82	U	0.84	U	0.33	U	0.5	U	0.46	U	0.59	U	0.67	U	0.88	U
SG-VW54A-01	N	12/29/2020	µg/m³	0.42	U	0.72	U	1.4	U	0.75	U	72		0.72	U	0.64	U	0.85	U	6.7	J	0.34	U	0.51	U	0.48	U	5.8		0.69	U	0.91	U
SG-VW55A-01	N	12/29/2020	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	7.4		0.69	U	0.61	U	0.81	U	0.83	U	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SG-VW56A-01	N	12/30/2020	µg/m³	0.38	U	0.66	U	1.3	U	0.69	U	3.4		0.66	U	0.59	U	0.78	U	0.79	U	0.31	U	0.47	U	0.44	U	0.56	U	0.63	U	0.84	U
SG-VW57A-01	N	12/30/2020	µg/m³	0.41	U	0.7	U	1.3	U	0.73	U	4.9		0.7	U	0.62	U	0.83	U	0.84	U	0.33	U	0.5	U	0.47	U	9.8		0.67	U	0.89	U
SG-VW24A-02	N	03/03/2021	µg/m³	0.41	U	0.715	U	1.4	U	0.745	U	1.5	J	0.715	U	0.635	U	0.835	U	0.855	U	0.33	U	0.505	U	0.475	U	0.6	U	0.68	U	0.9	U
SG-VW30A-02	N	03/04/2021	µg/m³	0.42	U	24		1.4	U	0.75	U	3.6		0.72	U	0.64	U	0.85	U	1400		0.34	U	0.51	U	0.48	U	0.61	U	0.69	U	0.91	U
SG-VW42A-02	N	03/04/2021	µg/m³	0.42	U	0.72	U	1.4	U	0.75	U	0.3	U	0.72	U	0.64	U	0.85	U	0.86	U	0.34	U	0.51	U	0.48	U	0.61	U	0.69	U	0.91	U
SG-VW45A-02	N	03/03/2021	µg/m³	0.43	U	0.75	U	1.4	U	0.78	U	0.32	U	0.75	U	0.66	U	0.88	U	0.9	U	0.35	U	0.53	U	0.5	U	0.63	U	0.71	U	0.95	U
SG-VW48A-02	N	03/03/2021	µg/m³	0.41	U	0.71	U	1.4	U	0.74	U	1.3	J	0.71	U	0.63	U	0.84	U	5.4	J	0.33	U	0.51	U	0.47	U	0.6	U	0.68	U	0.9	U
SG-VW49A-02	N	03/03/2021	µg/m³	0.4	U	0.68	U	1.3	U	0.71	U	1.1	J	0.68	U	0.61	U	0.81	U	7.6		0.32	U	0.49	U	0.46	U	0.58	U	0.65	U	0.87	U
SVM-1-5	N	03/03/2021	µg/m³	40	U	68	U	130	U	71	U	29	U	68	U	61	U	81	U	82	U	32	U	35000		46	U	58	U	65	U	87	U
SVM-2-5	N	03/03/2021	µg/m³	0.4	U	0.69	U	1.3	U	0.72	U	0.29	U	0.69	U	0.61	U	0.81	U	0.83	U	0.32	U	0.49	U	0.46	U	0.58	U	0.66	U	0.87	U
SVM-3-5	N	12/30/2020	µg/m³	0.41	U	0.7	U	1.3	U	0.73	U	3.3		0.7	U	0.62	U	0.83	U	0.84	U	1	J	0.5	U	0.47	U	0.59	U	0.67	U	0.89	U

Notes:
µg/m³ =- microgram per cubic meter
Conc = concentration
FD = field duplicate
ID = identification
J = estimated concentration
J- = estimated concentration, low bias
N - normal sample
Qual - laboratory qualifier
U - nondetect result
UJ - nondetect result, estimated concentration

TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				Dichlorodifluoro-methane		Diisopropyl ether		Ethanol		Ethyl acetate		Ethyl t-butyl ether		Ethylbenzene		Hexachloro-butadiene		Hexachloroethane		Hexane		Isooctane		Isopropyl alcohol		Methyl ethyl ketone		Methyl iodide		Methyl isobutyl ketone		Methyl t-butyl ether	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m^3	3.1	J	0.59	U	0.64	U	0.5	U	0.5	U	66		2.3	U	1.1	U	0.3	U	12		0.49	U	93		0.88	U	46		0.6	J
SG-VW17A-01	N	12/22/2020	µg/m^3	7.3		0.56	U	7.1		0.47	U	0.47	U	15		2.1	U	1	U	0.29	U	4.4	J	0.46	U	67		0.83	U	6.6	J	0.4	U
SG-VW18A-01	N	12/22/2020	µg/m^3	16		0.57	U	2.7	J	0.49	U	0.49	U	25		2.2	U	1.1	U	6.9	J	5.9	J	0.47	U	36		0.85	U	5.9	J	0.41	U
SG-VW19A-01	N	12/02/2020	µg/m^3	50		0.62	U	0.66	U	0.52	U	0.52	U	13		2.4	U	1.2	U	0.32	U	6.2	J	0.51	U	33		0.92	U	31		0.44	U
SG-VW20A-01	N	11/30/2020	µg/m^3	0.7	U	0.61	U	25		0.51	U	0.51	U	54		2.3	U	1.1	U	0.31	U	0.55	U	0.5	U	13		0.9	U	12		0.44	U
SG-VW21A-01	N	12/22/2020	µg/m^3	3.9	J	0.61	U	4.6		0.51	U	0.51	U	15		2.3	U	1.1	U	0.31	U	1.7	J	0.5	U	87		0.9	U	4.8	J	0.44	U
SG-VW21A-02	FD	12/22/2020	µg/m^3	4	J	0.6	U	4.2		0.5	U	0.5	U	15		2.3	U	1.1	U	0.31	U	1.4	J	3.5		84		0.89	U	4.8	J	0.43	U
SG-VW22A-01	N	12/22/2020	µg/m^3	3.5	U	3	U	3.3	U	2.6	U	2.6	U	18	J	12	U	5.7	U	1.6	U	2.7	U	2.5	U	170		4.5	U	15	J	2.2	U
SG-VW23A-01	N	12/29/2020	µg/m^3	3.6	J	0.6	U	2.6	J	0.5	U	0.5	U	15		2.3	U	1.1	U	3	J	0.54	U	0.49	U	6.2		0.89	U	1.6	J	0.43	U
SG-VW24A-01	N	12/03/2020	µg/m^3	18		0.6	U	0.65	U	0.51	U	0.51	U	0.5	U	2.3	U	1.1	U	0.31	U	0.54	U	0.5	U	0.29	U	0.9	U	0.4	U	0.43	U
SG-VW-25A-01	N	12/03/2020	µg/m^3	10		0.62	U	0.67	U	0.53	U	0.53	U	3	J	2.4	U	1.2	U	0.32	U	0.56	U	0.51	U	0.3	U	0.93	U	0.42	U	0.45	U
SG-VW26A-01	N	11/30/2020	µg/m^3	0.68	U	0.58	U	16		0.5	U	0.5	U	51		2.2	U	1.1	U	0.3	U	3.6	J	0.48	U	180		0.87	U	95		0.42	U
SG-VW27A-01	N	12/23/2020	µg/m^3	6.8	U	5.9	U	41		5	U	5	U	19	J	23	U	11	U	85		17	J	4.9	U	24	J	8.8	U	4	U	4.3	U
SG-VW28A-01	N	12/29/2020	µg/m^3	6.9	U	6	U	6.5	U	5.1	U	5.1	U	17	J	23	U	11	U	3.1	U	5.4	U	4.9	U	2.9	U	8.9	U	4	U	4.3	U
SG-VW29A-01	N	12/29/2020	µg/m^3	4	J	0.63	U	0.68	U	0.53	U	0.53	U	22		2.4	U	1.2	U	0.32	U	0.56	U	0.52	U	2.5	J	0.93	U	0.42	U	0.45	U
SG-VW30A-01	N	12/03/2020	µg/m^3	6.5	J	0.6	U	4		0.51	U	0.51	U	20		2.3	U	1.1	U	0.31	U	3.8	J	6.5		18		0.89	U	6	J	0.43	U
SG-VW31A-01	N	12/01/2020	µg/m^3	0.72	U	0.62	U	22		0.52	U	0.52	U	7	J	2.4	U	1.2	U	0.32	U	0.97	J	0.51	U	17		0.92	U	2.3	J	0.45	U
SG-VW32A-01	N	12/04/2020	µg/m^3	14	U	12	U	13	U	9.9	U	9.9	U	23	J	45	U	22	U	6	U	10	U	9.6	U	26	J	17	U	7.8	U	8.4	U
SG-VW32A-02	FD	12/04/2020	µg/m^3	12	UJ	11	UJ	11	UJ	9	UJ	9	UJ	26	J-	41	UJ	20	UJ	5.4	UJ	9.5	UJ	8.7	UJ	28	J-	16	UJ	14	J-	7.6	UJ
SG-VW33A-01	N	12/29/2020	µg/m^3	2.8	J	0.6	U	5.2		0.51	U	0.51	U	6.7	J	2.3	UJ	1.1	U	0.31	U	0.54	U	0.5	U	37		0.9	U	3.3	J	0.43	U
SG-VW34A-01	N	12/02/2020	µg/m^3	2.8	J	0.57	U	15		0.48	U	0.48	U	27		2.2	U	1.1	U	7.7		27		0.47	U	45		0.85	U	21		0.41	U
SG-VW35A-01	N	12/01/2020	µg/m^3	0.68	U	0.59	U	56		0.5	U	0.5	U	7.4	J	2.3	U	1.1	U	0.3	U	1.9	J	0.49	U	0.29	U	0.88	U	1.9	J	0.43	U
SG-VW36A-01	N	12/02/2020	µg/m^3	0.68	U	0.58	U	0.63	U	0.5	U	0.5	U	48		2.2	U	1.1	U	0.3	U	9.8		0.48	U	42		0.87	U	46		0.42	U
SG-VW37A-01	N	12/02/2020	µg/m^3	2.6	J	0.62	U	0.67	U	0.52	U	0.52	U	2.3	J	2.4	U	1.2	U	0.32	U	0.56	U	0.51	U	6.4		0.92	U	0.41	U	0.45	U
SG-VW38A-01	N	12/04/2020	µg/m^3	2.7	J	0.64	U	0.69	U	0.54	U	0.54	U	3.8	J	2.5	U	1.2	U	0.33	U	0.57	U	0.52	U	2.1	J	0.95	U	0.43	U	0.46	U
SG-VW39A-01	N	12/03/2020	µg/m^3	0.7	U	0.6	U	2	J	0.51	U	0.51	U	4	J	2.3	U	1.1	U	0.31	U	0.54	U	0.5	U	1.3	J	0.9	U	0.4	U	0.43	U
SG-VW40A-01	N	12/02/2020	µg/m^3	2.5	J	0.63	U	0.68	U	0.53	U	0.53	U	42		2.4	U	1.2	U	0.32	U	1.2	J	0.52	U	1.6	J	0.94	U	0.42	U	0.45	U
SG-VW41A-01	N	12/04/2020	µg/m^3	2.6	J	0.6	U	11	J	0.51	U	0.51	U	8.1		2.3	U	1.1	U	0.31	U	0.54	U	0.5	U	99		0.9	U	6.7	J	0.43	U
SG-VW41A-02	FD	12/04/2020	µg/m^3	2.7	J	0.6	U	7.4	J	0.51	U	0.51	U	7.7	J	2.3	U	1.1	U	0.31	U	0.54	U	0.5	U	100		0.9	U	7.4	J	0.43	U
SG-VW42A-01	N	12/02/2020	µg/m^3	67	U	58	U	62	U	49	U	49	U	47	U	220	U	110	U	2300		52	U	47	U	28	U	86	U	38	U	41	U
SG-VW43A-01	N	12/22/2020	µg/m^3	3.1	J	0.6	U	0.64	U	0.5	U	0.5	U	3.6	J	2.3	U	1.1	U	0.31	U	0.54	U	0.49	U	2	J	0.89	U	0.4	U	0.43	U
SG-VW44A-01	N	12/22/2020	µg/m^3	4.3	J	0.58	U	3.8		0.49	U	0.49	U	9.4		2.2	U	1.1	U	0.3	U	2.4	J	0.48	U	80		0.86	U	5.6	J	0.42	U
SG-VW45A-01	N	12/23/2020	µg/m^3	2.9	J	0.6	U	3.5		0.51	U	0.51	U	24		2.3	U	1.1	U	0.31	U	5	J	0.5	U	160		0.9	U	6.1	J	0.43	U
SG-VW46A-01	N	12/23/2020	µg/m^3	2.8	J	0.58	U	2	J	0.5	U	0.5	U	5.6	J	2.2	U	1.1	U	0.3	U	0.52	U	0.48	U	43		0.87	U	3.4	J	0.42	U
SG-VW47A-01	N	12/23/2020	µg/m^3	2.7	J	0.58	U	2	J	0.5	U	0.5	U	0.48	U	2.2	U	1.1	U	0.3	U	0.52	U	0.48	U	2.8	J	0.87	U	0.39	U	0.42	U
SG-VW48A-01	N	12/23/2020	µg/m^3	2.9	J	0.6	U	2.8	J	0.5	U	0.5	U	5.2	J	2.3	U	1.1	U	0.31	U	0.54	U	1.4	J	19		0.89	U	4.8	J	0.43	U
SG-VW49A-01	N	12/23/2020	µg/m^3	3	J	0.61	U	3.9		0.51	U	0.51	U	3.3	J	2.3	U	1.1	U	0.31	U	0.55	U	0.5	U	13		0.9	U	2.4	J	0.44	U
SG-VW50A-01	N	12/23/2020	µg/m^3	2.9	J	0.59	U	11		0.5	U	0.5	U	8.3		2.3	U	1.1	U	0.3	U	0.53	U	0.49	U	100		0.88	U	8.8		0.43	U
SG-VW50A-02	FD	12/23/2020	µg/m^3	3	J	0.58	U	8.6		0.5	U	0.5	U	8.2		2.2	U	1.1	U	0.3	U	0.52	U	2.8	J	99		0.87	U	8.9		0.42	U
SG-VW51A-01	N	12/23/2020	µg/m^3	2.9	J	0.64	U	28		0.54	U	0.54	U	9.9		2.4	U	1.2	U	0.33	U	0.57	U	0.52	U	130		0.95	U	4.2	J	0.46	U
SG-VW52A-01	N	12/22/2020	µg/m^3	46		0.6	U	6.5		0.5	U	0.5	U	5	J	2.3	U	1.1	U	0.31	U	0.54	U	0.49	U	40		0.89	U	3.8	J	0.43	U
SG-VW53A-01	N	12/29/2020	µg/m^3	26		0.62	U	6.1	J	0.53	U	0.53	U	4.3	J	2.4	U	1.2	U	0.32	U	0.56	U	0.51	UJ	6.8	J	0.93	U	0.42	U	0.45	U
SG-VW53A-02	FD	12/29/2020	µg/m^3	28		0.6	U	49	J	0.51	U	0.51	U	7.3	J	2.3	UJ	1.1	U	0.31	U	0.54	U	10	J	26	J	0.9	U	2.1	J	0.43	U
SG-VW54A-01	N	12/29/2020	µg/m^3	43		0.62	U	0.67	U	0.53	U	0.53	U	38		2.4	UJ	1.2	U	0.32	U	9.2		0.51	U	13		0.93	U	2.5	J	0.45	U
SG-VW55A-01	N	12/29/2020	µg/m^3	2.8	J	0.6	U	2.1	J	0.5	U	0.5	U	6.7	J	2.3	UJ	1.1	U	0.31	U	0.54	U	0.49	U	100		0.89	U	4.7	J	0.43	U
SG-VW56A-01	N	12/30/2020	µg/m^3	3.1	J	0.57	U	3.5		0.49	U	0.49	U	9.7		2.2	UJ	1.1	U	0.29	U	0.51	U	94		1.7	J	0.85	U	0.38	U	0.41	U
SG-VW57A-01	N	12/30/2020	µg/m^3	0.7	U	0.61	U	13		0.51	U	0.51	U	5	J	2.3	UJ	1.1	U	7	J	0.55	U	0.5	U	6.9		0.9	U	0.41	U	0.44	U
SG-VW24A-02	N	03/03/2021	µg/m^3	7.35	J	0.615	U	28.05	J	0.52	U	0.52	U	3.7	J	2.4	U	1.15	U	0.315	U	1.6	J	3.4		1	J	0.915	U	0.41	U	0.445	U
SG-VW30A-02	N	03/04/2021	µg/m^3	8.9		0.62	U	4.1		0.53	U	0.53	U	1.8	J	2.4	U	1.2	U	0.32	U	0.56	U	1.2	J	1	J	0.93	U	0.42	U	0.45	U
SG-VW42A-02	N	03/04/2021	µg/m^3	3	J	0.62	U	1.4	J	0.53	U	0.53	U	0.51	U	2.4	U	1.2	U	0.32	U	0.56	U	0.87	J	0.3	U	0.93	U	0.42	U	0.45	U
SG-VW45A-02	N	03/03/2021	µg/m^3	2.8	J	0.65	U	4.6		0.55	U	0.55	U	0.53	U	2.5	U	1.2	U	0.33	U	0.58	U	0.84	J	0.32	U	0.96	U	0.43	U	0.46	U
SG-VW48A-02	N	03/03/2021	µg/m^3	2.7	J	0.62	U	2.2	J	0.52	U	0.52	U	0.51	U	2.4	U	1.2	U	0.32	U	0.55	U	0.51	U	0.3	U	0.92	U	0.41	U	0.44	U
SG-VW49A-02	N	03/03/2021	µg/m^3	2.8	J	0.59	U	2.6	J	0.5	U	0.5	U	0.49	U	2.3	U	1.1	U	0.3	U	0.53	U	0.49	U	0.29	U	0.88	U	0.4	U	0.43	U
SVM-1-5	N	03/03/2021	µg/m^3	68	U	59	U	64	U	50	U	50	U	49	U	230	U	110	U	30	U	53	U	49	U	29	U	88	U	40	U	43	U
SVM-2-5	N	03/03/2021	µg/m^3	3.4	J	0.6	U	4.5		0.5	U	0.5	U	0.49	U	2.3	U	1.1	U	0.31	U	0.54	U	0.81	J	0.29	U	0.89	U	0.4	U	0.43	U
SVM-3-5	N	12/30/2020	µg/m^3	3.2	J	0.61	U	87		0.51	U	0.51	U	3.8	J	2.3	U	1.1	U	0.31	U	0.55	U	30		32		0.9	U	3.1	J	0.44	U

Notes:
µg/m^3 =- microgram per cubic meter
Conc = concentration
FD = field duplicate
ID = identification
J = estimated concentration
J- = estimated concentration, low bias
N - normal sample
Qual - laboratory qualifier
U - nondetect result
UJ - nondetect result, estimated concentration

TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				Methylene chloride		Naphthalene		n-Heptane		o-Xylene		p- & m-Xylenes		Propylene		Styrene		t-Amyl Methyl ether		t-Butyl alcohol		Tetrachloroethene		Tetrahydrofuran		Toluene		Total Petroleum Hydrocarbons		Total Xylenes		TPH - Gasoline	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m³	0.61	U	2.1	U	10		75		210		0.38	U	2.6	J	0.47	U	1.1	U	20		40		310		3400		280		3400	
SG-VW17A-01	N	12/22/2020	µg/m³	0.57	U	2	U	3.9		19		57		0.36	U	0.34	U	0.44	U	1	U	61		8.2		130		5700		76		5700	
SG-VW18A-01	N	12/22/2020	µg/m³	0.59	U	2.1	U	4.9		28		92		110		1.3	J	0.46	U	1	U	33		3.6		230		2700		120		2700	
SG-VW19A-01	N	12/02/2020	µg/m³	0.63	U	11	J	0.54	U	16		47		0.4	U	0.38	U	0.49	U	10		260		13		60		1300		63		1300	
SG-VW20A-01	N	11/30/2020	µg/m³	0.62	U	2.2	U	0.77	J	67		170		0.39	U	1.9	J	0.48	U	1.1	U	28		24		360		2200		240		2200	
SG-VW21A-01	N	12/22/2020	µg/m³	0.62	U	2.2	U	2	J	16		50		0.39	U	0.37	U	0.48	U	1.5	J	130		8.4		140		1400		66		1400	
SG-VW21A-02	FD	12/22/2020	µg/m³	0.61	U	2.1	U	4.1	J	15		48		0.38	U	0.37	U	0.47	U	1.1	U	130		8.3		150		1500		64		1500	
SG-VW22A-01	N	12/22/2020	µg/m³	3.1	U	11	U	2.6	U	19	J	58		1.9	U	1.9	U	2.4	U	5.4	U	93		13	J	1200		2800		77	J	2800	
SG-VW23A-01	N	12/29/2020	µg/m³	0.61	U	4.3	J	2.1	J	16		50		0.38	U	0.37	U	0.47	U	1.1	U	54		2.7	J	100		1400		66		1400	
SG-VW24A-01	N	12/03/2020	µg/m³	0.62	U	9.8	J	0.53	U	0.46	U	0.95	U	0.39	U	0.37	U	0.48	U	1.1	U	650		0.42	U	1.2	J	810		1.4	U	810	
SG-VW-25A-01	N	12/03/2020	µg/m³	0.64	U	2.2	U	0.54	U	5.2	J	12		0.4	U	0.38	U	0.5	U	2.3	J	96		2.5	J	7		420		17		420	
SG-VW26A-01	N	11/30/2020	µg/m³	0.6	U	2.1	U	4.7		63		170		0.38	U	2.5	J	0.46	U	1	U	42		64		210		2700		230		2700	
SG-VW27A-01	N	12/23/2020	µg/m³	6.1	U	21	U	29	J	21	J	64	J	3.8	U	3.6	U	4.7	U	11	U	7.6	U	4.1	U	2500		5400		85	J	5400	
SG-VW28A-01	N	12/29/2020	µg/m³	6.2	U	22	U	5.2	U	18	J	56	J	8.5	J	3.7	U	4.8	U	11	U	89		4.2	U	3500		6900		74	J	6900	
SG-VW29A-01	N	12/29/2020	µg/m³	0.64	U	2.3	U	0.55	U	23		75		0.4	U	0.39	U	0.5	U	1.1	U	56		3	J	120		1600		98		1600	
SG-VW30A-01	N	12/03/2020	µg/m³	0.62	U	7.5	J	2.1	J	29		75		0.38	U	0.37	U	0.48	U	1.2	J	99		21		72		1800		100		1800	
SG-VW31A-01	N	12/01/2020	µg/m³	0.64	U	2.2	U	0.85	J	9.5		22		0.4	U	0.38	U	0.49	U	1.1	U	64		4.4		89		610		32		610	
SG-VW32A-01	N	12/04/2020	µg/m³	12	U	42	U	10	U	31	J	110	J	7.5	U	7.2	U	9.3	U	21	U	83	J	17	J	9300		9500		140	J	9500	
SG-VW32A-02	FD	12/04/2020	µg/m³	11	UJ	38	UJ	9.2	UJ	34	J-	120	J-	6.8	UJ	6.5	UJ	8.4	UJ	19	UJ	57	J-	21	J-	9700	J-	10000	J-	160	J-	10000	J-
SG-VW33A-01	N	12/29/2020	µg/m³	0.62	U	2.2	U	0.53	U	7.3	J	22		0.39	U	0.37	U	0.48	U	1.1	U	2.9	J	4.1		42		380		30		380	
SG-VW34A-01	N	12/02/2020	µg/m³	0.58	U	2	U	10		29		99		0.36	U	0.35	U	0.45	U	1	U	19		15		180		3400		130		3400	
SG-VW35A-01	N	12/01/2020	µg/m³	0.61	U	2.1	U	0.52	U	12		29		0.38	U	0.36	U	0.47	U	1.1	U	250		1.2	J	140		810		41		810	
SG-VW36A-01	N	12/02/2020	µg/m³	0.6	U	2.1	U	12		56		150		0.38	U	1.7	J	0.46	U	1	U	78		38		280		2700		210		2700	
SG-VW37A-01	N	12/02/2020	µg/m³	0.64	U	2.2	U	0.54	U	3.9	J	9.5		0.4	U	0.38	U	0.49	U	1.1	U	0.8	U	0.75	J	8.9		350		13	J	350	
SG-VW38A-01	N	12/04/2020	µg/m³	0.66	U	9.7	J	0.56	U	7	J	17		0.41	U	0.39	U	0.51	U	1.1	U	37		0.77	J	27		280	J	24		280	J
SG-VW39A-01	N	12/03/2020	µg/m³	0.62	U	2.2	U	0.53	U	7	J	15		0.39	U	0.37	U	0.48	U	1.1	U	30		1.4	J	570		1000		22		1000	
SG-VW40A-01	N	12/02/2020	µg/m³	0.65	U	2.3	U	3.9		18		84		0.4	U	0.39	U	0.5	U	1.1	U	3.3	J	0.44	U	130		560		100		560	
SG-VW41A-01	N	12/04/2020	µg/m³	0.62	U	9.6	J	0.53	U	11		35		0.39	U	0.37	U	0.48	U	1.1	U	12		5.9		710		960		47		960	
SG-VW41A-02	FD	12/04/2020	µg/m³	0.62	U	9.4	J	1.1	J	9.8		29		0.39	U	0.37	U	0.48	U	1.1	U	12		6.9		720		990		39		990	
SG-VW42A-01	N	12/02/2020	µg/m³	59	U	210	U	50	U	44	U	90	U	37	U	310	J	46	U	100	U	74	U	40	U	5700		63000		130	U	63000	
SG-VW43A-01	N	12/22/2020	µg/m³	0.61	U	2.1	U	0.52	U	4.3	J	14		0.38	U	0.37	U	0.47	U	1.1	U	5.5	J	2.3	J	12		220	J	19		220	J
SG-VW44A-01	N	12/22/2020	µg/m³	0.6	U	2.1	U	2.1	J	11		35		0.37	U	0.36	U	0.46	U	1	U	9.1		8.1		69		810		46		810	
SG-VW45A-01	N	12/23/2020	µg/m³	0.62	U	2.2	U	5		29		94		0.39	U	2.6	J	0.48	U	1.1	U	5.1	J	8.7		130		2800		120		2800	
SG-VW46A-01	N	12/23/2020	µg/m³	0.6	U	2.1	U	0.51	U	7.9		23		0.38	U	0.36	U	0.46	U	1	U	5.3	J	4.2		33		510		31		510	
SG-VW47A-01	N	12/23/2020	µg/m³	0.6	U	2.1	U	0.51	U	1.7	J	0.92	U	0.38	U	0.36	U	0.46	U	1	U	9.5		0.4	U	7		130	J	1.7	J	130	J
SG-VW48A-01	N	12/23/2020	µg/m³	0.61	U	2.1	U	0.52	U	7.5	J	20		0.38	U	0.37	U	0.47	U	1.1	U	35		5.8		18		410		27		410	
SG-VW49A-01	N	12/23/2020	µg/m³	0.62	U	2.2	U	0.53	U	4.7	J	7.6	J	0.39	U	0.37	U	0.48	U	1.1	U	54		3.5		14		190	J	12	J	190	J
SG-VW50A-01	N	12/23/2020	µg/m³	0.61	U	2.1	U	0.52	U	12		32		0.38	U	0.36	U	0.47	U	1.1	U	71		10		39		710		44		710	
SG-VW50A-02	FD	12/23/2020	µg/m³	0.6	U	2.1	U	0.51	U	12		32		0.38	U	0.36	U	0.46	U	1	U	71		11		39		730		43		730	
SG-VW51A-01	N	12/23/2020	µg/m³	0.65	U	2.3	U	0.55	U	12		37		0.41	U	0.39	U	0.51	U	1.1	U	23		9.5		51		870		49		870	
SG-VW52A-01	N	12/22/2020	µg/m³	0.61	U	2.1	U	0.52	U	7	J	20		0.38	U	0.37	U	0.47	U	1.1	U	140		2.9	J	19		620		27		620	
SG-VW53A-01	N	12/29/2020	µg/m³	0.64	U	2.2	U	0.54	U	5.6	J	15	J	0.4	U	0.38	U	0.5	U	1.1	U	42		1.8	J	13	J	330	J	21	J	330	J
SG-VW53A-02	FD	12/29/2020	µg/m³	0.62	U	4.9	J	0.53	U	7.7	J	22	J	0.39	U	0.37	U	0.48	U	1.1	U	45		4.9	J	22	J	490	J	29	J	490	J
SG-VW54A-01	N	12/29/2020	µg/m³	0.64	U	2.2	U	0.54	U	42		150		100		0.38	U	0.5	U	1.1	U	29		5		280		3000		190		3000	
SG-VW55A-01	N	12/29/2020	µg/m³	0.61	U	2.1	U	0.52	U	8.6		26		0.38	U	0.37	U	0.47	U	1.1	U	0.76	U	7.8		46		610		34		610	
SG-VW56A-01	N	12/30/2020	µg/m³	0.59	U	2.1	U	3.8		3.3	J	14		0.37	U	0.35	U	0.46	U	1	U	8.6		0.4	U	14		200	J	17		200	J
SG-VW57A-01	N	12/30/2020	µg/m³	0.62	U	2.2	U	1.8	J	4.1	J	13		0.39	U	0.37	U	0.48	U	1.1	U	18		1.2	J	13		400		17		400	
SG-VW24A-02	N	03/03/2021	µg/m³	0.635	U	11.95	J	0.535	U	8.35	J	18.7	J	0.395	U	0.38	U	0.49	U	3	J	115		0.425	U	10	J	720	J	27	J	720	J
SG-VW30A-02	N	03/04/2021	µg/m³	0.64	U	2.2	U	0.54	U	1.9	J	4.7	J	0.4	U	0.38	U	0.5	U	1.3	J	210		1.2	J	7.6		1800		6.6	J	1800	
SG-VW42A-02	N	03/04/2021	µg/m³	0.64	U	2.2	U	0.54	U	0.48	U	0.98	U	0.4	U	0.38	U	0.5	U	1.1	U	6.7	J	0.43	U	5.1		91	J	1.5	U	91	J
SG-VW45A-02	N	03/03/2021	µg/m³	0.66	U	2.3	U	0.56	U	0.5	U	3.2	J	0.42	U	0.4	U	0.51	U	3.9	J	8.6		0.45	U	2	J	94	J	3.2	J	94	J
SG-VW48A-02	N	03/03/2021	µg/m³	0.63	U	70		0.54	U	1.6	J	2.8	J	0.4	U	0.38	U	0.49	U	1.1	U	29		0.43	U	1.9	J	2800		4.4	J	2800	
SG-VW49A-02	N	03/03/2021	µg/m³	0.61	U	2.1	U	0.52	U	0.46	U	0.93	U	0.38	U	0.36	U	0.47	U	1.1	U	55		0.41	U	0.41	U	120	J	1.4	U	120	J
SVM-1-5	N	03/03/2021	µg/m³	61	U	210	U	52	U	46	U	93	U	38	U	36	U	47	U	110	U	320000		41	U	41	U	500000		140	U	500000	
SVM-2-5	N	03/03/2021	µg/m³	0.61	U	2.1	U	0.52	U	0.46	U	0.93	U	0.38	U	0.37	U	0.47	U	1.4	J	15		0.41	U	0.41	U	51	J	1.4	U	51	J
SVM-3-5	N	12/30/2020	µg/m³	0.62	U	2.2	U	0.53	U	2.9	J	9		0.39	U	0.37	U	0.48	U	2.1	J	39		10		7.9		520		12	J	520	

Notes:
µg/m³ =- microgram per cubic meter
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TABLE E-1. HUMAN HEALTH RISK ASSESSMENT ANALYTICAL DATA
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				trans-1,2-Dichloroethene		trans-1,3-Dichloropropene		Trichloroethene		Trichlorofluoro-methane		Vinyl acetate		Vinyl bromide		Vinyl chloride	
Sample ID	Type	Date	Units	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual	Conc	Qual
SG-VW16A-01	N	11/30/2020	µg/m^3	0.41	U	0.61	U	0.82	U	1.7	J	0.5	U	0.49	U	0.59	U
SG-VW17A-01	N	12/22/2020	µg/m^3	0.39	U	0.57	U	0.77	U	2.6	J	0.47	U	0.46	U	0.56	U
SG-VW18A-01	N	12/22/2020	µg/m^3	0.4	U	0.59	U	0.79	U	2.9	J	0.49	U	0.47	U	0.57	U
SG-VW19A-01	N	12/02/2020	µg/m^3	0.43	U	0.63	U	0.85	U	7.5	J	0.52	U	0.51	U	0.62	U
SG-VW20A-01	N	11/30/2020	µg/m^3	0.42	U	0.62	U	0.92	J	0.73	U	0.51	U	0.5	U	0.61	U
SG-VW21A-01	N	12/22/2020	µg/m^3	0.42	U	0.62	U	13		1.8	J	0.51	U	0.5	U	0.61	U
SG-VW21A-02	FD	12/22/2020	µg/m^3	0.41	U	0.61	U	14		2.5	J	0.5	U	0.49	U	0.6	U
SG-VW22A-01	N	12/22/2020	µg/m^3	2.1	U	3.1	U	4.2	U	3.6	U	2.6	U	2.5	U	3	U
SG-VW23A-01	N	12/29/2020	µg/m^3	0.41	U	0.61	U	6.8	J	0.72	U	0.5	U	0.49	U	0.6	U
SG-VW24A-01	N	12/03/2020	µg/m^3	0.42	U	0.62	U	0.84	U	3.4	J	0.51	U	0.5	U	0.6	U
SG-VW-25A-01	N	12/03/2020	µg/m^3	0.43	U	0.64	U	0.86	U	1.9	J	0.53	U	0.51	U	0.62	U
SG-VW26A-01	N	11/30/2020	µg/m^3	0.4	U	0.6	U	0.81	U	1.5	J	0.5	U	0.48	U	0.58	U
SG-VW27A-01	N	12/23/2020	µg/m^3	4.1	U	6.1	U	8.2	U	7.1	U	5	U	4.9	U	5.9	U
SG-VW28A-01	N	12/29/2020	µg/m^3	4.2	U	6.2	U	8.3	U	7.2	U	5.1	U	4.9	U	6	U
SG-VW29A-01	N	12/29/2020	µg/m^3	0.43	U	0.64	U	0.87	U	0.76	U	0.53	U	0.52	U	0.63	U
SG-VW30A-01	N	12/03/2020	µg/m^3	0.42	U	0.62	U	2.7	J	1.8	J	0.51	U	0.49	U	0.6	U
SG-VW31A-01	N	12/01/2020	µg/m^3	0.43	U	0.64	U	0.86	U	2.6	J	0.52	U	0.51	U	0.62	U
SG-VW32A-01	N	12/04/2020	µg/m^3	8.1	U	12	U	16	U	14	U	9.9	U	9.6	U	12	U
SG-VW32A-02	FD	12/04/2020	µg/m^3	7.3	UJ	11	UJ	15	UJ	13	UJ	9	UJ	8.7	UJ	11	UJ
SG-VW33A-01	N	12/29/2020	µg/m^3	0.42	U	0.62	U	0.84	U	0.73	U	0.51	U	0.5	U	0.6	U
SG-VW34A-01	N	12/02/2020	µg/m^3	0.39	U	0.58	U	0.79	U	2.8	J	0.48	U	0.47	U	0.57	U
SG-VW35A-01	N	12/01/2020	µg/m^3	0.41	U	0.61	U	0.82	U	1.2	J	0.5	U	0.49	U	0.59	U
SG-VW36A-01	N	12/02/2020	µg/m^3	0.4	U	0.6	U	0.81	U	1.3	J	0.5	U	0.48	U	0.58	U
SG-VW37A-01	N	12/02/2020	µg/m^3	0.43	U	0.64	U	0.86	U	1.4	J	0.52	U	0.51	U	0.62	U
SG-VW38A-01	N	12/04/2020	µg/m^3	0.44	U	0.66	U	0.89	U	1.4	J	0.54	U	0.52	U	0.64	U
SG-VW39A-01	N	12/03/2020	µg/m^3	0.42	U	0.62	U	0.84	U	0.73	U	0.51	U	0.5	U	0.6	U
SG-VW40A-01	N	12/02/2020	µg/m^3	0.44	U	0.65	U	0.87	U	1.3	J	0.53	U	0.52	U	0.63	U
SG-VW41A-01	N	12/04/2020	µg/m^3	0.42	U	0.62	U	0.92	J	1.3	J	1.4	J	0.5	U	0.6	U
SG-VW41A-02	FD	12/04/2020	µg/m^3	0.42	U	0.62	U	0.92	J	1.4	J	0.51	U	0.5	U	0.6	U
SG-VW42A-01	N	12/02/2020	µg/m^3	40	U	59	U	80	U	70	U	49	U	47	U	58	U
SG-VW43A-01	N	12/22/2020	µg/m^3	0.41	U	0.61	U	0.83	U	0.72	U	0.5	U	0.49	U	0.6	U
SG-VW44A-01	N	12/22/2020	µg/m^3	0.4	U	0.6	U	5.5	J	2.3	J	0.49	U	0.48	U	0.58	U
SG-VW45A-01	N	12/23/2020	µg/m^3	0.42	U	0.62	U	0.84	U	1.7	J	0.51	U	0.5	U	0.6	U
SG-VW46A-01	N	12/23/2020	µg/m^3	0.4	U	0.6	U	0.81	U	0.7	U	0.5	U	0.48	U	0.58	U
SG-VW47A-01	N	12/23/2020	µg/m^3	0.4	U	0.6	U	0.81	U	0.7	U	0.5	U	0.48	U	0.58	U
SG-VW48A-01	N	12/23/2020	µg/m^3	0.41	U	0.61	U	0.83	U	0.72	U	0.5	U	0.49	U	0.6	U
SG-VW49A-01	N	12/23/2020	µg/m^3	0.42	U	0.62	U	0.84	U	0.73	U	0.51	U	0.5	U	0.61	U
SG-VW50A-01	N	12/23/2020	µg/m^3	0.41	U	0.61	U	0.82	U	0.71	U	0.5	U	0.49	U	0.59	U
SG-VW50A-02	FD	12/23/2020	µg/m^3	0.4	U	0.6	U	0.81	U	0.7	U	0.5	U	0.48	U	0.58	U
SG-VW51A-01	N	12/23/2020	µg/m^3	0.44	U	0.65	U	0.88	U	0.77	U	0.54	U	0.52	U	0.64	U
SG-VW52A-01	N	12/22/2020	µg/m^3	0.41	U	0.61	U	0.83	U	7.6		0.5	U	0.49	U	0.6	U
SG-VW53A-01	N	12/29/2020	µg/m^3	0.43	U	0.64	U	0.86	U	0.75	U	0.53	U	0.51	U	0.62	U
SG-VW53A-02	FD	12/29/2020	µg/m^3	0.42	U	0.62	U	0.84	U	1.9	J	0.51	U	0.5	U	0.6	U
SG-VW54A-01	N	12/29/2020	µg/m^3	0.43	U	0.64	U	0.86	U	2.5	J	0.53	U	0.51	U	0.62	U
SG-VW55A-01	N	12/29/2020	µg/m^3	0.41	U	0.61	U	0.83	U	0.72	U	0.5	U	0.49	U	0.6	U
SG-VW56A-01	N	12/30/2020	µg/m^3	0.4	U	0.59	U	0.79	U	0.69	U	0.49	U	0.47	U	0.57	U
SG-VW57A-01	N	12/30/2020	µg/m^3	0.42	U	0.62	U	0.84	U	0.73	U	0.51	U	0.5	U	0.61	U
SG-VW24A-02	N	03/03/2021	µg/m^3	0.425	U	0.635	U	0.855	U	2.2	J	0.52	U	0.505	U	0.615	U
SG-VW30A-02	N	03/04/2021	µg/m^3	0.43	U	0.64	U	2.5	J	0.75	U	0.53	U	0.51	U	0.62	U
SG-VW42A-02	N	03/04/2021	µg/m^3	0.43	U	0.64	U	0.86	U	0.75	U	0.53	U	0.51	U	0.62	U
SG-VW45A-02	N	03/03/2021	µg/m^3	0.45	U	0.66	U	2	J	0.78	U	0.55	U	0.53	U	0.65	U
SG-VW48A-02	N	03/03/2021	µg/m^3	0.43	U	0.63	U	0.85	U	0.74	U	0.52	U	0.51	U	0.62	U
SG-VW49A-02	N	03/03/2021	µg/m^3	0.41	U	0.61	U	0.82	U	0.71	U	0.5	U	0.49	U	0.59	U
SVM-1-5	N	03/03/2021	µg/m^3	200	J	61	U	15000		71	U	50	U	49	U	59	U
SVM-2-5	N	03/03/2021	µg/m^3	0.41	U	0.61	U	0.83	U	1.8	J	0.5	U	0.49	U	0.6	U
SVM-3-5	N	12/30/2020	µg/m^3	0.42	U	0.62	U	0.84	U	0.73	U	0.51	U	0.5	U	0.61	U

Notes:
µg/m^3 =- microgram per cubic meter
Conc = concentration
FD = field duplicate
ID = identification
J = estimated concentration
J- = estimated concentration, low bias
N - normal sample
Qual - laboratory qualifier
U - nondetect result
UJ - nondetect result, estimated concentration

TABLE E-2A. SCREENING LEVEL COMPARISON - DETECTED CHEMICALS (0.03 ATTENUATION FACTOR)

Analyte	CAS Number	Maximum Detected Concentration / Qualifier	Sample with Maximum Detected Concentration	Minimum Detected Concentration / Qualifier	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Max Detect > Screening Level?
1,1,1,2-Tetrafluoroethane	811-97-2	23	SG-VW17A-01	23	0.98 - 100	1	51	23	2,780,000	No
1,1,1-Trichloroethane	71-55-6	7.45 J	SG-VW21A-01	0.93 J	0.56 - 59	3	51	7.45	33,333	No
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	3.1 J	SG-VW34A-01	2 J	0.79 - 84	4	51	3.1	173,667	No
1,1-Difluoroethane	75-37-6	9.55	SG-VW50A-01	9.55	2.9 - 300	1	51	9.55	1,390,000	No
1,2,4-Trimethylbenzene	95-63-6	160	SG-VW48A-02	0.84 J	0.6 - 61	44	51	160	2,087	No
1,2-Dibromoethane	106-93-4	5.1 J	SG-VW19A-01	2.8 J	0.83 - 88	3	51	5.1	0.16	Yes
1,2-Dichloroethane	107-06-2	1.3 J	SG-VW54A-01	0.83 J	0.37 - 40	2	51	1.3	3.6	No
1,2-Dichloropropane	78-87-5	600 J	SVM-1-5	600 J	0.46 - 47	1	51	600	25.3	Yes
1,3,5-Trimethylbenzene	108-67-8	32	SG-VW48A-02	1.4 J	0.59 - 61	34	51	32	2,087	No
1-Ethyl-4-methylbenzene	622-96-8	53	SG-VW16A-01	1.9 J-	0.45 - 46	39	51	53	--	No
2-Hexanone	591-78-6	2.5 J	SG-VW49A-01	2.5 J	0.41 - 44	1	51	2.5	1,043	No
Acetone	67-64-1	460	SG-VW26A-01	1.7 J	0.67 - 65	46	51	460	1,073,333	No
Benzene	71-43-2	39	SG-VW27A-01	1 J	0.32 - 32	33	51	39	3.2	Yes
Bromodichloromethane	75-27-4	24	SG-VW30A-02	12	0.64 - 68	2	51	24	2.5	Yes
Carbon disulfide	75-15-0	300	SG-VW34A-01	1.1 J	0.29 - 29	45	51	300	24,333	No
Carbon tetrachloride	56-23-5	2.5 J	SG-VW17A-01	2.5 J	0.66 - 68	1	51	2.5	15.7	No
Chloroform	67-66-3	1,400	SG-VW30A-02	0.91 J	0.79 - 82	25	51	1,400	4.07	Yes
Chloromethane	74-87-3	1 J	SVM-3-5	0.71 J	0.3 - 32	2	51	1	3,130	No
cis-1,2-Dichloroethene	156-59-2	35,000	SVM-1-5	35,000	0.46 - 47	1	51	35,000	277	Yes
Cyclohexane	110-82-7	9.8	SG-VW57A-01	5.8	0.54 - 58	4	51	9.8	208,667	No
Dibromomethane	74-95-3	2.7 J	SG-VW36A-01	2.7 J	0.82 - 87	1	51	2.7	139	No
Dichlorodifluoromethane	75-71-8	50	SG-VW19A-01	2.5 J	0.68 - 68	38	51	50	3,467	No
Ethanol	64-17-5	87	SVM-3-5	1.4 J	0.63 - 64	35	51	87	--	No
Ethylbenzene	100-41-4	66	SG-VW16A-01	1.8 J	0.48 - 49	42	51	66	37.3	Yes
Hexane	110-54-3	2,300	SG-VW42A-01	3 J	0.29 - 30	6	51	2,300	24,333	No
Isooctane	540-84-1	27	SG-VW34A-01	0.97 J	0.51 - 53	17	51	27	--	No
Isopropyl alcohol	67-63-0	94 J-	SG-VW56A-01	0.81 J	0.46 - 49	12	51	94	6,967	No
Methyl ethyl ketone	78-93-3	180	SG-VW26A-01	1 J	0.29 - 29	40	51	180	173,667	No
Methyl isobutyl ketone	108-10-1	95	SG-VW26A-01	1.6 J	0.38 - 40	29	51	95	104,333	No
Methyl t-butyl ether	1634-04-4	0.6 J	SG-VW16A-01	0.6 J	0.4 - 43	1	51	0.6	360	No
Naphthalene	91-20-3	70	SG-VW48A-02	4.3 J	2 - 210	9	51	70	2.8	Yes
n-Heptane	142-82-5	29 J	SG-VW27A-01	0.77 J	0.51 - 52	18	51	29	13,900	No
o-Xylene	95-47-6	75	SG-VW16A-01	1.6 J	0.46 - 46	44	51	75	3,467	No
p- & m-Xylenes	179601-23-1	210	SG-VW16A-01	2.8 J	0.92 - 93	44	51	210	--	No
Propylene	115-07-1	110	SG-VW18A-01	8.5 J	0.36 - 38	3	51	110	104,333	No
Styrene	100-42-5	310 J	SG-VW42A-01	1.3 J	0.34 - 36	7	51	310	31,333	No
t-Butyl alcohol	75-65-0	10	SG-VW19A-01	1.2 J	1 - 110	9	51	10	--	No
Tetrachloroethene	127-18-4	320,000	SVM-1-5	2.9 J	0.76 - 74	47	51	320,000	15.3	Yes
Tetrahydrofuran	109-99-9	64	SG-VW26A-01	0.75 J	0.4 - 41	37	51	64	69,667	No
Toluene	108-88-3	9,500	SG-VW32A-01	1.2 J	0.41 - 41	48	51	9,500	10,333	No
Total Petroleum Hydrocarbons	TPH	500,000	SVM-1-5	51 J	NA - NA	51	51	500,000	--	No
Total Xylenes	1330-20-7	280	SG-VW16A-01	1.7 J	1.4 - 140	45	51	280	3,467	No
TPH - Gasoline	TPHg	500,000	SVM-1-5	51 J	NA - NA	51	51	500,000	--	No
trans-1,2-Dichloroethene	156-60-5	200 J	SVM-1-5	200 J	0.39 - 40	1	51	200	2,767	No
Trichloroethene	79-01-6	15,000	SVM-1-5	0.92 J	0.77 - 80	9	51	15,000	15.9	Yes
Trichlorofluoromethane	75-69-4	7.6	SG-VW52A-01	1.2 J	0.69 - 71	24	51	7.6	43,333	No
Vinyl acetate	108-05-4	1.4 J	SG-VW41A-01	1.4 J	0.47 - 50	1	51	1.4	6,967	No

Notes:

Shading denotes a chemical selected as a COPC

All concentrations provided in units of microgram per cubic meter

> = greater than

-- = not available

CAS = Chemical Abstracts Service

COPC = chemical of potential concern

DTSC = California Department of Toxic Substances Control

Max = maximum

NA = not applicable

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Concentration used for screening selected as the maximum detected concentration.

(2) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03). Risk-based screening levels

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-2B. SCREENING LEVEL COMPARISON - DETECTED CHEMICALS (0.001 ATTENUATION FACTOR)

Analyte	CAS Number	Maximum Detected Concentration / Qualifier	Sample with Maximum Detected Concentration	Minimum Detected Concentration / Qualifier	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Max Detect > Screening Level?
1,1,1,2-Tetrafluoroethane	811-97-2	23	SG-VW17A-01	23	0.98 - 100	1	51	23	83,400,000	No
1,1,1-Trichloroethane	71-55-6	7.45 J	SG-VW21A-01	0.93 J	0.56 - 59	3	51	7.45	1,000,000	No
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	3.1 J	SG-VW34A-01	2 J	0.79 - 84	4	51	3.1	5,210,000	No
1,1-Difluoroethane	75-37-6	9.55	SG-VW50A-01	9.55	2.9 - 300	1	51	9.55	41,700,000	No
1,2,4-Trimethylbenzene	95-63-6	160	SG-VW48A-02	0.84 J	0.6 - 61	44	51	160	62,600	No
1,2-Dibromoethane	106-93-4	5.1 J	SG-VW19A-01	2.8 J	0.83 - 88	3	51	5.1	4.7	Yes
1,2-Dichloroethane	107-06-2	1.3 J	SG-VW54A-01	0.83 J	0.37 - 40	2	51	1.3	108	No
1,2-Dichloropropane	78-87-5	600 J	SVM-1-5	600 J	0.46 - 47	1	51	600	759	No
1,3,5-Trimethylbenzene	108-67-8	32	SG-VW48A-02	1.4 J	0.59 - 61	34	51	32	62,600	No
1-Ethyl-4-methylbenzene	622-96-8	53	SG-VW16A-01	1.9 J-	0.45 - 46	39	51	53	--	No
2-Hexanone	591-78-6	2.5 J	SG-VW49A-01	2.5 J	0.41 - 44	1	51	2.5	31,300	No
Acetone	67-64-1	460	SG-VW26A-01	1.7 J	0.67 - 65	46	51	460	32,200,000	No
Benzene	71-43-2	39	SG-VW27A-01	1 J	0.32 - 32	33	51	39	97	No
Bromodichloromethane	75-27-4	24	SG-VW30A-02	12	0.64 - 68	2	51	24	76	No
Carbon disulfide	75-15-0	300	SG-VW34A-01	1.1 J	0.29 - 29	45	51	300	730,000	No
Carbon tetrachloride	56-23-5	2.5 J	SG-VW17A-01	2.5 J	0.66 - 68	1	51	2.5	470	No
Chloroform	67-66-3	1,400	SG-VW30A-02	0.91 J	0.79 - 82	25	51	1,400	122	Yes
Chloromethane	74-87-3	1 J	SVM-3-5	0.71 J	0.3 - 32	2	51	1	93,900	No
cis-1,2-Dichloroethene	156-59-2	35,000	SVM-1-5	35,000	0.46 - 47	1	51	35,000	8,300	Yes
Cyclohexane	110-82-7	9.8	SG-VW57A-01	5.8	0.54 - 58	4	51	9.8	6,260,000	No
Dibromomethane	74-95-3	2.7 J	SG-VW36A-01	2.7 J	0.82 - 87	1	51	2.7	4,170	No
Dichlorodifluoromethane	75-71-8	50	SG-VW19A-01	2.5 J	0.68 - 68	38	51	50	104,000	No
Ethanol	64-17-5	87	SVM-3-5	1.4 J	0.63 - 64	35	51	87	--	No
Ethylbenzene	100-41-4	66	SG-VW16A-01	1.8 J	0.48 - 49	42	51	66	1,120	No
Hexane	110-54-3	2,300	SG-VW42A-01	3 J	0.29 - 30	6	51	2,300	730,000	No
Isooctane	540-84-1	27	SG-VW34A-01	0.97 J	0.51 - 53	17	51	27	--	No
Isopropyl alcohol	67-63-0	94 J-	SG-VW56A-01	0.81 J	0.46 - 49	12	51	94	209,000	No
Methyl ethyl ketone	78-93-3	180	SG-VW26A-01	1 J	0.29 - 29	40	51	180	5,210,000	No
Methyl isobutyl ketone	108-10-1	95	SG-VW26A-01	1.6 J	0.38 - 40	29	51	95	3,130,000	No
Methyl t-butyl ether	1634-04-4	0.6 J	SG-VW16A-01	0.6 J	0.4 - 43	1	51	0.6	10,800	No
Naphthalene	91-20-3	70	SG-VW48A-02	4.3 J	2 - 210	9	51	70	82.6	No
n-Heptane	142-82-5	29 J	SG-VW27A-01	0.77 J	0.51 - 52	18	51	29	417,000	No
o-Xylene	95-47-6	75	SG-VW16A-01	1.6 J	0.46 - 46	44	51	75	104,000	No
p- & m-Xylenes	179601-23-1	210	SG-VW16A-01	2.8 J	0.92 - 93	44	51	210	--	No
Propylene	115-07-1	110	SG-VW18A-01	8.5 J	0.36 - 38	3	51	110	3,130,000	No
Styrene	100-42-5	310 J	SG-VW42A-01	1.3 J	0.34 - 36	7	51	310	940,000	No
t-Butyl alcohol	75-65-0	10	SG-VW19A-01	1.2 J	1 - 110	9	51	10	--	No
Tetrachloroethene	127-18-4	320,000	SVM-1-5	2.9 J	0.76 - 74	47	51	320,000	460	Yes
Tetrahydrofuran	109-99-9	64	SG-VW26A-01	0.75 J	0.4 - 41	37	51	64	2,090,000	No
Toluene	108-88-3	9,500	SG-VW32A-01	1.2 J	0.41 - 41	48	51	9,500	310,000	No
Total Petroleum Hydrocarbons	TPH	500,000	SVM-1-5	51 J	NA - NA	51	51	500,000	--	No
Total Xylenes	1330-20-7	280	SG-VW16A-01	1.7 J	1.4 - 140	45	51	280	104,000	No
TPH - Gasoline	TPHg	500,000	SVM-1-5	51 J	NA - NA	51	51	500,000	--	No
trans-1,2-Dichloroethene	156-60-5	200 J	SVM-1-5	200 J	0.39 - 40	1	51	200	83,000	No
Trichloroethene	79-01-6	15,000	SVM-1-5	0.92 J	0.77 - 80	9	51	15,000	478	Yes
Trichlorofluoromethane	75-69-4	7.6	SG-VW52A-01	1.2 J	0.69 - 71	24	51	7.6	1,300,000	No
Vinyl acetate	108-05-4	1.4 J	SG-VW41A-01	1.4 J	0.47 - 50	1	51	1.4	209,000	No

Notes:

Shading denotes a chemical selected as a COPC

All concentrations provided in units of microgram per cubic meter

> = greater than

-- = not available

CAS = Chemical Abstracts Service

COPC = chemical of potential concern

DTSC = California Department of Toxic Substances Control

Max = maximum

NA = not applicable

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Concentration used for screening selected as the maximum detected concentration.

(2) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001). Risk-based screening levels obtained from DTSC Hero Note 3 (DTSC, 2020) or, if unavailable, USEPA VISLs (USEPA, 2020) and are based on a target cancer risk of 1E-06 and a target hazard of 1.

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-2C. METHOD DETECTION LIMIT COMPARISON TO SCREENING LEVELS (0.03 ATTENUATION FACTOR)
(Page 1 of 2)

Analyte	CAS Number	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Maximum MDL > Screening Level? (3)	Frequency of MDL Exceedances
1,1,1,2-Tetrachloroethane	630-20-6	0.87 - 93	0	51	93	12.7	Yes	6%
1,1,1,2-Tetrafluoroethane	811-97-2	0.98 - 100	1	51	100	2,780,000	No	0%
1,1,1-Trichloroethane	71-55-6	0.56 - 59	3	51	59	33,333	No	0%
1,1,2,2-Tetrachloroethane	79-34-5	0.67 - 71	0	51	71	1.6	Yes	12%
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.79 - 84	4	51	84	173,667	No	0%
1,1,2-Trichloroethane	79-00-5	0.87 - 93	0	51	93	5.8	Yes	10%
1,1-Dichloroethane	75-34-3	0.33 - 35	0	51	35	58.5	No	0%
1,1-Dichloroethene	75-35-4	0.44 - 47	0	51	47	2,433	No	0%
1,1-Difluoroethane	75-37-6	2.9 - 300	1	51	300	1,390,000	No	0%
1,2,3-Trichloropropane	96-18-4	0.69 - 73	0	51	73	0.0047	Yes	100%
1,2,4-Trichlorobenzene	120-82-1	1.2 - 120	0	51	120	12.7	Yes	8%
1,2,4-Trimethylbenzene	95-63-6	0.6 - 61	44	51	61	2,087	No	0%
1,2-Dibromo-3-chloropropane	96-12-8	2.4 - 260	0	51	260	0.0056	Yes	100%
1,2-Dibromoethane	106-93-4	0.83 - 88	3	51	88	0.16	Yes	100%
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.3 - 140	0	51	140	--	No	--
1,2-Dichlorobenzene	95-50-1	0.72 - 76	0	51	76	6,967	No	0%
1,2-Dichloroethane	107-06-2	0.37 - 40	2	51	40	3.6	Yes	10%
1,2-Dichloropropane	78-87-5	0.46 - 47	1	51	47	25.3	Yes	2%
1,3,5-Trimethylbenzene	108-67-8	0.59 - 61	34	51	61	2,087	No	0%
1,3-Butadiene	106-99-0	0.31 - 33	0	51	33	0.57	Yes	12%
1,3-Dichlorobenzene	541-73-1	0.44 - 47	0	51	47	--	No	--
1,4-Dichlorobenzene	106-46-7	0.72 - 76	0	51	76	8.5	Yes	6%
1,4-Dioxane	123-91-1	0.47 - 50	0	51	50	18.7	Yes	4%
1-Ethyl-4-methylbenzene	622-96-8	0.45 - 46	39	51	46	--	No	--
2-Hexanone	591-78-6	0.41 - 44	1	51	44	1,043	No	0%
Acetone	67-64-1	0.67 - 65	46	51	65	1,073,333	No	0%
Acrolein	107-02-8	1.2 - 120	0	51	120	0.7	Yes	100%
Acrylonitrile	107-13-1	0.39 - 41	0	51	41	1.4	Yes	12%
Allyl chloride	107-05-1	0.4 - 43	0	51	43	15.6	Yes	4%
Benzene	71-43-2	0.32 - 32	33	51	32	3.2	Yes	17%
Benzyl chloride	100-44-7	0.37 - 40	0	51	40	1.9	Yes	12%
Bromodichloromethane	75-27-4	0.64 - 68	2	51	68	2.5	Yes	12%
Bromoform	75-25-2	1.2 - 130	0	51	130	85.1	Yes	4%
Bromomethane	74-83-9	0.67 - 71	0	51	71	174	No	0%
Carbon disulfide	75-15-0	0.29 - 29	45	51	29	24,333	No	0%
Carbon tetrachloride	56-23-5	0.66 - 68	1	51	68	15.7	Yes	4%
Chlorobenzene	108-90-7	0.57 - 61	0	51	61	1,737	No	0%
Chloroethane	75-00-3	0.76 - 81	0	51	81	346,667	No	0%
Chloroform	67-66-3	0.79 - 82	25	51	82	4.07	Yes	19%
Chloromethane	74-87-3	0.3 - 32	2	51	32	3,130	No	0%
cis-1,2-Dichloroethene	156-59-2	0.46 - 47	1	51	47	277	No	0%
cis-1,3-Dichloropropene	10061-01-5	0.43 - 46	0	51	46	--	No	--
Cyclohexane	110-82-7	0.54 - 58	4	51	58	208,667	No	0%
Dibromochloromethane	124-48-1	0.61 - 65	0	51	65	4.3	Yes	10%
Dibromomethane	74-95-3	0.82 - 87	1	51	87	139	No	0%
Dichlorodifluoromethane	75-71-8	0.68 - 68	38	51	68	3,467	No	0%
Diisopropyl ether	108-20-3	0.56 - 59	0	51	59	24,333	No	0%
Ethanol	64-17-5	0.63 - 64	35	51	64	--	No	--
Ethyl acetate	141-78-6	0.47 - 50	0	51	50	2,433	No	0%
Ethyl t-butyl ether	637-92-3	0.47 - 50	0	51	50	--	No	--
Ethylbenzene	100-41-4	0.48 - 49	42	51	49	37.3	Yes	22%
Hexachlorobutadiene	87-68-3	2.1 - 230	0	51	230	4.3	Yes	12%
Hexachloroethane	67-72-1	1 - 110	0	51	110	8.5	Yes	10%
Hexane	110-54-3	0.29 - 30	6	51	30	24,333	No	0%
Isooctane	540-84-1	0.51 - 53	17	51	53	--	No	--
Isopropyl alcohol	67-63-0	0.46 - 49	12	51	49	6,967	No	0%
Methyl ethyl ketone	78-93-3	0.29 - 29	40	51	29	173,667	No	0%
Methyl iodide	74-88-4	0.83 - 88	0	51	88	--	No	--
Methyl isobutyl ketone	108-10-1	0.38 - 40	29	51	40	104,333	No	0%
Methyl t-butyl ether	1634-04-4	0.4 - 43	1	51	43	360	No	0%

TABLE E-2C. METHOD DETECTION LIMIT COMPARISON TO SCREENING LEVELS (0.03 ATTENUATION FACTOR)
(Page 2 of 2)

Analyte	CAS Number	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Maximum MDL > Screening Level? (3)	Frequency of MDL Exceedances
Methylene chloride	75-09-2	0.57 - 61	0	51	61	33.3	Yes	4%
Naphthalene	91-20-3	2 - 210	9	51	210	2.8	Yes	14%
n-Heptane	142-82-5	0.51 - 52	18	51	52	13,900	No	0%
o-Xylene	95-47-6	0.46 - 46	44	51	46	3,467	No	0%
p- & m-Xylenes	179601-23-1	0.92 - 93	44	51	93	--	No	--
Propylene	115-07-1	0.36 - 38	3	51	38	104,333	No	0%
Styrene	100-42-5	0.34 - 36	7	51	36	31,333	No	0%
t-Amyl Methyl ether	994-05-8	0.44 - 47	0	51	47	--	No	--
t-Butyl alcohol	75-65-0	1 - 110	9	51	110	--	No	--
Tetrachloroethene	127-18-4	0.76 - 74	47	51	74	15.3	Yes	25%
Tetrahydrofuran	109-99-9	0.4 - 41	37	51	41	69,667	No	0%
Toluene	108-88-3	0.41 - 41	48	51	41	10,333	No	0%
Total Petroleum Hydrocarbons	TPH	NA - NA	51	51	NA	--	NA	--
Total Xylenes	1330-20-7	1.4 - 140	45	51	140	3,467	No	0%
TPH - Gasoline	TPHg	NA - NA	51	51	NA	--	NA	--
trans-1,2-Dichloroethene	156-60-5	0.39 - 40	1	51	40	2,767	No	0%
trans-1,3-Dichloropropene	10061-02-6	0.57 - 61	0	51	61	--	No	--
Trichloroethene	79-01-6	0.77 - 80	9	51	80	15.9	Yes	2%
Trichlorofluoromethane	75-69-4	0.69 - 71	24	51	71	43,333	No	0%
Vinyl acetate	108-05-4	0.47 - 50	1	51	50	6,967	No	0%
Vinyl bromide	593-60-2	0.46 - 49	0	51	49	6.2	Yes	6%
Vinyl chloride	75-01-4	0.56 - 59	0	51	59	0.32	Yes	100%

Notes:

Shading denotes a chemical with an MDL greater than the screening level

All concentrations provided in units of microgram per cubic meter

-- = not available

CAS = Chemical Abstracts Service

COPC - chemical of potential concern

DTSC = California Department of Toxic Substances Control

MDL = method detection limit

NA = not applicable

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Concentration used for screening selected as the maximum detection limt.

(2) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03). Risk-based screening levels obtained from DTSC Hero Note 3 (DTSC, 2020) or, if unavailable, USEPA VISLs (USEPA, 2020) and are based on a target cancer risk of 1E-06 and a target hazard of 1.

(3) Chemical selected as a COPC if the MDL is greater than the screening level.

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-2D. METHOD DETECTION LIMIT COMPARISON TO SCREENING LEVELS (0.001 ATTENUATION FACTOR)
(Page 1 of 2)

Analyte	CAS Number	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Maximum MDL > Screening Level? (3)	Frequency of MDL Exceedances
1,1,1,2-Tetrachloroethane	630-20-6	0.87 - 93	0	51	93	380	No	0%
1,1,1,2-Tetrafluoroethane	811-97-2	0.98 - 100	1	51	100	83,400,000	No	0%
1,1,1-Trichloroethane	71-55-6	0.56 - 59	3	51	59	1,000,000	No	0%
1,1,2,2-Tetrachloroethane	79-34-5	0.67 - 71	0	51	71	48.4	Yes	4%
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.79 - 84	4	51	84	5,210,000	No	0%
1,1,2-Trichloroethane	79-00-5	0.87 - 93	0	51	93	175	No	0%
1,1-Dichloroethane	75-34-3	0.33 - 35	0	51	35	1,755	No	0%
1,1-Dichloroethene	75-35-4	0.44 - 47	0	51	47	73,000	No	0%
1,1-Difluoroethane	75-37-6	2.9 - 300	1	51	300	41,700,000	No	0%
1,2,3-Trichloropropane	96-18-4	0.69 - 73	0	51	73	0.14	Yes	100%
1,2,4-Trichlorobenzene	120-82-1	1.2 - 120	0	51	120	380	No	0%
1,2,4-Trimethylbenzene	95-63-6	0.6 - 61	44	51	61	62,600	No	0%
1,2-Dibromo-3-chloropropane	96-12-8	2.4 - 260	0	51	260	0.17	Yes	100%
1,2-Dibromoethane	106-93-4	0.83 - 88	3	51	88	4.7	Yes	10%
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.3 - 140	0	51	140	--	No	--
1,2-Dichlorobenzene	95-50-1	0.72 - 76	0	51	76	209,000	No	0%
1,2-Dichloroethane	107-06-2	0.37 - 40	2	51	40	108	No	0%
1,2-Dichloropropane	78-87-5	0.46 - 47	1	51	47	759	No	0%
1,3,5-Trimethylbenzene	108-67-8	0.59 - 61	34	51	61	62,600	No	0%
1,3-Butadiene	106-99-0	0.31 - 33	0	51	33	17	Yes	4%
1,3-Dichlorobenzene	541-73-1	0.44 - 47	0	51	47	--	No	--
1,4-Dichlorobenzene	106-46-7	0.72 - 76	0	51	76	255	No	0%
1,4-Dioxane	123-91-1	0.47 - 50	0	51	50	562	No	0%
1-Ethyl-4-methylbenzene	622-96-8	0.45 - 46	39	51	46	--	No	--
2-Hexanone	591-78-6	0.41 - 44	1	51	44	31,300	No	0%
Acetone	67-64-1	0.67 - 65	46	51	65	32,200,000	No	0%
Acrolein	107-02-8	1.2 - 120	0	51	120	20.9	Yes	6%
Acrylonitrile	107-13-1	0.39 - 41	0	51	41	41.3	No	0%
Allyl chloride	107-05-1	0.4 - 43	0	51	43	468	No	0%
Benzene	71-43-2	0.32 - 32	33	51	32	97	No	0%
Benzyl chloride	100-44-7	0.37 - 40	0	51	40	57.3	No	0%
Bromodichloromethane	75-27-4	0.64 - 68	2	51	68	76	No	0%
Bromoform	75-25-2	1.2 - 130	0	51	130	2,552	No	0%
Bromomethane	74-83-9	0.67 - 71	0	51	71	5,210	No	0%
Carbon disulfide	75-15-0	0.29 - 29	45	51	29	730,000	No	0%
Carbon tetrachloride	56-23-5	0.66 - 68	1	51	68	470	No	0%
Chlorobenzene	108-90-7	0.57 - 61	0	51	61	52,100	No	0%
Chloroethane	75-00-3	0.76 - 81	0	51	81	10,400,000	No	0%
Chloroform	67-66-3	0.79 - 82	25	51	82	122	No	0%
Chloromethane	74-87-3	0.3 - 32	2	51	32	93,900	No	0%
cis-1,2-Dichloroethene	156-59-2	0.46 - 47	1	51	47	8,300	No	0%
cis-1,3-Dichloropropene	10061-01-5	0.43 - 46	0	51	46	--	No	--
Cyclohexane	110-82-7	0.54 - 58	4	51	58	6,260,000	No	0%
Dibromochloromethane	124-48-1	0.61 - 65	0	51	65	130	No	0%
Dibromomethane	74-95-3	0.82 - 87	1	51	87	4,170	No	0%
Dichlorodifluoromethane	75-71-8	0.68 - 68	38	51	68	104,000	No	0%
Diisopropyl ether	108-20-3	0.56 - 59	0	51	59	730,000	No	0%
Ethanol	64-17-5	0.63 - 64	35	51	64	--	No	--
Ethyl acetate	141-78-6	0.47 - 50	0	51	50	73,000	No	0%
Ethyl t-butyl ether	637-92-3	0.47 - 50	0	51	50	--	No	--
Ethylbenzene	100-41-4	0.48 - 49	42	51	49	1,120	No	0%
Hexachlorobutadiene	87-68-3	2.1 - 230	0	51	230	128	Yes	4%
Hexachloroethane	67-72-1	1 - 110	0	51	110	255	No	0%
Hexane	110-54-3	0.29 - 30	6	51	30	730,000	No	0%
Isooctane	540-84-1	0.51 - 53	17	51	53	--	No	--
Isopropyl alcohol	67-63-0	0.46 - 49	12	51	49	209,000	No	0%
Methyl ethyl ketone	78-93-3	0.29 - 29	40	51	29	5,210,000	No	0%
Methyl iodide	74-88-4	0.83 - 88	0	51	88	--	No	--
Methyl isobutyl ketone	108-10-1	0.38 - 40	29	51	40	3,130,000	No	0%

TABLE E-2D. METHOD DETECTION LIMIT COMPARISON TO SCREENING LEVELS (0.001 ATTENUATION FACTOR)
(Page 2 of 2)

Analyte	CAS Number	Range of Detection Limits	Number of Detections	Number of Samples	Concentration Used for Screening (1)	Screening Level (2)	Maximum MDL > Screening Level? (3)	Frequency of MDL Exceedances
Methyl t-butyl ether	1634-04-4	0.4 - 43	1	51	43	10,800	No	0%
Methylene chloride	75-09-2	0.57 - 61	0	51	61	1,000	No	0%
Naphthalene	91-20-3	2 - 210	9	51	210	82.6	Yes	5%
n-Heptane	142-82-5	0.51 - 52	18	51	52	417,000	No	0%
o-Xylene	95-47-6	0.46 - 46	44	51	46	104,000	No	0%
p- & m-Xylenes	179601-23-1	0.92 - 93	44	51	93	--	No	--
Propylene	115-07-1	0.36 - 38	3	51	38	3,130,000	No	0%
Styrene	100-42-5	0.34 - 36	7	51	36	940,000	No	0%
t-Amyl Methyl ether	994-05-8	0.44 - 47	0	51	47	--	No	--
t-Butyl alcohol	75-65-0	1 - 110	9	51	110	--	No	--
Tetrachloroethene	127-18-4	0.76 - 74	47	51	74	460	No	0%
Tetrahydrofuran	109-99-9	0.4 - 41	37	51	41	2,090,000	No	0%
Toluene	108-88-3	0.41 - 41	48	51	41	310,000	No	0%
Total Petroleum Hydrocarbons	TPH	NA - NA	51	51	NA	--	NA	--
Total Xylenes	1330-20-7	1.4 - 140	45	51	140	104,000	No	0%
TPH - Gasoline	TPHg	NA - NA	51	51	NA	--	NA	--
trans-1,2-Dichloroethene	156-60-5	0.39 - 40	1	51	40	83,000	No	0%
trans-1,3-Dichloropropene	10061-02-6	0.57 - 61	0	51	61	--	No	--
Trichloroethene	79-01-6	0.77 - 80	9	51	80	478	No	0%
Trichlorofluoromethane	75-69-4	0.69 - 71	24	51	71	1,300,000	No	0%
Vinyl acetate	108-05-4	0.47 - 50	1	51	50	209,000	No	0%
Vinyl bromide	593-60-2	0.46 - 49	0	51	49	187	No	0%
Vinyl chloride	75-01-4	0.56 - 59	0	51	59	9.5	Yes	6%

Notes:

Shading denotes a chemical with a MDL greater than the screening level

All concentrations provided in units of microgram per cubic meter

-- = not available

CAS = Chemical Abstracts Service

COPC = chemical of potential concern

DTSC = California Department of Toxic Substances Control

MDL = method detection limit

NA = not applicable

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Concentration used for screening selected as the maximum detection limt.

(2) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001). Risk-based screening levels obtained from DTSC Hero Note 3 (DTSC, 2020) or, if unavailable, USEPA VISLs (USEPA, 2020) and are based on a target cancer risk of 1E-06 and a target hazard of 1.

(3) Chemical selected as a COPC if the MDL is greater than the screening level.

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-3A. CUMULATIVE RISK AND HAZARD ESTIMATES - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR
(Page 1 of 2)

			Resident (1) AF=0.03				Resident (2) AF=0.001			
Analyte	CAS	Maximum Detected Concentration	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)
1,1,1,2-Tetrafluoroethane	811-97-2	23	--	--	2,780,000	0.0000083	--	--	83,400,000	0.00000028
1,1,1-Trichloroethane	71-55-6	7.45	--	--	33,333	0.00022	--	--	1,000,000	0.0000075
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	3.1	--	--	173,667	0.000018	--	--	5,210,000	0.00000060
1,1-Difluoroethane	75-37-6	9.55	--	--	1,390,000	0.0000069	--	--	41,700,000	0.00000023
1,2,4-Trimethylbenzene	95-63-6	160	--	--	2,087	0.077	--	--	62,600	0.0026
1,2-Dibromoethane	106-93-4	5.1	0.16	3.3E-05	28	0.18	4.7	1.1E-06	830	0.0061
1,2-Dichloroethane	107-06-2	1.3	3.6	3.6E-07	243	0.0053	108	1.2E-08	7,300	0.00018
1,2-Dichloropropane	78-87-5	600	25.3	2.4E-05	139	4.3	759	7.9E-07	4,170	0.14
1,3,5-Trimethylbenzene	108-67-8	32	--	--	2,087	0.015	--	--	62,600	0.00051
1-Ethyl-4-methylbenzene	622-96-8	53	--	--	--	--	--	--	--	--
2-Hexanone	591-78-6	2.5	--	--	1,043	0.0024	--	--	31,300	0.000080
Acetone	67-64-1	460	--	--	1,073,333	0.00043	--	--	32,200,000	0.000014
Benzene	71-43-2	39	3.2	1.2E-05	103	0.38	97	4.0E-07	3,100	0.013
Bromodichloromethane	75-27-4	24	2.5	9.5E-06	2,767	0.0087	75.9	3.2E-07	83,000	0.00029
Carbon disulfide	75-15-0	300	--	--	24,333	0.012	--	--	730,000	0.00041
Carbon tetrachloride	56-23-5	2.5	15.7	1.6E-07	1,400	0.0018	470	5.3E-09	42,000	0.000060
Chloroform	67-66-3	1,400	4.07	3.4E-04	3,400	0.41	122	1.1E-05	102,000	0.014
Chloromethane	74-87-3	1	--	--	3,130	0.00032	--	--	93,900	0.000011
cis-1,2-Dichloroethene	156-59-2	35,000	--	--	277	127	--	--	8,300	4.2
Cyclohexane	110-82-7	9.8	--	--	208,667	0.000047	--	--	6,260,000	0.0000016
Dibromomethane	74-95-3	2.7	--	--	139	0.019	--	--	4,170	0.00065
Dichlorodifluoromethane	75-71-8	50	--	--	3,467	0.014	--	--	104,000	0.00048
Ethanol	64-17-5	87	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	66	37.3	1.8E-06	34,667	0.0019	1120	5.9E-08	1,040,000	0.000063
Hexane	110-54-3	2,300	--	--	24,333	0.095	--	--	730,000	0.0032
Isooctane	540-84-1	27	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	94	--	--	6,967	0.013	--	--	209,000	0.00045
Methyl ethyl ketone	78-93-3	180	--	--	173,667	0.0010	--	--	5,210,000	0.000035
Methyl isobutyl ketone	108-10-1	95	--	--	104,333	0.00091	--	--	3,130,000	0.000030
Methyl t-butyl ether	1634-04-4	0.6	360	1.7E-09	104,333	0.0000058	10800	5.6E-11	3,130,000	0.00000019
Naphthalene	91-20-3	70	2.8	2.5E-05	104	0.67	82.6	8.5E-07	3,130	0.022
n-Heptane	142-82-5	29	--	--	13,900	0.0021	--	--	417,000	0.000070
o-Xylene	95-47-6	75	--	--	3,467	0.022	--	--	104,000	0.00072
p- & m-Xylenes	179601-23-1	210	--	--	--	--	--	--	--	--
Propylene	115-07-1	110	--	--	104,333	0.0011	--	--	3,130,000	0.000035
Styrene	100-42-5	310	--	--	31,333	0.010	--	--	940,000	0.00033
t-Butyl alcohol	75-65-0	10	--	--	--	--	--	--	--	--

TABLE E-3A. CUMULATIVE RISK AND HAZARD ESTIMATES - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR
(Page 2 of 2)

			Resident (1) AF=0.03				Resident (2) AF=0.001			
Analyte	CAS	Maximum Detected Concentration	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)
Tetrachloroethene	127-18-4	320,000	15.3	2.1E-02	1,400	229	460	7.0E-04	42,000	7.6
Tetrahydrofuran	109-99-9	64	--	--	69,667	0.00092	--	--	2,090,000	0.000031
Toluene	108-88-3	9,500	--	--	10,333	0.92	--	--	310,000	0.031
Total Petroleum Hydrocarbons	TPH	500,000	--	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	280	--	--	3,467	0.081	--	--	104,000	0.0027
TPH - Gasoline	TPHg	500,000	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	200	--	--	2,767	0.072	--	--	83,000	0.0024
Trichloroethene	79-01-6	15,000	15.9	9.4E-04	70	215	478	3.1E-05	2,090	7.2
Trichlorofluoromethane	75-69-4	7.6	--	--	43,333	0.00018	--	--	1,300,000	0.0000058
Vinyl acetate	108-05-4	1.4	--	--	6,967	0.00020	--	--	209,000	0.0000067
			Estimated Cumulative Cancer Risk	2E-02	**Estimated Hazard Index**	578	**Estimated Cumulative Cancer Risk**	7E-04	**Estimated Hazard Index**	19

Notes:

Shading denotes a cumulative cancer risk greater than 1E-06 or a noncancer hazard index greater than 1.

$\mu g/m^3$ = microgram per cubic meter

-- = not applicable/available

AF = attenuation factor

CAS = Chemical Abstracts Service

DTSC = California Department of Toxic Substances Control

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03).

(2) Risk-based screening level for a residential exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001).

(3) Risk-based screening levels obtained from DTSC Hero Note 3 (DTSC, 2020) or, if unavailable, USEPA VISLs (USEPA, 2020) and are based on a target cancer risk of 1E-06 and a target noncancer hazard of 1.

(4) Estimated potential cancer risk and noncancer hazards calculated as:

$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: MDC = Maximum detected concentration (microgram per cubic meter)
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(5) Risks and hazards only calculated for chemicals detected in one or more samples.

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-3B. CUMULATIVE RISK AND HAZARD ESTIMATES - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR
(Page 1 of 2)

			Commercial Worker (1) AF=0.03				Commercial Worker (2) AF=0.001			
Analyte	CAS	Maximum Detected Concentration	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)
1,1,1,2-Tetrafluoroethane	811-97-2	23	--	--	12,000,000	0.0000019	--	--	350,000,000	0.000000066
1,1,1-Trichloroethane	71-55-6	7.45	--	--	150,000	0.000050	--	--	4,400,000	0.0000017
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	3.1	--	--	730,000	0.0000042	--	--	21,900,000	0.00000014
1,1-Difluoroethane	75-37-6	9.55	--	--	5,800,000	0.0000016	--	--	175,000,000	0.000000055
1,2,4-Trimethylbenzene	95-63-6	160	--	--	8,800	0.0182	--	--	263,000	0.00061
1,2-Dibromoethane	106-93-4	5.1	0.67	7.6E-06	120	0.043	20	2.6E-07	3,500	0.0015
1,2-Dichloroethane	107-06-2	1.3	16	8.1E-08	1,000	0.0013	472	2.8E-09	30,700	0.000042
1,2-Dichloropropane	78-87-5	600	110	5.5E-06	580	1.0	3,310	1.8E-07	17,500	0.034
1,3,5-Trimethylbenzene	108-67-8	32	--	--	8,800	0.0036	--	--	263,000	0.00012
1-Ethyl-4-methylbenzene	622-96-8	53	--	--	--	--	--	--	--	--
2-Hexanone	591-78-6	2.5	--	--	4,400	0.00057	--	--	131,000	0.000019
Acetone	67-64-1	460	--	--	4,500,000	0.00010	--	--	135,000,000	0.0000034
Benzene	71-43-2	39	14	2.8E-06	430	0.091	420	9.3E-08	13,000	0.0030
Bromodichloromethane	75-27-4	24	11	2.2E-06	12,000	0.0020	331	7.2E-08	350,000	0.000069
Carbon disulfide	75-15-0	300	--	--	100,000	0.0030	--	--	3,070,000	0.000098
Carbon tetrachloride	56-23-5	2.5	67	3.7E-08	6,000	0.00042	2,000	1.3E-09	180,000	0.000014
Chloroform	67-66-3	1,400	18	7.8E-05	14,000	0.10	533	2.6E-06	428,000	0.0033
Chloromethane	74-87-3	1	--	--	13,000	0.000077	--	--	394,000	0.0000025
cis-1,2-Dichloroethene	156-59-2	35,000	--	--	1,200	29.2	--	--	35,000	1.0
Cyclohexane	110-82-7	9.8	--	--	880,000	0.000011	--	--	26,300,000	0.00000037
Dibromomethane	74-95-3	2.7	--	--	580	0.0047	--	--	17,500	0.00015
Dichlorodifluoromethane	75-71-8	50	--	--	15,000	0.0033	--	--	438,000	0.00011
Ethanol	64-17-5	87	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	66	160	4.1E-07	150,000	0.00044	4,910	1.3E-08	4,380,000	0.000015
Hexane	110-54-3	2,300	--	--	100,000	0.023	--	--	3,070,000	0.00075
Isooctane	540-84-1	27	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	94	--	--	29,000	0.0032	--	--	876,000	0.00011
Methyl ethyl ketone	78-93-3	180	--	--	730,000	0.00025	--	--	21,900,000	0.0000082
Methyl isobutyl ketone	108-10-1	95	--	--	440,000	0.00022	--	--	13,100,000	0.0000073
Methyl t-butyl ether	1634-04-4	0.6	1,600	3.8E-10	440,000	0.0000014	47,200	1.3E-11	13,100,000	0.000000046
Naphthalene	91-20-3	70	12	5.8E-06	440	0.16	361	1.9E-07	13,100	0.0053
n-Heptane	142-82-5	29	--	--	58,000	0.00050	--	--	1,750,000	0.000017
o-Xylene	95-47-6	75	--	--	15,000	0.0050	--	--	438,000	0.00017
p- & m-Xylenes	179601-23-1	210	--	--	--	--	--	--	--	--
Propylene	115-07-1	110	--	--	440,000	0.00025	--	--	13,100,000	0.0000084
Styrene	100-42-5	310	--	--	130,000	0.0024	--	--	3,900,000	0.000079
t-Butyl alcohol	75-65-0	10	--	--	--	--	--	--	--	--

TABLE E-3B. CUMULATIVE RISK AND HAZARD ESTIMATES - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR
(Page 2 of 2)

			Commercial Worker (1) AF=0.03				Commercial Worker (2) AF=0.001			
Analyte	CAS	Maximum Detected Concentration	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)	Risk-Based Screening Level Cancer Endpoint (3)	Potential Estimated Cancer Risk (4,5)	Risk-Based Screening Level Noncancer Endpoint (3)	Potential Estimated Noncancer Hazard (4,5)
Tetrachloroethene	127-18-4	320,000	67	4.8E-03	6,000	53.3	2,000	1.6E-04	180,000	1.8
Tetrahydrofuran	109-99-9	64	--	--	290,000	0.00022	--	--	8,760,000	0.0000073
Toluene	108-88-3	9,500	--	--	43,000	0.22	--	--	1,300,000	0.0073
Total Petroleum Hydrocarbons	TPH	500,000	--	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	280	--	--	15,000	0.019	--	--	438,000	0.00064
TPH - Gasoline	TPHg	500,000	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	200	--	--	12,000	0.02	--	--	350,000	0.00057
Trichloroethene	79-01-6	15,000	100	1.5E-04	290	51.7	2,990	5.0E-06	8,760	1.7
Trichlorofluoromethane	75-69-4	7.6	--	--	180,000	0.000042	--	--	5,300,000	0.0000014
Vinyl acetate	108-05-4	1.4	--	--	29,000	0.000048	--	--	876,000	0.0000016
			Estimated Cumulative Cancer Risk	5E-03	**Estimated Hazard Index**	136	**Estimated Cumulative Cancer Risk**	2E-04	**Estimated Hazard Index**	5

Notes:

Shading denotes a cumulative cancer risk greater than 1E-06 or a noncancer hazard index greater than 1.

$\mu g/m^3$ = microgram per cubic meter

-- = not applicable/available

AF = attenuation factor

CAS = Chemical Abstracts Service

DTSC = California Department of Toxic Substances Control

USEPA = United States Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

(1) Risk-based screening level for a commercial worker exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03).

(2) Risk-based screening level for a commercial worker exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001).

(3) Risk-based screening levels obtained from DTSC Hero Note 3 (DTSC, 2020) or, if unavailable, USEPA VISLs (USEPA, 2020) and are based on a target cancer risk of 1E-06 and a target noncancer hazard of 1.

(4) Estimated potential cancer risk and noncancer hazards calculated as:

$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: MDC = Maximum detected concentration (microgram per cubic meter)
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(5) Risks and hazards only calculated for chemicals detected in one or more samples.

References:

DTSC. 2020. Human Health Risk Assessment Note 3 - DTSC-Modified Screening Levels (DTSC-SLs). Available at: https://dtsc.ca.gov/human-health-risk-hero/. June.

USEPA. 2020. Vapor Intrusion Screening Levels (VISL) Calculator. Available at: https://epa-visl.ornl.gov/cgi-bin/visl_search. November.

TABLE E-4. SUMMARY OF CUMULATIVE RISK AND HAZARD RESULTS

	Attenuation Factor 0.03 (1)			Attenuation Factor 0.001 (1)		
Receptor	Potential Estimated Cumulative Cancer Risk	Potential Estimated Noncancer Hazard Index	Primary Risk Contributors (2)	Potential Estimated Cumulative Cancer Risk	Potential Estimated Noncancer Hazard Index	Primary Risk Contributors (2)
Resident	2E-02	578	1,2-DBE, benzene, BDCM, chloroform, cis-1,2-DCE, ethylbenzene, naphthalene, PCE, TCE, and toluene	7E-04	19	1,2-DBE, cis-1,2-DCE, chloroform, PCE, and TCE
Commercial Worker	5E-03	136	1,2-DBE, 1,2-dichloropropane, benzene, BDCM, cis-1,2-DCE, chloroform, naphthalene, PCE, and TCE	2E-04	5	Chloroform, PCE, and TCE

Notes:

Shading denotes a cumulative cancer risk greater than 1E-06 or a noncancer hazard index greater than 1.

Cancer risks and noncancer hazards are shown to one significant figure.

BDCM = bromodichloromethane

DBE = dibromoethane

DCE = dichloroethene

NA = not applicable

PCE = tetrachloroethene

TCE = trichloroethene

(1) Cumulative risks and hazards calculated for each receptor exposure scenario (see Tables E-3A and E-3B) using attenuation factors of 0.03 and 0.001.

(2) Primary risk contributors were identified as chemicals contributing to a cumulative cancer risk greater than 1E-06 or noncancer hazard index greater than 1 for a receptor exposure scenario.

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)
(Page 1 of 12)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	8.27E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24E-04	ND	ND	ND	ND	ND	2.79E-05
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	1.50E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.15E-05
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	3.31E-02	ND	1.34E-02	ND	1.20E-02	ND	1.39E-02	ND	3.40E-02	ND	7.67E-03	ND	1.10E-02	ND	5.75E-03	ND	4.03E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	3.26E-05	1.84E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	2.31E-07	3.41E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.34E-02	ND	3.35E-03	ND	3.93E-03	ND	3.64E-03	ND	9.58E-03	ND	2.49E-03	ND	ND	ND	2.11E-03	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.96E-04	ND	9.13E-05	ND	6.89E-05	ND	2.42E-04	ND	1.49E-05	ND	1.40E-04	ND	2.42E-04	ND	1.68E-05	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.14E-05	3.58E-01	3.71E-06	1.16E-01	9.59E-06	3.00E-01	9.90E-07	3.10E-02	2.69E-06	8.42E-02	2.35E-06	7.35E-02	2.32E-06	7.26E-02	3.09E-06	9.68E-02	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	5.75E-04	ND	1.07E-03	ND	3.82E-03	ND	3.04E-03	ND	1.23E-03	ND	1.05E-03	ND	7.40E-04	ND	1.40E-03	ND	1.03E-04
Carbon tetrachloride	ND	ND	1.60E-07	1.79E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.95E-06	3.53E-03	2.19E-05	2.62E-02	1.30E-06	1.56E-03	2.46E-06	2.94E-03	2.24E-07	2.68E-04	1.35E-06	1.62E-03	2.46E-06	2.94E-03	7.87E-07	9.41E-04	2.29E-06	2.74E-03
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	2.83E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	8.94E-04	ND	2.11E-03	ND	4.62E-03	ND	1.44E-02	ND	ND	ND	1.14E-03	ND	ND	ND	1.04E-03	ND	5.19E-03
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.77E-06	1.90E-03	4.02E-07	4.33E-04	6.70E-07	7.21E-04	3.48E-07	3.75E-04	1.45E-06	1.56E-03	4.02E-07	4.33E-04	4.82E-07	5.19E-04	4.02E-07	4.33E-04	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	2.84E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.23E-04	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.02E-04	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	5.36E-04	ND	3.86E-04	ND	2.07E-04	ND	1.90E-04	ND	7.49E-05	ND	4.92E-04	ND	9.79E-04	ND	3.57E-05	ND	ND
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	4.41E-04	ND	6.33E-05	ND	5.65E-05	ND	2.97E-04	ND	1.15E-04	ND	4.60E-05	ND	1.44E-04	ND	1.53E-05	ND	ND
Methyl t-butyl ether	1.67E-09	5.75E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	4.00E-06	1.05E-01	ND	ND	ND	ND	ND	ND	1.56E-06	4.12E-02	3.56E-06	9.39E-02
n-Heptane	ND	7.19E-04	ND	2.81E-04	ND	3.53E-04	ND	ND	ND	5.54E-05	ND	2.19E-04	ND	ND	ND	1.51E-04	ND	ND
o-Xylene	ND	2.16E-02	ND	5.48E-03	ND	8.08E-03	ND	4.62E-03	ND	1.93E-02	ND	4.47E-03	ND	5.48E-03	ND	4.62E-03	ND	ND
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	1.05E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	8.30E-05	ND	ND	ND	4.15E-05	ND	ND	ND	6.06E-05	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.30E-06	1.43E-02	3.98E-06	4.36E-02	2.15E-06	2.36E-02	1.70E-05	1.86E-01	1.83E-06	2.00E-02	8.48E-06	9.29E-02	6.07E-06	6.64E-02	3.52E-06	3.86E-02	4.24E-05	4.64E-01
Tetrahydrofuran	ND	5.74E-04	ND	1.18E-04	ND	5.17E-05	ND	1.87E-04	ND	3.44E-04	ND	1.20E-04	ND	1.87E-04	ND	3.88E-05	ND	ND
Toluene	ND	3.00E-02	ND	1.26E-02	ND	2.23E-02	ND	5.81E-03	ND	3.48E-02	ND	1.40E-02	ND	1.16E-01	ND	9.68E-03	ND	1.16E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	8.08E-02	ND	2.19E-02	ND	3.46E-02	ND	1.82E-02	ND	6.92E-02	ND	1.88E-02	ND	2.22E-02	ND	1.90E-02	ND	ND
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	5.77E-08	1.32E-02	8.47E-07	1.94E-01	ND	ND	4.27E-07	9.76E-02	ND	ND
Trichlorofluoromethane	ND	3.92E-05	ND	6.00E-05	ND	6.69E-05	ND	1.73E-04	ND	ND	ND	4.96E-05	ND	ND	ND	ND	ND	7.85E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.7E-05**	**5.6E-01**	**3.0E-05**	**2.5E-01**	**1.4E-05**	**4.2E-01**	**5.8E-05**	**5.8E-01**	**6.2E-06**	**2.9E-01**	**1.3E-05**	**4.1E-01**	**1.1E-05**	**3.0E-01**	**9.8E-06**	**3.2E-01**	**4.8E-05**	**5.7E-01**

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.73E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	9.87E-03	ND	3.69E-03	ND	3.31E-02	ND	9.58E-03	ND	7.67E-03	ND	8.63E-03	ND	1.53E-02	ND	8.63E-04	ND	4.70E-03
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	2.08E-03	ND	1.20E-03	ND	1.05E-02	ND	ND	ND	ND	ND	3.35E-03	ND	4.74E-03	ND	ND	ND	1.15E-03
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	5.92E-06	ND	3.35E-06	ND	4.29E-04	ND	ND	ND	ND	ND	5.12E-06	ND	2.80E-05	ND	4.66E-06	ND	3.54E-05
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5.10E-07	1.60E-02	ND	ND	6.19E-06	1.94E-01	1.21E-05	3.77E-01	ND	ND	2.91E-06	9.10E-02	1.14E-06	3.58E-02	ND	ND	4.64E-07	1.45E-02
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.74E-06	4.34E-03	9.49E-06	8.67E-03	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	6.16E-05	ND	4.52E-04	ND	4.52E-04	ND	1.15E-03	ND	1.07E-03	ND	1.52E-03	ND	6.16E-04	ND	1.48E-04	ND	3.25E-04
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	1.40E-06	1.68E-03	2.34E-07	2.79E-04	ND	ND	ND	ND	1.01E-06	1.21E-03	1.60E-04	1.91E-01	3.44E-04	4.12E-01	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.12E-03	ND	2.88E-03	ND	ND	ND	ND	ND	ND	ND	1.15E-03	ND	1.88E-03	ND	2.57E-03	ND	ND
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)
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Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	9.91E-08	1.07E-04	8.04E-08	8.65E-05	1.37E-06	1.47E-03	5.09E-07	5.48E-04	4.55E-07	4.90E-04	5.89E-07	6.35E-04	5.36E-07	5.77E-04	4.82E-08	5.19E-05	1.88E-07	2.02E-04
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	3.49E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	4.88E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.33E-04	ND	1.72E-04	ND	ND
Methyl ethyl ketone	ND	5.76E-06	ND	ND	ND	1.04E-03	ND	1.38E-04	ND	ND	ND	1.44E-05	ND	1.04E-04	ND	5.76E-06	ND	9.79E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	ND	ND	ND	ND	9.11E-04	ND	ND	ND	ND	ND	ND	ND	5.75E-05	ND	ND	ND	2.20E-05
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	4.34E-06	1.15E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.72E-06	7.19E-02	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	3.38E-04	ND	2.09E-03	ND	ND	ND	ND	ND	1.51E-04	ND	ND	ND	6.12E-05
o-Xylene	ND	2.41E-03	ND	1.50E-03	ND	1.82E-02	ND	6.06E-03	ND	5.19E-03	ND	6.63E-03	ND	8.37E-03	ND	5.48E-04	ND	2.74E-03
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.15E-05	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	7.98E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	7.50E-06	8.21E-02	6.26E-06	6.86E-02	2.74E-06	3.00E-02	ND	ND	5.80E-06	6.36E-02	3.65E-06	4.00E-02	6.46E-06	7.07E-02	1.37E-05	1.50E-01	4.17E-06	4.57E-02
Tetrahydrofuran	ND	ND	ND	3.59E-05	ND	9.19E-04	ND	ND	ND	ND	ND	4.31E-05	ND	3.01E-04	ND	1.72E-05	ND	6.32E-05
Toluene	ND	9.68E-04	ND	6.77E-04	ND	2.03E-02	ND	2.42E-01	ND	3.39E-01	ND	1.16E-02	ND	6.97E-03	ND	7.35E-04	ND	8.61E-03
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	7.79E-03	ND	4.90E-03	ND	6.63E-02	ND	2.45E-02	ND	2.13E-02	ND	2.83E-02	ND	2.88E-02	ND	1.90E-03	ND	9.23E-03
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.69E-07	3.88E-02	1.57E-07	3.59E-02	ND	ND
Trichlorofluoromethane	ND	5.08E-05	ND	4.38E-05	ND	3.46E-05	ND	ND	ND	ND	ND	ND	ND	4.15E-05	ND	ND	ND	6.00E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.2E-05**	**2.4E-01**	**7.7E-06**	**8.6E-02**	**1.1E-05**	**3.8E-01**	**1.3E-05**	**6.7E-01**	**6.3E-06**	**4.4E-01**	**8.2E-06**	**1.9E-01**	**1.8E-04**	**4.8E-01**	**3.7E-04**	**6.1E-01**	**4.8E-06**	**8.8E-02**

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	3.30E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	1.79E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.53E-02	ND	3.35E-03	ND	1.39E-02	ND	9.58E-03	ND	2.40E-02	ND	2.49E-03	ND	2.68E-03	ND	1.92E-03	ND	1.29E-02
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	1.05E-03	ND	4.46E-03	ND	2.06E-03	ND	9.11E-03	ND	6.71E-04	ND	7.67E-04	ND	8.63E-04	ND	3.26E-03
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.07E-04	ND	5.96E-05	ND	3.07E-04	ND	1.02E-05	ND	6.99E-05	ND	9.32E-06	ND	5.78E-06	ND	4.84E-06	ND	4.94E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	1.33E-06	4.16E-02	5.88E-06	1.84E-01	4.33E-07	1.35E-02	7.11E-06	2.23E-01	ND	ND	ND	ND	ND	ND	1.86E-06	5.81E-02
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	4.52E-04	ND	1.23E-02	ND	4.93E-04	ND	4.52E-04	ND	1.52E-04	ND	6.58E-05	ND	9.04E-05	ND	5.75E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	6.89E-07	8.24E-04	ND	ND	ND	ND	ND	ND	ND	ND	7.38E-07	8.82E-04	ND	ND
Chloromethane	ND	ND	ND	ND	ND	2.27E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	3.02E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.94E-02	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	8.08E-04	ND	8.08E-04	ND	ND	ND	ND	ND	7.50E-04	ND	7.79E-04	ND	ND	ND	7.21E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	6.56E-07	7.07E-04	1.79E-07	1.93E-04	7.23E-07	7.79E-04	1.98E-07	2.13E-04	1.29E-06	1.38E-03	6.16E-08	6.63E-05	1.02E-07	1.10E-04	1.07E-07	1.15E-04	1.13E-06	1.21E-03
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	3.16E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.55E-04	ND	2.13E-04	ND	2.59E-04	ND	ND	ND	2.42E-04	ND	3.69E-05	ND	1.21E-05	ND	7.49E-06	ND	9.21E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.34E-04	ND	3.16E-05	ND	2.01E-04	ND	1.82E-05	ND	4.41E-04	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.52E-06	9.30E-02	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	7.19E-04	ND	ND	ND	8.63E-04	ND	ND	ND	ND	ND	ND	ND	2.81E-04
o-Xylene	ND	9.38E-03	ND	2.11E-03	ND	8.37E-03	ND	3.46E-03	ND	1.62E-02	ND	1.13E-03	ND	2.02E-03	ND	2.02E-03	ND	5.19E-03
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.43E-05	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	4.57E-06	5.00E-02	1.89E-07	2.07E-03	1.24E-06	1.36E-02	1.63E-05	1.79E-01	5.09E-06	5.57E-02	ND	ND	2.41E-06	2.64E-02	1.96E-06	2.14E-02	2.15E-07	2.36E-03
Tetrahydrofuran	ND	2.73E-04	ND	5.89E-05	ND	2.15E-04	ND	1.72E-05	ND	5.45E-04	ND	1.08E-05	ND	1.11E-05	ND	2.01E-05	ND	ND
Toluene	ND	9.19E-01	ND	4.06E-03	ND	1.74E-02	ND	1.35E-02	ND	2.71E-02	ND	8.61E-04	ND	2.61E-03	ND	5.52E-02	ND	1.26E-02
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	4.33E-02	ND	8.65E-03	ND	3.75E-02	ND	1.18E-02	ND	6.06E-02	ND	3.75E-03	ND	6.92E-03	ND	6.35E-03	ND	2.88E-02
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	6.46E-05	ND	2.77E-05	ND	3.00E-05	ND	3.23E-05	ND	3.23E-05	ND	ND	ND	3.00E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**5.2E-06**	**1.0E+00**	**1.7E-06**	**6.5E-02**	**8.5E-06**	**3.0E-01**	**1.7E-05**	**2.3E-01**	**1.3E-05**	**4.4E-01**	**6.2E-08**	**1.0E-02**	**6.0E-06**	**1.4E-01**	**2.8E-06**	**8.9E-02**	**3.2E-06**	**1.3E-01**

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	5.75E-03	ND	ND	ND	ND	ND	3.45E-03	ND	5.27E-03	ND	1.68E-02	ND	ND	ND	3.98E-03	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.55E-05	1.45E-01	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.39E-03	ND	ND	ND	ND	ND	1.05E-03	ND	1.87E-03	ND	5.27E-03	ND	ND	ND	1.39E-03	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	8.94E-05	ND	ND	ND	1.96E-06	ND	4.01E-06	ND	1.30E-04	ND	2.33E-04	ND	1.96E-06	ND	5.22E-05	ND	5.96E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.02E-06	3.19E-02	ND	ND	ND	ND	5.57E-07	1.74E-02	2.35E-06	7.35E-02	5.26E-06	1.65E-01	ND	ND	5.57E-07	1.74E-02	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	2.34E-04	ND	ND	ND	ND	ND	1.85E-04	ND	5.34E-04	ND	8.22E-04	ND	ND	ND	3.33E-04	ND	1.81E-04
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	4.92E-06	5.88E-03	5.90E-07	7.06E-04	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	7.64E-04	ND	ND	ND	8.65E-04	ND	8.94E-04	ND	1.24E-03	ND	8.37E-04	ND	8.08E-04	ND	8.08E-04	ND	7.79E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.12E-07	2.28E-04	ND	ND	ND	ND	9.64E-08	1.04E-04	2.52E-07	2.71E-04	6.43E-07	6.92E-04	ND	ND	1.50E-07	1.62E-04	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	9.45E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	1.25E-04	ND	ND	ND	ND	ND	ND	ND	1.21E-04	ND	ND	ND	ND
Methyl ethyl ketone	ND	5.73E-04	ND	ND	ND	ND	ND	1.15E-05	ND	4.61E-04	ND	9.21E-04	ND	ND	ND	2.48E-04	ND	1.61E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	6.76E-05	ND	ND	ND	ND	ND	ND	ND	5.37E-05	ND	5.85E-05	ND	ND	ND	3.26E-05	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	3.45E-06	9.11E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	7.91E-05	ND	ND	ND	ND	ND	ND	ND	1.51E-04	ND	3.60E-04	ND	ND	ND	ND	ND	ND
o-Xylene	ND	3.00E-03	ND	ND	ND	ND	ND	1.24E-03	ND	3.17E-03	ND	8.37E-03	ND	ND	ND	2.28E-03	ND	4.90E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	9.89E-03	ND	ND	ND	ND	ND	ND	ND	8.30E-05	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	7.83E-07	8.57E-03	ND	ND	4.37E-07	4.79E-03	3.59E-07	3.93E-03	5.93E-07	6.50E-03	3.33E-07	3.64E-03	5.61E-07	6.14E-03	3.46E-07	3.79E-03	6.20E-07	6.79E-03
Tetrahydrofuran	ND	9.19E-05	ND	ND	ND	ND	ND	3.30E-05	ND	1.16E-04	ND	1.25E-04	ND	ND	ND	6.03E-05	ND	ND
Toluene	ND	6.92E-02	ND	5.52E-01	ND	4.94E-04	ND	1.16E-03	ND	6.68E-03	ND	1.26E-02	ND	1.94E-04	ND	3.19E-03	ND	6.77E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.24E-02	ND	ND	ND	ND	ND	5.48E-03	ND	1.33E-02	ND	3.46E-02	ND	9.23E-04	ND	8.94E-03	ND	4.90E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5.77E-08	1.32E-02	ND	ND	ND	ND	ND	ND	3.45E-07	7.89E-02	ND	ND	1.26E-07	2.87E-02	ND	ND	ND	ND
Trichlorofluoromethane	ND	3.12E-05	ND	ND	ND	ND	ND	ND	ND	5.31E-05	ND	3.92E-05	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	2.01E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**5.5E-06**	**2.4E-01**	**0.0E+00**	**6.6E-01**	**4.4E-07**	**6.3E-03**	**1.0E-06**	**3.5E-02**	**8.5E-06**	**2.0E-01**	**6.8E-06**	**2.5E-01**	**2.6E-05**	**1.8E-01**	**1.1E-06**	**4.3E-02**	**6.2E-07**	**9.4E-03**

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.87E-06	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	4.79E-03	ND	7.67E-02	ND	1.68E-03	ND	ND	ND	6.71E-03	ND	5.75E-03	ND	5.27E-03	ND	3.95E-03	ND	1.96E-02
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	1.79E-05	1.01E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.61E-07	5.34E-03
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.44E-03	ND	1.53E-02	ND	ND	ND	ND	ND	1.99E-03	ND	1.77E-03	ND	1.49E-03	ND	1.22E-03	ND	6.71E-03
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	2.40E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.30E-05	ND	1.96E-06	ND	1.68E-05	ND	1.58E-06	ND	9.78E-05	ND	2.98E-04	ND	5.96E-05	ND	2.19E-05	ND	1.40E-05
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	3.09E-07	9.68E-03	ND	ND	6.03E-07	1.89E-02	1.30E-06	4.06E-02	4.64E-07	1.45E-02	5.26E-07	1.65E-02	1.14E-05	3.58E-01
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.85E-04	ND	5.34E-05	ND	1.68E-04	ND	4.52E-05	ND	2.34E-04	ND	1.81E-04	ND	4.11E-04	ND	4.73E-04	ND	2.96E-03
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	8.61E-07	1.03E-03	1.33E-06	1.59E-03	1.16E-06	1.38E-03	1.87E-06	2.24E-03	5.29E-07	6.32E-04	ND	ND	2.21E-06	2.65E-03	ND	ND	1.65E-06	1.97E-03
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.78E-05
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	8.37E-04	ND	7.79E-04	ND	8.65E-04	ND	8.08E-04	ND	8.51E-04	ND	8.37E-04	ND	1.33E-02	ND	7.79E-03	ND	1.24E-02
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)
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Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.39E-07	1.50E-04	ND	ND	8.84E-08	9.52E-05	ND	ND	2.21E-07	2.38E-04	2.65E-07	2.86E-04	1.34E-07	1.44E-04	1.55E-07	1.67E-04	1.02E-06	1.10E-03
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	2.01E-04	ND	ND	ND	ND	ND	ND	ND	4.02E-04	ND	ND	ND	ND	ND	1.44E-03	ND	ND
Methyl ethyl ketone	ND	1.09E-04	ND	ND	ND	7.49E-05	ND	ND	ND	5.73E-04	ND	7.49E-04	ND	2.30E-04	ND	9.44E-05	ND	7.49E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	4.60E-05	ND	ND	ND	2.30E-05	ND	ND	ND	8.48E-05	ND	4.03E-05	ND	3.64E-05	ND	2.01E-05	ND	2.40E-05
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	2.54E-05	6.71E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.78E-06	4.70E-02	ND	ND
n-Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	2.16E-03	ND	4.62E-04	ND	1.36E-03	ND	ND	ND	3.46E-03	ND	3.46E-03	ND	2.02E-03	ND	1.92E-03	ND	1.21E-02
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.58E-04
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.28E-06	2.50E-02	1.89E-06	2.07E-02	3.52E-06	3.86E-02	3.59E-06	3.93E-02	4.63E-06	5.07E-02	1.50E-06	1.64E-02	9.13E-06	1.00E-01	2.84E-06	3.11E-02	1.89E-06	2.07E-02
Tetrahydrofuran	ND	8.33E-05	ND	ND	ND	5.02E-05	ND	ND	ND	1.51E-04	ND	1.36E-04	ND	4.16E-05	ND	4.81E-05	ND	7.18E-05
Toluene	ND	1.74E-03	ND	1.84E-04	ND	1.35E-03	ND	ND	ND	3.77E-03	ND	4.94E-03	ND	1.84E-03	ND	1.69E-03	ND	2.71E-02
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	7.79E-03	ND	1.27E-03	ND	3.46E-03	ND	ND	ND	1.25E-02	ND	1.41E-02	ND	7.79E-03	ND	7.21E-03	ND	5.48E-02
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.75E-04	ND	4.38E-05	ND	5.77E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**3.3E-06**	**4.6E-02**	**4.7E-05**	**8.9E-01**	**5.1E-06**	**6.1E-02**	**5.5E-06**	**4.2E-02**	**6.0E-06**	**1.0E-01**	**3.1E-06**	**9.0E-02**	**1.2E-05**	**1.5E-01**	**5.3E-06**	**1.2E-01**	**1.6E-05**	**5.2E-01**

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	4.46E-03	ND	1.29E-03	ND	1.92E-03	ND	ND	ND	ND	ND	1.10E-03
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	2.37E-05	4.32E+00	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.34E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.68E-04	ND	5.50E-06	ND	8.48E-06	ND	ND	ND	3.07E-06	ND	2.33E-05
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.61E-06	5.03E-02	4.02E-06	1.26E-01	6.19E-07	1.94E-02	ND	ND	ND	ND	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	3.04E-04	ND	1.40E-04	ND	2.01E-04	ND	ND	ND	ND	ND	1.36E-04
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.19E-04
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	1.27E+02	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	4.70E-05	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	8.08E-04	ND	8.94E-04	ND	ND	ND	ND	ND	9.81E-04	ND	9.23E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5A. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.79E-07	1.93E-04	2.60E-07	2.80E-04	1.34E-07	1.44E-04	ND	ND	ND	ND	1.02E-07	1.10E-04
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	2.88E-04	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	1.35E-02	ND	ND	ND	ND	ND	1.16E-04	ND	4.31E-03
Methyl ethyl ketone	ND	5.76E-04	ND	9.79E-06	ND	3.97E-05	ND	ND	ND	ND	ND	1.84E-04
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	4.50E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.97E-05
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	ND	ND	2.73E-04	ND	1.29E-04	ND	ND	ND	ND	ND	ND
o-Xylene	ND	2.48E-03	ND	9.52E-04	ND	1.18E-03	ND	ND	ND	ND	ND	8.37E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	5.61E-07	6.14E-03	1.17E-06	1.29E-02	2.09E-02	2.29E+02	9.78E-07	1.07E-02	2.54E-06	2.79E-02
Tetrahydrofuran	ND	1.12E-04	ND	ND	ND	1.72E-05	ND	ND	ND	ND	ND	1.44E-04
Toluene	ND	4.45E-03	ND	1.35E-03	ND	1.26E-03	ND	ND	ND	ND	ND	7.65E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	9.81E-03	ND	4.90E-03	ND	4.90E-03	ND	ND	ND	ND	ND	3.46E-03
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	7.23E-02	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	9.41E-04	2.15E+02	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.15E-05	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.8E-06**	**7.5E-02**	**4.8E-06**	**1.6E-01**	**1.9E-06**	**4.2E-02**	**2.2E-02**	**5.7E+02**	**9.8E-07**	**1.2E-02**	**2.6E-06**	**4.0E-02**

Notes:

ND = nondetect

All results are from November or December 2020 unless noted otherwise.
When two sets of results are presented for a given location, the higher estimated risk or hazard was selected for that location.
Cancer risk and noncancer hazard calculated using the formula:

$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: MDC = Maximum detected concentration (microgram per cubic meter)
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(1) Noncancer hazard estimate for a residential exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03) and a target noncancer hazard of 1.
(2) Cancer risk estimate for a residential exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03) and a target cancer risk of 1E-06.
(3) Cumualtive risk and hazards summed for each sample location.

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	2.8E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5E-06	ND	ND	ND	ND	ND	9.3E-07
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	5.0E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8E-07
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.1E-03	ND	4.5E-04	ND	4.0E-04	ND	4.6E-04	ND	1.1E-03	ND	2.6E-04	ND	3.7E-04	ND	1.9E-04	ND	1.3E-05
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	1.1E-06	6.1E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	7.7E-09	1.1E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	4.5E-04	ND	1.1E-04	ND	1.3E-04	ND	1.2E-04	ND	3.2E-04	ND	8.3E-05	ND	ND	ND	7.0E-05	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	6.5E-06	ND	3.0E-06	ND	2.3E-06	ND	8.1E-06	ND	5.0E-07	ND	4.7E-06	ND	8.1E-06	ND	5.6E-07	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	3.8E-07	1.2E-02	1.2E-07	3.9E-03	3.2E-07	1.0E-02	3.3E-08	1.0E-03	9.0E-08	2.8E-03	7.8E-08	2.5E-03	7.7E-08	2.4E-03	1.0E-07	3.2E-03	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.9E-05	ND	3.6E-05	ND	1.3E-04	ND	1.0E-04	ND	4.1E-05	ND	3.5E-05	ND	2.5E-05	ND	4.7E-05	ND	3.4E-06
Carbon tetrachloride	ND	ND	5.3E-09	6.0E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	9.8E-08	1.2E-04	7.3E-07	8.7E-04	4.3E-08	5.2E-05	8.2E-08	9.8E-05	7.5E-09	8.9E-06	4.5E-08	5.4E-05	8.2E-08	9.8E-05	2.6E-08	3.1E-05	7.6E-08	9.1E-05
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	9.4E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	3.0E-05	ND	7.0E-05	ND	1.5E-04	ND	4.8E-04	ND	ND	ND	3.8E-05	ND	ND	ND	3.5E-05	ND	1.7E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5.9E-08	6.3E-05	1.3E-08	1.4E-05	2.2E-08	2.4E-05	1.2E-08	1.3E-05	4.8E-08	5.2E-05	1.3E-08	1.4E-05	1.6E-08	1.7E-05	1.3E-08	1.4E-05	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	9.5E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1E-06	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7E-05	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.8E-05	ND	1.3E-05	ND	6.9E-06	ND	6.3E-06	ND	2.5E-06	ND	1.6E-05	ND	3.3E-05	ND	1.2E-06	ND	ND
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.5E-05	ND	2.1E-06	ND	1.9E-06	ND	9.9E-06	ND	3.8E-06	ND	1.5E-06	ND	4.8E-06	ND	5.1E-07	ND	ND
Methyl t-butyl ether	5.6E-11	1.9E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	1.3E-07	3.5E-03	ND	ND	ND	ND	ND	ND	5.2E-08	1.4E-03	1.2E-07	3.1E-03
n-Heptane	ND	2.4E-05	ND	9.4E-06	ND	1.2E-05	ND	ND	ND	1.8E-06	ND	7.3E-06	ND	ND	ND	5.0E-06	ND	ND
o-Xylene	ND	7.2E-04	ND	1.8E-04	ND	2.7E-04	ND	1.5E-04	ND	6.4E-04	ND	1.5E-04	ND	1.8E-04	ND	1.5E-04	ND	ND
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	3.5E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	2.8E-06	ND	ND	ND	1.4E-06	ND	ND	ND	2.0E-06	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	4.3E-08	4.8E-04	1.3E-07	1.5E-03	7.2E-08	7.9E-04	5.7E-07	6.2E-03	6.1E-08	6.7E-04	2.8E-07	3.1E-03	2.0E-07	2.2E-03	1.2E-07	1.3E-03	1.4E-06	1.5E-02
Tetrahydrofuran	ND	1.9E-05	ND	3.9E-06	ND	1.7E-06	ND	6.2E-06	ND	1.1E-05	ND	4.0E-06	ND	6.2E-06	ND	1.3E-06	ND	ND
Toluene	ND	1.0E-03	ND	4.2E-04	ND	7.4E-04	ND	1.9E-04	ND	1.2E-03	ND	4.7E-04	ND	3.9E-03	ND	3.2E-04	ND	3.9E-06
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	2.7E-03	ND	7.3E-04	ND	1.2E-03	ND	6.1E-04	ND	2.3E-03	ND	6.3E-04	ND	7.4E-04	ND	6.3E-04	ND	ND
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	1.9E-09	4.4E-04	2.8E-08	6.5E-03	ND	ND	1.4E-08	3.3E-03	ND	ND
Trichlorofluoromethane	ND	1.3E-06	ND	2.0E-06	ND	2.2E-06	ND	5.8E-06	ND	ND	ND	1.7E-06	ND	ND	ND	ND	ND	2.6E-06
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**5.8E-07**	**1.9E-02**	**1.0E-06**	**8.3E-03**	**4.6E-07**	**1.4E-02**	**1.9E-06**	**1.9E-02**	**2.1E-07**	**9.6E-03**	**4.5E-07**	**1.4E-02**	**3.8E-07**	**1.0E-02**	**3.3E-07**	**1.1E-02**	**1.6E-06**	**1.9E-02**

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.8E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	3.3E-04	ND	1.2E-04	ND	1.1E-03	ND	3.2E-04	ND	2.6E-04	ND	2.9E-04	ND	5.1E-04	ND	2.9E-05	ND	1.6E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	6.9E-05	ND	4.0E-05	ND	3.5E-04	ND	ND	ND	ND	ND	1.1E-04	ND	1.6E-04	ND	ND	ND	3.8E-05
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	2.0E-07	ND	1.1E-07	ND	1.4E-05	ND	ND	ND	ND	ND	1.7E-07	ND	9.3E-07	ND	1.6E-07	ND	1.2E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.7E-08	5.3E-04	ND	ND	2.1E-07	6.5E-03	4.0E-07	1.3E-02	ND	ND	9.7E-08	3.0E-03	3.8E-08	1.2E-03	ND	ND	1.5E-08	4.8E-04
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6E-07	1.4E-04	3.2E-07	2.9E-04	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	2.1E-06	ND	1.5E-05	ND	1.5E-05	ND	3.8E-05	ND	3.6E-05	ND	5.1E-05	ND	2.1E-05	ND	4.9E-06	ND	1.1E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	4.7E-08	5.6E-05	7.8E-09	9.3E-06	ND	ND	ND	ND	3.4E-08	4.0E-05	5.3E-06	6.4E-03	1.1E-05	1.4E-02	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	7.1E-05	ND	9.6E-05	ND	ND	ND	ND	ND	ND	ND	3.8E-05	ND	6.3E-05	ND	8.6E-05	ND	ND
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	3.3E-09	3.6E-06	2.7E-09	2.9E-06	4.6E-08	4.9E-05	1.7E-08	1.8E-05	1.5E-08	1.6E-05	2.0E-08	2.1E-05	1.8E-08	1.9E-05	1.6E-09	1.7E-06	6.3E-09	6.7E-06
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	1.2E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	1.6E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1E-05	ND	5.7E-06	ND	ND
Methyl ethyl ketone	ND	1.9E-07	ND	ND	ND	3.5E-05	ND	4.6E-06	ND	ND	ND	4.8E-07	ND	3.5E-06	ND	1.9E-07	ND	3.3E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	ND	ND	ND	ND	3.0E-05	ND	ND	ND	ND	ND	ND	ND	1.9E-06	ND	ND	ND	7.3E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.4E-07	3.8E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.1E-08	2.4E-03	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	1.1E-05	ND	7.0E-05	ND	ND	ND	ND	ND	5.0E-06	ND	ND	ND	2.0E-06
o-Xylene	ND	8.0E-05	ND	5.0E-05	ND	6.1E-04	ND	2.0E-04	ND	1.7E-04	ND	2.2E-04	ND	2.8E-04	ND	1.8E-05	ND	9.1E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-06	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	2.7E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.5E-07	2.7E-03	2.1E-07	2.3E-03	9.1E-08	1.0E-03	ND	ND	1.9E-07	2.1E-03	1.2E-07	1.3E-03	2.2E-07	2.4E-03	4.6E-07	5.0E-03	1.4E-07	1.5E-03
Tetrahydrofuran	ND	ND	ND	1.2E-06	ND	3.1E-05	ND	ND	ND	ND	ND	1.4E-06	ND	1.0E-05	ND	5.7E-07	ND	2.1E-06
Toluene	ND	3.2E-05	ND	2.3E-05	ND	6.8E-04	ND	8.1E-03	ND	1.1E-02	ND	3.9E-04	ND	2.3E-04	ND	2.5E-05	ND	2.9E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	2.6E-04	ND	1.6E-04	ND	2.2E-03	ND	8.2E-04	ND	7.1E-04	ND	9.4E-04	ND	9.6E-04	ND	6.3E-05	ND	3.1E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.6E-09	1.3E-03	5.2E-09	1.2E-03	ND	ND
Trichlorofluoromethane	ND	1.7E-06	ND	1.5E-06	ND	1.2E-06	ND	ND	ND	ND	ND	ND	ND	1.4E-06	ND	ND	ND	2.0E-06
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**4.1E-07**	**8.0E-03**	**2.6E-07**	**2.9E-03**	**3.5E-07**	**1.3E-02**	**4.2E-07**	**2.2E-02**	**2.1E-07**	**1.5E-02**	**2.7E-07**	**6.5E-03**	**5.9E-06**	**1.6E-02**	**1.2E-05**	**2.0E-02**	**1.6E-07**	**2.9E-03**

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	1.1E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	6.0E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	5.1E-04	ND	1.1E-04	ND	4.6E-04	ND	3.2E-04	ND	8.0E-04	ND	8.3E-05	ND	8.9E-05	ND	6.4E-05	ND	4.3E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	3.5E-05	ND	1.5E-04	ND	6.9E-05	ND	3.0E-04	ND	2.2E-05	ND	2.6E-05	ND	2.9E-05	ND	1.1E-04
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	3.6E-06	ND	2.0E-06	ND	1.0E-05	ND	3.4E-07	ND	2.3E-06	ND	3.1E-07	ND	1.9E-07	ND	1.6E-07	ND	1.6E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	4.4E-08	1.4E-03	2.0E-07	6.1E-03	1.4E-08	4.5E-04	2.4E-07	7.4E-03	ND	ND	ND	ND	ND	ND	6.2E-08	1.9E-03
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	1.5E-05	ND	4.1E-04	ND	1.6E-05	ND	1.5E-05	ND	5.1E-06	ND	2.2E-06	ND	3.0E-06	ND	1.9E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	2.3E-08	2.7E-05	ND	ND	ND	ND	ND	ND	ND	ND	2.5E-08	2.9E-05	ND	ND
Chloromethane	ND	ND	ND	ND	ND	7.6E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	1.0E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.5E-04	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	2.7E-05	ND	2.7E-05	ND	ND	ND	ND	ND	2.5E-05	ND	2.6E-05	ND	ND	ND	2.4E-05
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.2E-08	2.4E-05	6.0E-09	6.4E-06	2.4E-08	2.6E-05	6.6E-09	7.1E-06	4.3E-08	4.6E-05	2.1E-09	2.2E-06	3.4E-09	3.7E-06	3.6E-09	3.8E-06	3.8E-08	4.0E-05
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	1.1E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	5.2E-06	ND	7.1E-06	ND	8.6E-06	ND	ND	ND	8.1E-06	ND	1.2E-06	ND	4.0E-07	ND	2.5E-07	ND	3.1E-07
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	4.5E-06	ND	1.1E-06	ND	6.7E-06	ND	6.1E-07	ND	1.5E-05	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-07	3.1E-03	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	2.4E-05	ND	ND	ND	2.9E-05	ND	ND	ND	ND	ND	ND	ND	9.4E-06
o-Xylene	ND	3.1E-04	ND	7.0E-05	ND	2.8E-04	ND	1.2E-04	ND	5.4E-04	ND	3.8E-05	ND	6.7E-05	ND	6.7E-05	ND	1.7E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8E-06	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.5E-07	1.7E-03	6.3E-09	6.9E-05	4.1E-08	4.5E-04	5.4E-07	6.0E-03	1.7E-07	1.9E-03	ND	ND	8.0E-08	8.8E-04	6.5E-08	7.1E-04	7.2E-09	7.9E-05
Tetrahydrofuran	ND	9.1E-06	ND	2.0E-06	ND	7.2E-06	ND	5.7E-07	ND	1.8E-05	ND	3.6E-07	ND	3.7E-07	ND	6.7E-07	ND	ND
Toluene	ND	3.1E-02	ND	1.4E-04	ND	5.8E-04	ND	4.5E-04	ND	9.0E-04	ND	2.9E-05	ND	8.7E-05	ND	1.8E-03	ND	4.2E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.4E-03	ND	2.9E-04	ND	1.3E-03	ND	3.9E-04	ND	2.0E-03	ND	1.3E-04	ND	2.3E-04	ND	2.1E-04	ND	9.6E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	2.2E-06	ND	9.2E-07	ND	1.0E-06	ND	1.1E-06	ND	1.1E-06	ND	ND	ND	1.0E-06
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.7E-07**	**3.5E-02**	**5.7E-08**	**2.2E-03**	**2.8E-07**	**9.9E-03**	**5.6E-07**	**7.8E-03**	**4.5E-07**	**1.5E-02**	**2.1E-09**	**3.3E-04**	**2.0E-07**	**4.5E-03**	**9.3E-08**	**3.0E-03**	**1.1E-07**	**4.2E-03**

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.9E-04	ND	ND	ND	ND	ND	1.2E-04	ND	1.8E-04	ND	5.6E-04	ND	ND	ND	1.3E-04	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.5E-07	4.8E-03	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	4.6E-05	ND	ND	ND	ND	ND	3.5E-05	ND	6.2E-05	ND	1.8E-04	ND	ND	ND	4.6E-05	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	3.0E-06	ND	ND	ND	6.5E-08	ND	1.3E-07	ND	4.3E-06	ND	7.8E-06	ND	6.5E-08	ND	1.7E-06	ND	2.0E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	3.4E-08	1.1E-03	ND	ND	ND	ND	1.9E-08	5.8E-04	7.8E-08	2.5E-03	1.8E-07	5.5E-03	ND	ND	1.9E-08	5.8E-04	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	7.8E-06	ND	ND	ND	ND	ND	6.2E-06	ND	1.8E-05	ND	2.7E-05	ND	ND	ND	1.1E-05	ND	6.0E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	1.6E-07	2.0E-04	2.0E-08	2.4E-05	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.5E-05	ND	ND	ND	2.9E-05	ND	3.0E-05	ND	4.1E-05	ND	2.8E-05	ND	2.7E-05	ND	2.7E-05	ND	2.6E-05
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	7.1E-09	7.6E-06	ND	ND	ND	ND	3.2E-09	3.5E-06	8.4E-09	9.0E-06	2.1E-08	2.3E-05	ND	ND	5.0E-09	5.4E-06	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	3.2E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	4.2E-06	ND	ND	ND	ND	ND	ND	ND	4.0E-06	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.9E-05	ND	ND	ND	ND	ND	3.8E-07	ND	1.5E-05	ND	3.1E-05	ND	ND	ND	8.3E-06	ND	5.4E-07
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	2.3E-06	ND	ND	ND	ND	ND	ND	ND	1.8E-06	ND	1.9E-06	ND	ND	ND	1.1E-06	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.2E-07	3.0E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	2.6E-06	ND	ND	ND	ND	ND	ND	ND	5.0E-06	ND	1.2E-05	ND	ND	ND	ND	ND	ND
o-Xylene	ND	1.0E-04	ND	ND	ND	ND	ND	4.1E-05	ND	1.1E-04	ND	2.8E-04	ND	ND	ND	7.6E-05	ND	1.6E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	3.3E-04	ND	ND	ND	ND	ND	ND	ND	2.8E-06	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.6E-08	2.9E-04	ND	ND	1.5E-08	1.6E-04	1.2E-08	1.3E-04	2.0E-08	2.2E-04	1.1E-08	1.2E-04	1.9E-08	2.0E-04	1.2E-08	1.3E-04	2.1E-08	2.3E-04
Tetrahydrofuran	ND	3.1E-06	ND	ND	ND	ND	ND	1.1E-06	ND	3.9E-06	ND	4.2E-06	ND	ND	ND	2.0E-06	ND	ND
Toluene	ND	2.3E-03	ND	1.8E-02	ND	1.6E-05	ND	3.9E-05	ND	2.2E-04	ND	4.2E-04	ND	6.5E-06	ND	1.1E-04	ND	2.3E-05
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	4.1E-04	ND	ND	ND	ND	ND	1.8E-04	ND	4.4E-04	ND	1.2E-03	ND	3.1E-05	ND	3.0E-04	ND	1.6E-05
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	1.9E-09	4.4E-04	ND	ND	ND	ND	ND	ND	1.2E-08	2.6E-03	ND	ND	4.2E-09	9.6E-04	ND	ND	ND	ND
Trichlorofluoromethane	ND	1.0E-06	ND	ND	ND	ND	ND	ND	ND	1.8E-06	ND	1.3E-06	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	6.7E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.8E-07**	**8.0E-03**	**0.0E+00**	**2.2E-02**	**1.5E-08**	**2.1E-04**	**3.4E-08**	**1.2E-03**	**2.8E-07**	**6.6E-03**	**2.3E-07**	**8.4E-03**	**8.7E-07**	**6.0E-03**	**3.5E-08**	**1.4E-03**	**2.1E-08**	**3.1E-04**

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3E-07	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.6E-04	ND	2.6E-03	ND	5.6E-05	ND	ND	ND	2.2E-04	ND	1.9E-04	ND	1.8E-04	ND	1.3E-04	ND	6.5E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	6.0E-07	3.4E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-08	1.8E-04
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	4.8E-05	ND	5.1E-04	ND	ND	ND	ND	ND	6.6E-05	ND	5.9E-05	ND	5.0E-05	ND	4.1E-05	ND	2.2E-04
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	8.0E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	4.3E-07	ND	6.5E-08	ND	5.6E-07	ND	5.3E-08	ND	3.3E-06	ND	9.9E-06	ND	2.0E-06	ND	7.3E-07	ND	4.7E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	1.0E-08	3.2E-04	ND	ND	2.0E-08	6.3E-04	4.3E-08	1.4E-03	1.5E-08	4.8E-04	1.8E-08	5.5E-04	3.8E-07	1.2E-02
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	6.2E-06	ND	1.8E-06	ND	5.6E-06	ND	1.5E-06	ND	7.8E-06	ND	6.0E-06	ND	1.4E-05	ND	1.6E-05	ND	9.9E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.9E-08	3.4E-05	4.4E-08	5.3E-05	3.9E-08	4.6E-05	6.2E-08	7.5E-05	1.8E-08	2.1E-05	ND	ND	7.4E-08	8.8E-05	ND	ND	5.5E-08	6.6E-05
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.3E-07
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.8E-05	ND	2.6E-05	ND	2.9E-05	ND	2.7E-05	ND	2.8E-05	ND	2.8E-05	ND	4.4E-04	ND	2.6E-04	ND	4.1E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	4.6E-09	5.0E-06	ND	ND	2.9E-09	3.2E-06	ND	ND	7.4E-09	7.9E-06	8.8E-09	9.5E-06	4.5E-09	4.8E-06	5.2E-09	5.6E-06	3.4E-08	3.7E-05
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	6.7E-06	ND	ND	ND	ND	ND	ND	ND	1.3E-05	ND	ND	ND	ND	ND	4.8E-05	ND	ND
Methyl ethyl ketone	ND	3.6E-06	ND	ND	ND	2.5E-06	ND	ND	ND	1.9E-05	ND	2.5E-05	ND	7.7E-06	ND	3.1E-06	ND	2.5E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.5E-06	ND	ND	ND	7.7E-07	ND	ND	ND	2.8E-06	ND	1.3E-06	ND	1.2E-06	ND	6.7E-07	ND	8.0E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	8.5E-07	2.2E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.9E-08	1.6E-03	ND	ND
n-Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	7.2E-05	ND	1.5E-05	ND	4.5E-05	ND	ND	ND	1.2E-04	ND	1.2E-04	ND	6.7E-05	ND	6.4E-05	ND	4.0E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2E-05
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	7.6E-08	8.3E-04	6.3E-08	6.9E-04	1.2E-07	1.3E-03	1.2E-07	1.3E-03	1.5E-07	1.7E-03	5.0E-08	5.5E-04	3.0E-07	3.3E-03	9.5E-08	1.0E-03	6.3E-08	6.9E-04
Tetrahydrofuran	ND	2.8E-06	ND	ND	ND	1.7E-06	ND	ND	ND	5.0E-06	ND	4.5E-06	ND	1.4E-06	ND	1.6E-06	ND	2.4E-06
Toluene	ND	5.8E-05	ND	6.1E-06	ND	4.5E-05	ND	ND	ND	1.3E-04	ND	1.6E-04	ND	6.1E-05	ND	5.6E-05	ND	9.0E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	2.6E-04	ND	4.2E-05	ND	1.2E-04	ND	ND	ND	4.2E-04	ND	4.7E-04	ND	2.6E-04	ND	2.4E-04	ND	1.8E-03
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8E-06	ND	1.5E-06	ND	1.9E-06
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.1E-07**	**1.5E-03**	**1.6E-06**	**3.0E-02**	**1.7E-07**	**2.0E-03**	**1.8E-07**	**1.4E-03**	**2.0E-07**	**3.4E-03**	**1.0E-07**	**3.0E-03**	**4.0E-07**	**5.0E-03**	**1.8E-07**	**4.0E-03**	**5.5E-07**	**1.7E-02**

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.5E-04	ND	4.3E-05	ND	6.4E-05	ND	ND	ND	ND	ND	3.7E-05
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	7.9E-07	1.4E-01	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	4.5E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	5.6E-06	ND	1.8E-07	ND	2.8E-07	ND	ND	ND	1.0E-07	ND	7.8E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	5.4E-08	1.7E-03	1.3E-07	4.2E-03	2.1E-08	6.5E-04	ND	ND	ND	ND	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.0E-05	ND	4.7E-06	ND	6.7E-06	ND	ND	ND	ND	ND	4.5E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1E-05
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	4.2E+00	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	1.6E-06	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.7E-05	ND	3.0E-05	ND	ND	ND	ND	ND	3.3E-05	ND	3.1E-05
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	6.0E-09	6.4E-06	8.7E-09	9.3E-06	4.5E-09	4.8E-06	ND	ND	ND	ND	3.4E-09	3.7E-06
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	9.6E-06	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	4.5E-04	ND	ND	ND	ND	ND	3.9E-06	ND	1.4E-04
Methyl ethyl ketone	ND	1.9E-05	ND	3.3E-07	ND	1.3E-06	ND	ND	ND	ND	ND	6.1E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.5E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.9E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5B. POINT RISK ESTIMATE SUMMARY - RESIDENTIAL EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	ND	ND	9.1E-06	ND	4.3E-06	ND	ND	ND	ND	ND	ND
o-Xylene	ND	8.3E-05	ND	3.2E-05	ND	3.9E-05	ND	ND	ND	ND	ND	2.8E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	1.9E-08	2.0E-04	3.9E-08	4.3E-04	7.0E-04	7.6E+00	3.3E-08	3.6E-04	8.5E-08	9.3E-04
Tetrahydrofuran	ND	3.7E-06	ND	ND	ND	5.7E-07	ND	ND	ND	ND	ND	4.8E-06
Toluene	ND	1.5E-04	ND	4.5E-05	ND	4.2E-05	ND	ND	ND	ND	ND	2.5E-05
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	3.3E-04	ND	1.6E-04	ND	1.6E-04	ND	ND	ND	ND	ND	1.2E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	2.4E-03	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	3.1E-05	7.2E+00	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4E-06	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**6.0E-08**	**2.5E-03**	**1.6E-07**	**5.2E-03**	**6.4E-08**	**1.4E-03**	**7.3E-04**	**1.9E+01**	**3.3E-08**	**4.0E-04**	**8.8E-08**	**1.3E-03**

Notes:
ND = nondetect
All results are from November or December 2020 unless noted otherwise.
When two sets of results are presented for a given location, the higher estimated risk or hazard was selected for that location.
Cancer risk and noncancer hazard calculated using the formula:

$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: *MDC = Maximum detected concentration (microgram per cubic meter)*
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(1) Noncancer hazard estimate for a residential exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001) and a target noncancer hazard of 1.
(2) Cancer risk estimate for a residential exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001) and a target cancer risk of 1E-06.
(3) Cumualtive risk and hazards summed for each sample location.

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	2.0E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.1E-05	ND	ND	ND	ND	ND	6.3E-06
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	3.6E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-06
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	7.9E-03	ND	3.2E-03	ND	2.9E-03	ND	3.3E-03	ND	8.1E-03	ND	1.8E-03	ND	2.6E-03	ND	1.4E-03	ND	9.6E-05
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	7.7E-06	4.4E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	5.3E-08	8.1E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	3.2E-03	ND	8.0E-04	ND	9.4E-04	ND	8.7E-04	ND	2.3E-03	ND	5.9E-04	ND	ND	ND	5.0E-04	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	4.7E-05	ND	2.2E-05	ND	1.6E-05	ND	5.8E-05	ND	3.6E-06	ND	3.3E-05	ND	5.8E-05	ND	4.0E-06	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	2.6E-06	8.5E-02	8.6E-07	2.8E-02	2.2E-06	7.2E-02	2.3E-07	7.4E-03	6.2E-07	2.0E-02	5.4E-07	1.8E-02	5.4E-07	1.7E-02	7.1E-07	2.3E-02	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.4E-04	ND	2.5E-04	ND	9.1E-04	ND	7.2E-04	ND	2.9E-04	ND	2.5E-04	ND	1.8E-04	ND	3.3E-04	ND	2.4E-05
Carbon tetrachloride	ND	ND	3.8E-08	4.2E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	6.8E-07	8.4E-04	5.0E-06	6.2E-03	3.0E-07	3.7E-04	5.6E-07	7.0E-04	5.1E-08	6.4E-05	3.1E-07	3.9E-04	5.6E-07	7.0E-04	1.8E-07	2.2E-04	5.2E-07	6.5E-04
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	6.7E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.1E-04	ND	5.0E-04	ND	1.1E-03	ND	3.4E-03	ND	ND	ND	2.7E-04	ND	ND	ND	2.5E-04	ND	1.2E-03
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	4.0E-07	4.5E-04	9.2E-08	1.0E-04	1.5E-07	1.7E-04	7.9E-08	8.9E-05	3.3E-07	3.7E-04	9.2E-08	1.0E-04	1.1E-07	1.2E-04	9.2E-08	1.0E-04	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	6.7E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9E-05	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-04	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.3E-04	ND	9.2E-05	ND	4.9E-05	ND	4.5E-05	ND	1.8E-05	ND	1.2E-04	ND	2.3E-04	ND	8.5E-06	ND	ND
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.1E-04	ND	1.5E-05	ND	1.4E-05	ND	7.1E-05	ND	2.7E-05	ND	1.1E-05	ND	3.4E-05	ND	3.7E-06	ND	ND
Methyl t-butyl ether	3.8E-10	1.4E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	9.1E-07	2.5E-02	ND	ND	ND	ND	ND	ND	3.6E-07	9.8E-03	8.1E-07	2.2E-02
n-Heptane	ND	1.7E-04	ND	6.7E-05	ND	8.4E-05	ND	ND	ND	1.3E-05	ND	5.2E-05	ND	ND	ND	3.6E-05	ND	ND
o-Xylene	ND	5.1E-03	ND	1.3E-03	ND	1.9E-03	ND	1.1E-03	ND	4.6E-03	ND	1.1E-03	ND	1.3E-03	ND	1.1E-03	ND	ND
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	2.5E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	2.0E-05	ND	ND	ND	1.0E-05	ND	ND	ND	1.5E-05	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	3.0E-07	3.3E-03	9.2E-07	1.0E-02	5.0E-07	5.5E-03	3.9E-06	4.3E-02	4.2E-07	4.7E-03	2.0E-06	2.2E-02	1.4E-06	1.6E-02	8.1E-07	9.0E-03	9.8E-06	1.1E-01
Tetrahydrofuran	ND	1.4E-04	ND	2.8E-05	ND	1.2E-05	ND	4.5E-05	ND	8.2E-05	ND	2.9E-05	ND	4.5E-05	ND	9.2E-06	ND	ND
Toluene	ND	7.2E-03	ND	3.0E-03	ND	5.3E-03	ND	1.4E-03	ND	8.3E-03	ND	3.3E-03	ND	2.8E-02	ND	2.3E-03	ND	2.8E-05
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.9E-02	ND	5.2E-03	ND	8.2E-03	ND	4.3E-03	ND	1.6E-02	ND	4.5E-03	ND	5.3E-03	ND	4.5E-03	ND	ND
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	9.2E-09	3.2E-03	1.4E-07	4.6E-02	ND	ND	6.8E-08	2.3E-02	ND	ND
Trichlorofluoromethane	ND	9.6E-06	ND	1.5E-05	ND	1.6E-05	ND	4.2E-05	ND	ND	ND	1.2E-05	ND	ND	ND	ND	ND	1.9E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**4.0E-06**	**1.3E-01**	**6.9E-06**	**5.9E-02**	**3.2E-06**	**9.9E-02**	**1.3E-05**	**1.4E-01**	**1.4E-06**	**6.8E-02**	**3.0E-06**	**9.8E-02**	**2.6E-06**	**7.1E-02**	**2.2E-06**	**7.6E-02**	**1.1E-05**	**1.3E-01**

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	4.1E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	2.3E-03	ND	8.8E-04	ND	7.9E-03	ND	2.3E-03	ND	1.8E-03	ND	2.1E-03	ND	3.7E-03	ND	2.1E-04	ND	1.1E-03
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	5.0E-04	ND	2.9E-04	ND	2.5E-03	ND	ND	ND	ND	ND	8.0E-04	ND	1.1E-03	ND	ND	ND	2.7E-04
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.4E-06	ND	8.0E-07	ND	1.0E-04	ND	ND	ND	ND	ND	1.2E-06	ND	6.7E-06	ND	1.1E-06	ND	8.4E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.2E-07	3.8E-03	ND	ND	1.4E-06	4.6E-02	2.8E-06	9.0E-02	ND	ND	6.7E-07	2.2E-02	2.6E-07	8.5E-03	ND	ND	1.1E-07	3.5E-03
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1E-06	1.0E-03	2.2E-06	2.1E-03	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.5E-05	ND	1.1E-04	ND	1.1E-04	ND	2.7E-04	ND	2.5E-04	ND	3.6E-04	ND	1.5E-04	ND	3.5E-05	ND	7.7E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	3.2E-07	4.0E-04	5.3E-08	6.7E-05	ND	ND	ND	ND	2.3E-07	2.9E-04	3.7E-05	4.6E-02	7.9E-05	9.8E-02	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	5.0E-04	ND	6.8E-04	ND	ND	ND	ND	ND	ND	ND	2.7E-04	ND	4.5E-04	ND	6.1E-04	ND	ND
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2.3E-08	2.5E-05	1.8E-08	2.1E-05	3.1E-07	3.5E-04	1.2E-07	1.3E-04	1.0E-07	1.2E-04	1.3E-07	1.5E-04	1.2E-07	1.4E-04	1.1E-08	1.2E-05	4.3E-08	4.8E-05
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	8.3E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	1.2E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2E-04	ND	4.1E-05	ND	ND
Methyl ethyl ketone	ND	1.4E-06	ND	ND	ND	2.5E-04	ND	3.3E-05	ND	ND	ND	3.4E-06	ND	2.5E-05	ND	1.4E-06	ND	2.3E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	ND	ND	ND	ND	2.2E-04	ND	ND	ND	ND	ND	ND	ND	1.4E-05	ND	ND	ND	5.3E-06
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)
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Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	9.9E-07	2.7E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.2E-07	1.7E-02	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	8.1E-05	ND	5.0E-04	ND	ND	ND	ND	ND	3.6E-05	ND	ND	ND	1.5E-05
o-Xylene	ND	5.7E-04	ND	3.6E-04	ND	4.3E-03	ND	1.4E-03	ND	1.2E-03	ND	1.6E-03	ND	2.0E-03	ND	1.3E-04	ND	6.5E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9E-05	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	1.9E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.7E-06	1.9E-02	1.4E-06	1.6E-02	6.3E-07	7.0E-03	ND	ND	1.3E-06	1.5E-02	8.4E-07	9.3E-03	1.5E-06	1.7E-02	3.2E-06	3.5E-02	9.6E-07	1.1E-02
Tetrahydrofuran	ND	ND	ND	8.6E-06	ND	2.2E-04	ND	ND	ND	ND	ND	1.0E-05	ND	7.2E-05	ND	4.1E-06	ND	1.5E-05
Toluene	ND	2.3E-04	ND	1.6E-04	ND	4.8E-03	ND	5.8E-02	ND	8.1E-02	ND	2.8E-03	ND	1.7E-03	ND	1.8E-04	ND	2.1E-03
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.8E-03	ND	1.2E-03	ND	1.6E-02	ND	5.8E-03	ND	5.1E-03	ND	6.7E-03	ND	6.8E-03	ND	4.5E-04	ND	2.2E-03
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-08	9.2E-03	2.5E-08	8.6E-03	ND	ND
Trichlorofluoromethane	ND	1.2E-05	ND	1.1E-05	ND	8.5E-06	ND	ND	ND	ND	ND	ND	ND	1.0E-05	ND	ND	ND	1.5E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**2.9E-06**	**5.7E-02**	**1.8E-06**	**2.0E-02**	**2.4E-06**	**9.0E-02**	**2.9E-06**	**1.6E-01**	**1.4E-06**	**1.0E-01**	**1.9E-06**	**4.6E-02**	**4.0E-05**	**1.1E-01**	**8.4E-05**	**1.5E-01**	**1.1E-06**	**2.1E-02**

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	7.5E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	4.2E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	3.7E-03	ND	8.0E-04	ND	3.3E-03	ND	2.3E-03	ND	5.7E-03	ND	5.9E-04	ND	6.4E-04	ND	4.6E-04	ND	3.1E-03
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	2.5E-04	ND	1.1E-03	ND	4.9E-04	ND	2.2E-03	ND	1.6E-04	ND	1.8E-04	ND	2.1E-04	ND	7.8E-04
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	2.6E-05	ND	1.4E-05	ND	7.3E-05	ND	2.4E-06	ND	1.7E-05	ND	2.2E-06	ND	1.4E-06	ND	1.2E-06	ND	1.2E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	3.1E-07	9.9E-03	1.4E-06	4.4E-02	1.0E-07	3.2E-03	1.6E-06	5.3E-02	ND	ND	ND	ND	ND	ND	4.3E-07	1.4E-02
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	1.1E-04	ND	2.9E-03	ND	1.2E-04	ND	1.1E-04	ND	3.6E-05	ND	1.6E-05	ND	2.1E-05	ND	1.4E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	1.6E-07	2.0E-04	ND	ND	ND	ND	ND	ND	ND	ND	1.7E-07	2.1E-04	ND	ND
Chloromethane	ND	ND	ND	ND	ND	5.4E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	7.2E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.6E-03	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	1.9E-04	ND	1.9E-04	ND	ND	ND	ND	ND	1.8E-04	ND	1.8E-04	ND	ND	ND	1.7E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.5E-07	1.7E-04	4.1E-08	4.6E-05	1.6E-07	1.8E-04	4.5E-08	5.1E-05	2.9E-07	3.3E-04	1.4E-08	1.6E-05	2.3E-08	2.6E-05	2.4E-08	2.7E-05	2.6E-07	2.9E-04
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	7.5E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	3.7E-05	ND	5.1E-05	ND	6.2E-05	ND	ND	ND	5.8E-05	ND	8.8E-06	ND	2.9E-06	ND	1.8E-06	ND	2.2E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	3.2E-05	ND	7.6E-06	ND	4.8E-05	ND	4.4E-06	ND	1.1E-04	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)
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Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.1E-07	2.2E-02	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	1.7E-04	ND	ND	ND	2.1E-04	ND	ND	ND	ND	ND	ND	ND	6.7E-05
o-Xylene	ND	2.2E-03	ND	5.0E-04	ND	2.0E-03	ND	8.2E-04	ND	3.8E-03	ND	2.7E-04	ND	4.8E-04	ND	4.8E-04	ND	1.2E-03
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3E-05	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.1E-06	1.2E-02	4.4E-08	4.8E-04	2.9E-07	3.2E-03	3.8E-06	4.2E-02	1.2E-06	1.3E-02	ND	ND	5.6E-07	6.2E-03	4.5E-07	5.0E-03	5.0E-08	5.5E-04
Tetrahydrofuran	ND	6.5E-05	ND	1.4E-05	ND	5.1E-05	ND	4.1E-06	ND	1.3E-04	ND	2.6E-06	ND	2.6E-06	ND	4.8E-06	ND	ND
Toluene	ND	2.2E-01	ND	9.7E-04	ND	4.2E-03	ND	3.2E-03	ND	6.5E-03	ND	2.1E-04	ND	6.2E-04	ND	1.3E-02	ND	3.0E-03
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.0E-02	ND	2.1E-03	ND	8.9E-03	ND	2.8E-03	ND	1.4E-02	ND	8.9E-04	ND	1.6E-03	ND	1.5E-03	ND	6.8E-03
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	1.6E-05	ND	6.8E-06	ND	7.4E-06	ND	7.9E-06	ND	7.9E-06	ND	ND	ND	7.4E-06
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.2E-06**	**2.5E-01**	**3.9E-07**	**1.5E-02**	**2.0E-06**	**7.0E-02**	**3.9E-06**	**5.5E-02**	**3.1E-06**	**1.0E-01**	**1.4E-08**	**2.4E-03**	**1.4E-06**	**3.2E-02**	**6.4E-07**	**2.1E-02**	**7.3E-07**	**3.0E-02**

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.4E-03	ND	ND	ND	ND	ND	8.2E-04	ND	1.3E-03	ND	4.0E-03	ND	ND	ND	9.5E-04	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.0E-06	3.4E-02	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	3.3E-04	ND	ND	ND	ND	ND	2.5E-04	ND	4.4E-04	ND	1.3E-03	ND	ND	ND	3.3E-04	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	2.1E-05	ND	ND	ND	4.7E-07	ND	9.6E-07	ND	3.1E-05	ND	5.6E-05	ND	4.7E-07	ND	1.2E-05	ND	1.4E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	2.4E-07	7.6E-03	ND	ND	ND	ND	1.3E-07	4.2E-03	5.4E-07	1.8E-02	1.2E-06	3.9E-02	ND	ND	1.3E-07	4.2E-03	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	5.6E-05	ND	ND	ND	ND	ND	4.4E-05	ND	1.3E-04	ND	2.0E-04	ND	ND	ND	7.9E-05	ND	4.3E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	1.1E-06	1.4E-03	1.4E-07	1.7E-04	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	1.8E-04	ND	ND	ND	2.1E-04	ND	2.1E-04	ND	2.9E-04	ND	2.0E-04	ND	1.9E-04	ND	1.9E-04	ND	1.8E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	4.8E-08	5.4E-05	ND	ND	ND	ND	2.2E-08	2.5E-05	5.7E-08	6.4E-05	1.5E-07	1.6E-04	ND	ND	3.4E-08	3.8E-05	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	2.2E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	3.0E-05	ND	ND	ND	ND	ND	ND	ND	2.9E-05	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.4E-04	ND	ND	ND	ND	ND	2.7E-06	ND	1.1E-04	ND	2.2E-04	ND	ND	ND	5.9E-05	ND	3.8E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.6E-05	ND	ND	ND	ND	ND	ND	ND	1.3E-05	ND	1.4E-05	ND	ND	ND	7.8E-06	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	7.9E-07	2.2E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	1.9E-05	ND	ND	ND	ND	ND	ND	ND	3.6E-05	ND	8.6E-05	ND	ND	ND	ND	ND	ND
o-Xylene	ND	7.1E-04	ND	ND	ND	ND	ND	2.9E-04	ND	7.5E-04	ND	2.0E-03	ND	ND	ND	5.4E-04	ND	1.2E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	2.4E-03	ND	ND	ND	ND	ND	ND	ND	2.0E-05	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.8E-07	2.0E-03	ND	ND	1.0E-07	1.1E-03	8.3E-08	9.2E-04	1.4E-07	1.5E-03	7.7E-08	8.5E-04	1.3E-07	1.4E-03	8.0E-08	8.8E-04	1.4E-07	1.6E-03
Tetrahydrofuran	ND	2.2E-05	ND	ND	ND	ND	ND	7.9E-06	ND	2.8E-05	ND	3.0E-05	ND	ND	ND	1.4E-05	ND	ND
Toluene	ND	1.7E-02	ND	1.3E-01	ND	1.2E-04	ND	2.8E-04	ND	1.6E-03	ND	3.0E-03	ND	4.6E-05	ND	7.6E-04	ND	1.6E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	2.9E-03	ND	ND	ND	ND	ND	1.3E-03	ND	3.2E-03	ND	8.2E-03	ND	2.2E-04	ND	2.1E-03	ND	1.2E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	9.2E-09	3.2E-03	ND	ND	ND	ND	ND	ND	5.5E-08	1.9E-02	ND	ND	2.0E-08	6.8E-03	ND	ND	ND	ND
Trichlorofluoromethane	ND	7.6E-06	ND	ND	ND	ND	ND	ND	ND	1.3E-05	ND	9.6E-06	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	4.8E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.3E-06**	**5.7E-02**	**0.0E+00**	**1.6E-01**	**1.0E-07**	**1.5E-03**	**2.3E-07**	**8.3E-03**	**1.9E-06**	**4.7E-02**	**1.6E-06**	**6.0E-02**	**6.1E-06**	**4.3E-02**	**2.4E-07**	**1.0E-02**	**1.4E-07**	**2.2E-03**

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6E-06	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.1E-03	ND	1.8E-02	ND	4.0E-04	ND	ND	ND	1.6E-03	ND	1.4E-03	ND	1.3E-03	ND	9.4E-04	ND	4.7E-03
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	4.2E-06	2.4E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.3E-08	1.3E-03
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	3.4E-04	ND	3.7E-03	ND	ND	ND	ND	ND	4.7E-04	ND	4.2E-04	ND	3.5E-04	ND	2.9E-04	ND	1.6E-03
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	5.7E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	3.1E-06	ND	4.7E-07	ND	4.0E-06	ND	3.8E-07	ND	2.3E-05	ND	7.1E-05	ND	1.4E-05	ND	5.2E-06	ND	3.3E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	7.1E-08	2.3E-03	ND	ND	1.4E-07	4.5E-03	3.0E-07	9.7E-03	1.1E-07	3.5E-03	1.2E-07	3.9E-03	2.6E-06	8.5E-02
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	4.4E-05	ND	1.3E-05	ND	4.0E-05	ND	1.1E-05	ND	5.6E-05	ND	4.3E-05	ND	9.8E-05	ND	1.1E-04	ND	7.0E-04
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.0E-07	2.5E-04	3.0E-07	3.8E-04	2.6E-07	3.3E-04	4.3E-07	5.3E-04	1.2E-07	1.5E-04	ND	ND	5.1E-07	6.3E-04	ND	ND	3.8E-07	4.7E-04
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6E-06
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	2.0E-04	ND	1.8E-04	ND	2.1E-04	ND	1.9E-04	ND	2.0E-04	ND	2.0E-04	ND	3.2E-03	ND	1.8E-03	ND	2.9E-03
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	3.2E-08	3.6E-05	ND	ND	2.0E-08	2.3E-05	ND	ND	5.0E-08	5.7E-05	6.0E-08	6.8E-05	3.1E-08	3.4E-05	3.5E-08	4.0E-05	2.3E-07	2.6E-04
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	4.8E-05	ND	ND	ND	ND	ND	ND	ND	9.6E-05	ND	ND	ND	ND	ND	3.4E-04	ND	ND
Methyl ethyl ketone	ND	2.6E-05	ND	ND	ND	1.8E-05	ND	ND	ND	1.4E-04	ND	1.8E-04	ND	5.5E-05	ND	2.2E-05	ND	1.8E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.1E-05	ND	ND	ND	5.5E-06	ND	ND	ND	2.0E-05	ND	9.6E-06	ND	8.7E-06	ND	4.8E-06	ND	5.7E-06
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	5.8E-06	1.6E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1E-07	1.1E-02	ND	ND
n-Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	5.1E-04	ND	1.1E-04	ND	3.2E-04	ND	ND	ND	8.2E-04	ND	8.2E-04	ND	4.8E-04	ND	4.6E-04	ND	2.9E-03
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3E-04
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5.3E-07	5.8E-03	4.4E-07	4.8E-03	8.1E-07	9.0E-03	8.3E-07	9.2E-03	1.1E-06	1.2E-02	3.5E-07	3.8E-03	2.1E-06	2.3E-02	6.5E-07	7.3E-03	4.4E-07	4.8E-03
Tetrahydrofuran	ND	2.0E-05	ND	ND	ND	1.2E-05	ND	ND	ND	3.6E-05	ND	3.3E-05	ND	9.9E-06	ND	1.1E-05	ND	1.7E-05
Toluene	ND	4.2E-04	ND	4.4E-05	ND	3.2E-04	ND	ND	ND	9.0E-04	ND	1.2E-03	ND	4.4E-04	ND	4.0E-04	ND	6.5E-03
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	1.8E-03	ND	3.0E-04	ND	8.2E-04	ND	ND	ND	3.0E-03	ND	3.4E-03	ND	1.8E-03	ND	1.7E-03	ND	1.3E-02
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.3E-05	ND	1.1E-05	ND	1.4E-05
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**7.5E-07**	**1.1E-02**	**1.1E-05**	**2.1E-01**	**1.2E-06**	**1.4E-02**	**1.3E-06**	**9.9E-03**	**1.4E-06**	**2.4E-02**	**7.1E-07**	**2.1E-02**	**2.7E-06**	**3.5E-02**	**1.2E-06**	**2.9E-02**	**3.8E-06**	**1.2E-01**

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.1E-03	ND	3.1E-04	ND	4.6E-04	ND	ND	ND	ND	ND	2.6E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	5.4E-06	1.0E+00	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	3.2E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	4.0E-05	ND	1.3E-06	ND	2.0E-06	ND	ND	ND	7.3E-07	ND	5.6E-06
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	3.7E-07	1.2E-02	9.3E-07	3.0E-02	1.4E-07	4.6E-03	ND	ND	ND	ND	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	7.2E-05	ND	3.3E-05	ND	4.8E-05	ND	ND	ND	ND	ND	3.2E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6E-05
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	3.0E+01	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	1.1E-05	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	1.9E-04	ND	2.1E-04	ND	ND	ND	ND	ND	2.3E-04	ND	2.2E-04
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	4.1E-08	4.6E-05	5.9E-08	6.6E-05	3.1E-08	3.4E-05	ND	ND	ND	ND	2.3E-08	2.6E-05
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	6.8E-05	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	3.2E-03	ND	ND	ND	ND	ND	2.8E-05	ND	1.0E-03
Methyl ethyl ketone	ND	1.4E-04	ND	2.3E-06	ND	9.5E-06	ND	ND	ND	ND	ND	4.4E-05
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.1E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1E-06
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5C. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.03 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	ND	ND	6.5E-05	ND	3.1E-05	ND	ND	ND	ND	ND	ND
o-Xylene	ND	5.9E-04	ND	2.3E-04	ND	2.8E-04	ND	ND	ND	ND	ND	2.0E-04
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	1.3E-07	1.4E-03	2.7E-07	3.0E-03	4.8E-03	5.3E+01	2.3E-07	2.5E-03	5.9E-07	6.5E-03
Tetrahydrofuran	ND	2.7E-05	ND	ND	ND	4.1E-06	ND	ND	ND	ND	ND	3.4E-05
Toluene	ND	1.1E-03	ND	3.2E-04	ND	3.0E-04	ND	ND	ND	ND	ND	1.8E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	2.3E-03	ND	1.2E-03	ND	1.2E-03	ND	ND	ND	ND	ND	8.2E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	1.7E-02	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	1.5E-04	5.1E+01	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0E-05	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**4.1E-07**	**1.8E-02**	**1.1E-06**	**3.7E-02**	**4.4E-07**	**1.0E-02**	**5.0E-03**	**1.4E+02**	**2.3E-07**	**2.8E-03**	**6.1E-07**	**9.4E-03**

Notes:

ND = nondetect

All results are from November or December 2020 unless noted otherwise.

When two sets of results are presented for a given location, the higher estimated risk or hazard was selected for that location.

Cancer risk and noncancer hazard calculated using the formula:

$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: *MDC = Maximum detected concentration (microgram per cubic meter)*
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(1) Noncancer hazard estimate for a commercial worker exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03) and a target noncancer hazard of 1.

(2) Cancer risk estimate for a commercial worker exposure scenario assuming an attenuation factor of 0.03 (risk-based screening level for indoor air / 0.03) and a target cancer risk of 1E-06.

(3) Cumualtive risk and hazards summed for each sample location.

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	6.6E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7E-06	ND	ND	ND	ND	ND	2.1E-07
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	1.2E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.1E-08
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	2.6E-04	ND	1.1E-04	ND	9.5E-05	ND	1.1E-04	ND	2.7E-04	ND	6.1E-05	ND	8.7E-05	ND	4.6E-05	ND	3.2E-06
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	2.6E-07	1.5E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	1.8E-09	2.7E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.1E-04	ND	2.7E-05	ND	3.1E-05	ND	2.9E-05	ND	7.6E-05	ND	2.0E-05	ND	ND	ND	1.7E-05	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.6E-06	ND	7.3E-07	ND	5.5E-07	ND	1.9E-06	ND	1.2E-07	ND	1.1E-06	ND	1.9E-06	ND	1.3E-07	ND	ND
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	8.8E-08	2.8E-03	2.9E-08	9.2E-04	7.4E-08	2.4E-03	7.6E-09	2.5E-04	2.1E-08	6.7E-04	1.8E-08	5.8E-04	1.8E-08	5.8E-04	2.4E-08	7.7E-04	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	4.6E-06	ND	8.5E-06	ND	3.0E-05	ND	2.4E-05	ND	9.8E-06	ND	8.3E-06	ND	5.9E-06	ND	1.1E-05	ND	8.1E-07
Carbon tetrachloride	ND	ND	1.3E-09	1.4E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	2.3E-08	2.8E-05	1.7E-07	2.1E-04	9.9E-09	1.2E-05	1.9E-08	2.3E-05	1.7E-09	2.1E-06	1.0E-08	1.3E-05	1.9E-08	2.3E-05	6.0E-09	7.5E-06	1.7E-08	2.2E-05
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	2.2E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	7.1E-06	ND	1.7E-05	ND	3.7E-05	ND	1.1E-04	ND	ND	ND	9.0E-06	ND	ND	ND	8.2E-06	ND	4.1E-05
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.3E-08	1.5E-05	3.1E-09	3.4E-06	5.1E-09	5.7E-06	2.6E-09	3.0E-06	1.1E-08	1.2E-05	3.1E-09	3.4E-06	3.7E-09	4.1E-06	3.1E-09	3.4E-06	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	2.2E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.8E-07	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0E-06	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	4.2E-06	ND	3.1E-06	ND	1.6E-06	ND	1.5E-06	ND	5.9E-07	ND	3.9E-06	ND	7.8E-06	ND	2.8E-07	ND	ND
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	3.5E-06	ND	5.0E-07	ND	4.5E-07	ND	2.4E-06	ND	9.2E-07	ND	3.7E-07	ND	1.1E-06	ND	1.2E-07	ND	ND
Methyl t-butyl ether	1.3E-11	4.6E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW16		VW17		VW18		VW19		VW20		VW21		VW22		VW23		VW24	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	3.0E-08	8.4E-04	ND	ND	ND	ND	ND	ND	1.2E-08	3.3E-04	2.7E-08	7.5E-04
n-Heptane	ND	5.7E-06	ND	2.2E-06	ND	2.8E-06	ND	ND	ND	4.4E-07	ND	1.7E-06	ND	ND	ND	1.2E-06	ND	ND
o-Xylene	ND	1.7E-04	ND	4.3E-05	ND	6.4E-05	ND	3.7E-05	ND	1.5E-04	ND	3.5E-05	ND	4.3E-05	ND	3.7E-05	ND	ND
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	8.4E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	6.7E-07	ND	ND	ND	3.3E-07	ND	ND	ND	4.9E-07	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.0E-08	1.1E-04	3.1E-08	3.4E-04	1.7E-08	1.8E-04	1.3E-07	1.4E-03	1.4E-08	1.6E-04	6.5E-08	7.2E-04	4.7E-08	5.2E-04	2.7E-08	3.0E-04	3.3E-07	3.6E-03
Tetrahydrofuran	ND	4.6E-06	ND	9.4E-07	ND	4.1E-07	ND	1.5E-06	ND	2.7E-06	ND	9.5E-07	ND	1.5E-06	ND	3.1E-07	ND	ND
Toluene	ND	2.4E-04	ND	1.0E-04	ND	1.8E-04	ND	4.6E-05	ND	2.8E-04	ND	1.1E-04	ND	9.2E-04	ND	7.7E-05	ND	9.2E-07
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	6.4E-04	ND	1.7E-04	ND	2.7E-04	ND	1.4E-04	ND	5.5E-04	ND	1.5E-04	ND	1.8E-04	ND	1.5E-04	ND	ND
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	3.1E-10	1.1E-04	4.5E-09	1.5E-03	ND	ND	2.3E-09	7.8E-04	ND	ND
Trichlorofluoromethane	ND	3.2E-07	ND	4.9E-07	ND	5.5E-07	ND	1.4E-06	ND	ND	ND	4.1E-07	ND	ND	ND	ND	ND	6.4E-07
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.3E-07**	**4.5E-03**	**2.3E-07**	**2.0E-03**	**1.1E-07**	**3.3E-03**	**4.5E-07**	**4.6E-03**	**4.8E-08**	**2.3E-03**	**1.0E-07**	**3.3E-03**	**8.7E-08**	**2.4E-03**	**7.4E-08**	**2.5E-03**	**3.7E-07**	**4.4E-03**

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.4E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	7.8E-05	ND	2.9E-05	ND	2.6E-04	ND	7.6E-05	ND	6.1E-05	ND	6.8E-05	ND	1.2E-04	ND	6.8E-06	ND	3.7E-05
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.7E-05	ND	9.5E-06	ND	8.4E-05	ND	ND	ND	ND	ND	2.7E-05	ND	3.8E-05	ND	ND	ND	9.1E-06
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	4.7E-08	ND	2.7E-08	ND	3.4E-06	ND	ND	ND	ND	ND	4.1E-08	ND	2.2E-07	ND	3.7E-08	ND	2.8E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	3.9E-09	1.3E-04	ND	ND	4.8E-08	1.5E-03	9.3E-08	3.0E-03	ND	ND	2.2E-08	7.2E-04	8.8E-09	2.8E-04	ND	ND	3.6E-09	1.2E-04
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6E-08	3.4E-05	7.2E-08	6.9E-05	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	4.9E-07	ND	3.6E-06	ND	3.6E-06	ND	9.1E-06	ND	8.5E-06	ND	1.2E-05	ND	4.9E-06	ND	1.2E-06	ND	2.6E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	1.1E-08	1.3E-05	1.8E-09	2.2E-06	ND	ND	ND	ND	7.7E-09	9.6E-06	1.2E-06	1.5E-03	2.6E-06	3.3E-03	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	1.7E-05	ND	2.3E-05	ND	ND	ND	ND	ND	ND	ND	9.1E-06	ND	1.5E-05	ND	2.0E-05	ND	ND
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	7.5E-10	8.4E-07	6.1E-10	6.8E-07	1.0E-08	1.2E-05	3.9E-09	4.3E-06	3.5E-09	3.9E-06	4.5E-09	5.0E-06	4.1E-09	4.6E-06	3.7E-10	4.1E-07	1.4E-09	1.6E-06
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	2.8E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	3.9E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4E-06	ND	1.4E-06	ND	ND
Methyl ethyl ketone	ND	4.6E-08	ND	ND	ND	8.2E-06	ND	1.1E-06	ND	ND	ND	1.1E-07	ND	8.2E-07	ND	4.6E-08	ND	7.8E-07
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	ND	ND	ND	ND	7.3E-06	ND	ND	ND	ND	ND	ND	ND	4.6E-07	ND	ND	ND	1.8E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW24 (March 2021)		VW25		VW26		VW27		VW28		VW29		VW30		VW30 (March 2021)		VW31	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	3.3E-08	9.1E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1E-08	5.7E-04	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	2.7E-06	ND	1.7E-05	ND	ND	ND	ND	ND	1.2E-06	ND	ND	ND	4.9E-07
o-Xylene	ND	1.9E-05	ND	1.2E-05	ND	1.4E-04	ND	4.8E-05	ND	4.1E-05	ND	5.3E-05	ND	6.6E-05	ND	4.3E-06	ND	2.2E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.5E-07	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	6.4E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5.8E-08	6.4E-04	4.8E-08	5.3E-04	2.1E-08	2.3E-04	ND	ND	4.5E-08	4.9E-04	2.8E-08	3.1E-04	5.0E-08	5.5E-04	1.1E-07	1.2E-03	3.2E-08	3.6E-04
Tetrahydrofuran	ND	ND	ND	2.9E-07	ND	7.3E-06	ND	ND	ND	ND	ND	3.4E-07	ND	2.4E-06	ND	1.4E-07	ND	5.0E-07
Toluene	ND	7.7E-06	ND	5.4E-06	ND	1.6E-04	ND	1.9E-03	ND	2.7E-03	ND	9.2E-05	ND	5.5E-05	ND	5.8E-06	ND	6.8E-05
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	6.2E-05	ND	3.9E-05	ND	5.3E-04	ND	1.9E-04	ND	1.7E-04	ND	2.2E-04	ND	2.3E-04	ND	1.5E-05	ND	7.3E-05
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.0E-10	3.1E-04	8.4E-10	2.9E-04	ND	ND
Trichlorofluoromethane	ND	4.2E-07	ND	3.6E-07	ND	2.8E-07	ND	ND	ND	ND	ND	ND	ND	3.4E-07	ND	ND	ND	4.9E-07
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**9.5E-08**	**1.9E-03**	**5.9E-08**	**6.7E-04**	**8.1E-08**	**3.0E-03**	**9.7E-08**	**5.3E-03**	**4.8E-08**	**3.5E-03**	**6.3E-08**	**1.5E-03**	**1.3E-06**	**3.8E-03**	**2.8E-06**	**4.8E-03**	**3.7E-08**	**6.9E-04**

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	2.5E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	1.4E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	1.2E-04	ND	2.7E-05	ND	1.1E-04	ND	7.6E-05	ND	1.9E-04	ND	2.0E-05	ND	2.1E-05	ND	1.5E-05	ND	1.0E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	8.4E-06	ND	3.5E-05	ND	1.6E-05	ND	7.2E-05	ND	5.3E-06	ND	6.1E-06	ND	6.8E-06	ND	2.6E-05
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	8.5E-07	ND	4.7E-07	ND	2.4E-06	ND	8.1E-08	ND	5.6E-07	ND	7.4E-08	ND	4.6E-08	ND	3.9E-08	ND	3.9E-08
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	1.0E-08	3.3E-04	4.5E-08	1.5E-03	3.3E-09	1.1E-04	5.5E-08	1.8E-03	ND	ND	ND	ND	ND	ND	1.4E-08	4.6E-04
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	3.6E-06	ND	9.8E-05	ND	3.9E-06	ND	3.6E-06	ND	1.2E-06	ND	5.2E-07	ND	7.2E-07	ND	4.6E-07
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	5.3E-09	6.5E-06	ND	ND	ND	ND	ND	ND	ND	ND	5.6E-09	7.0E-06	ND	ND
Chloromethane	ND	ND	ND	ND	ND	1.8E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	2.4E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5E-04	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	6.4E-06	ND	6.4E-06	ND	ND	ND	ND	ND	5.9E-06	ND	6.2E-06	ND	ND	ND	5.7E-06
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5.0E-09	5.6E-06	1.4E-09	1.5E-06	5.5E-09	6.2E-06	1.5E-09	1.7E-06	9.8E-09	1.1E-05	4.7E-10	5.3E-07	7.7E-10	8.7E-07	8.1E-10	9.1E-07	8.6E-09	9.6E-06
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	2.5E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	ND	1.2E-06	ND	1.7E-06	ND	2.1E-06	ND	ND	ND	1.9E-06	ND	2.9E-07	ND	9.6E-08	ND	5.9E-08	ND	7.3E-08
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	1.1E-06	ND	2.5E-07	ND	1.6E-06	ND	1.5E-07	ND	3.5E-06	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW32		VW33		VW34		VW35		VW36		VW37		VW38		VW39		VW40	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-08	7.4E-04	ND	ND	ND	ND
n-Heptane	ND	ND	ND	ND	ND	5.7E-06	ND	ND	ND	6.9E-06	ND	ND	ND	ND	ND	ND	ND	2.2E-06
o-Xylene	ND	7.4E-05	ND	1.7E-05	ND	6.6E-05	ND	2.7E-05	ND	1.3E-04	ND	8.9E-06	ND	1.6E-05	ND	1.6E-05	ND	4.1E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4E-07	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	3.5E-08	3.9E-04	1.5E-09	1.6E-05	9.5E-09	1.1E-04	1.3E-07	1.4E-03	3.9E-08	4.3E-04	ND	ND	1.9E-08	2.1E-04	1.5E-08	1.7E-04	1.7E-09	1.8E-05
Tetrahydrofuran	ND	2.2E-06	ND	4.7E-07	ND	1.7E-06	ND	1.4E-07	ND	4.3E-06	ND	8.6E-08	ND	8.8E-08	ND	1.6E-07	ND	ND
Toluene	ND	7.3E-03	ND	3.2E-05	ND	1.4E-04	ND	1.1E-04	ND	2.2E-04	ND	6.8E-06	ND	2.1E-05	ND	4.4E-04	ND	1.0E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	3.4E-04	ND	6.8E-05	ND	3.0E-04	ND	9.4E-05	ND	4.8E-04	ND	3.0E-05	ND	5.5E-05	ND	5.0E-05	ND	2.3E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	5.3E-07	ND	2.3E-07	ND	2.5E-07	ND	2.6E-07	ND	2.6E-07	ND	ND	ND	2.5E-07
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**4.0E-08**	**8.2E-03**	**1.3E-08**	**5.1E-04**	**6.5E-08**	**2.3E-03**	**1.3E-07**	**1.8E-03**	**1.0E-07**	**3.5E-03**	**4.7E-10**	**7.9E-05**	**4.6E-08**	**1.1E-03**	**2.1E-08**	**7.0E-04**	**2.4E-08**	**1.0E-03**

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	4.6E-05	ND	ND	ND	ND	ND	2.7E-05	ND	4.2E-05	ND	1.3E-04	ND	ND	ND	3.2E-05	ND	ND
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0E-07	1.1E-03	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.1E-05	ND	ND	ND	ND	ND	8.4E-06	ND	1.5E-05	ND	4.2E-05	ND	ND	ND	1.1E-05	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	7.1E-07	ND	ND	ND	1.6E-08	ND	3.2E-08	ND	1.0E-06	ND	1.9E-06	ND	1.6E-08	ND	4.1E-07	ND	4.7E-08
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	7.9E-09	2.5E-04	ND	ND	ND	ND	4.3E-09	1.4E-04	1.8E-08	5.8E-04	4.0E-08	1.3E-03	ND	ND	4.3E-09	1.4E-04	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.9E-06	ND	ND	ND	ND	ND	1.5E-06	ND	4.2E-06	ND	6.5E-06	ND	ND	ND	2.6E-06	ND	1.4E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	3.8E-08	4.7E-05	4.5E-09	5.6E-06	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	6.1E-06	ND	ND	ND	6.8E-06	ND	7.1E-06	ND	9.8E-06	ND	6.6E-06	ND	6.4E-06	ND	6.4E-06	ND	6.2E-06
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.6E-09	1.8E-06	ND	ND	ND	ND	7.3E-10	8.2E-07	1.9E-09	2.1E-06	4.9E-09	5.5E-06	ND	ND	1.1E-09	1.3E-06	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	7.5E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	ND	ND	9.9E-07	ND	ND	ND	ND	ND	ND	ND	9.6E-07	ND	ND	ND	ND
Methyl ethyl ketone	ND	4.5E-06	ND	ND	ND	ND	ND	9.1E-08	ND	3.7E-06	ND	7.3E-06	ND	ND	ND	2.0E-06	ND	1.3E-07
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	5.4E-07	ND	ND	ND	ND	ND	ND	ND	4.3E-07	ND	4.7E-07	ND	ND	ND	2.6E-07	ND	ND
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW41		VW42		VW42 (March 2021)		VW43		VW44		VW45		VW45 (March 2021)		VW46		VW47	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	2.6E-08	7.3E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	6.3E-07	ND	ND	ND	ND	ND	ND	ND	1.2E-06	ND	2.9E-06	ND	ND	ND	ND	ND	ND
o-Xylene	ND	2.4E-05	ND	ND	ND	ND	ND	9.8E-06	ND	2.5E-05	ND	6.6E-05	ND	ND	ND	1.8E-05	ND	3.9E-06
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	7.9E-05	ND	ND	ND	ND	ND	ND	ND	6.7E-07	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	6.0E-09	6.7E-05	ND	ND	3.4E-09	3.7E-05	2.8E-09	3.1E-05	4.6E-09	5.1E-05	2.6E-09	2.8E-05	4.3E-09	4.8E-05	2.7E-09	2.9E-05	4.8E-09	5.3E-05
Tetrahydrofuran	ND	7.3E-07	ND	ND	ND	ND	ND	2.6E-07	ND	9.2E-07	ND	9.9E-07	ND	ND	ND	4.8E-07	ND	ND
Toluene	ND	5.5E-04	ND	4.4E-03	ND	3.9E-06	ND	9.2E-06	ND	5.3E-05	ND	1.0E-04	ND	1.5E-06	ND	2.5E-05	ND	5.4E-06
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	9.8E-05	ND	ND	ND	ND	ND	4.3E-05	ND	1.1E-04	ND	2.7E-04	ND	7.3E-06	ND	7.1E-05	ND	3.9E-06
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	3.1E-10	1.1E-04	ND	ND	ND	ND	ND	ND	1.8E-09	6.3E-04	ND	ND	6.7E-10	2.3E-04	ND	ND	ND	ND
Trichlorofluoromethane	ND	2.5E-07	ND	ND	ND	ND	ND	ND	ND	4.3E-07	ND	3.2E-07	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	1.6E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**4.2E-08**	**1.9E-03**	**0.0E+00**	**5.2E-03**	**3.4E-09**	**4.9E-05**	**7.8E-09**	**2.8E-04**	**6.4E-08**	**1.6E-03**	**5.2E-08**	**2.0E-03**	**2.0E-07**	**1.4E-03**	**8.1E-09**	**3.4E-04**	**4.8E-09**	**7.4E-05**

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5E-08	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	3.8E-05	ND	6.1E-04	ND	1.3E-05	ND	ND	ND	5.3E-05	ND	4.6E-05	ND	4.2E-05	ND	3.1E-05	ND	1.6E-04
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	1.4E-07	8.0E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8E-09	4.2E-05
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.1E-05	ND	1.2E-04	ND	ND	ND	ND	ND	1.6E-05	ND	1.4E-05	ND	1.2E-05	ND	9.7E-06	ND	5.3E-05
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	1.9E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.0E-07	ND	1.6E-08	ND	1.3E-07	ND	1.3E-08	ND	7.8E-07	ND	2.4E-06	ND	4.7E-07	ND	1.7E-07	ND	1.1E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	2.4E-09	7.7E-05	ND	ND	4.6E-09	1.5E-04	1.0E-08	3.2E-04	3.6E-09	1.2E-04	4.0E-09	1.3E-04	8.8E-08	2.8E-03
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	1.5E-06	ND	4.2E-07	ND	1.3E-06	ND	3.6E-07	ND	1.9E-06	ND	1.4E-06	ND	3.3E-06	ND	3.7E-06	ND	2.3E-05
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	6.6E-09	8.2E-06	1.0E-08	1.3E-05	8.8E-09	1.1E-05	1.4E-08	1.8E-05	4.0E-09	5.0E-06	ND	ND	1.7E-08	2.1E-05	ND	ND	1.3E-08	1.6E-05
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2E-07
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	6.6E-06	ND	6.2E-06	ND	6.8E-06	ND	6.4E-06	ND	6.7E-06	ND	6.6E-06	ND	1.1E-04	ND	6.2E-05	ND	9.8E-05
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.1E-09	1.2E-06	ND	ND	6.7E-10	7.5E-07	ND	ND	1.7E-09	1.9E-06	2.0E-09	2.3E-06	1.0E-09	1.1E-06	1.2E-09	1.3E-06	7.7E-09	8.7E-06
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	1.6E-06	ND	ND	ND	ND	ND	ND	ND	3.2E-06	ND	ND	ND	ND	ND	1.1E-05	ND	ND
Methyl ethyl ketone	ND	8.7E-07	ND	ND	ND	5.9E-07	ND	ND	ND	4.5E-06	ND	5.9E-06	ND	1.8E-06	ND	7.5E-07	ND	5.9E-07
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	3.7E-07	ND	ND	ND	1.8E-07	ND	ND	ND	6.8E-07	ND	3.2E-07	ND	2.9E-07	ND	1.6E-07	ND	1.9E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)
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Sample Location:	VW48		VW48 (March 2021)		VW49		VW49 (March 2021)		VW50		VW51		VW52		VW53		VW54	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	1.9E-07	5.3E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4E-08	3.7E-04	ND	ND
n-Heptane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	1.7E-05	ND	3.7E-06	ND	1.1E-05	ND	ND	ND	2.7E-05	ND	2.7E-05	ND	1.6E-05	ND	1.5E-05	ND	9.6E-05
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6E-06
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.8E-08	1.9E-04	1.5E-08	1.6E-04	2.7E-08	3.0E-04	2.8E-08	3.1E-04	3.6E-08	3.9E-04	1.2E-08	1.3E-04	7.0E-08	7.8E-04	2.2E-08	2.4E-04	1.5E-08	1.6E-04
Tetrahydrofuran	ND	6.6E-07	ND	ND	ND	4.0E-07	ND	ND	ND	1.2E-06	ND	1.1E-06	ND	3.3E-07	ND	3.8E-07	ND	5.7E-07
Toluene	ND	1.4E-05	ND	1.5E-06	ND	1.1E-05	ND	ND	ND	3.0E-05	ND	3.9E-05	ND	1.5E-05	ND	1.3E-05	ND	2.2E-04
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	6.2E-05	ND	1.0E-05	ND	2.7E-05	ND	ND	ND	9.9E-05	ND	1.1E-04	ND	6.2E-05	ND	5.7E-05	ND	4.3E-04
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4E-06	ND	3.6E-07	ND	4.7E-07
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**2.5E-08**	**3.6E-04**	**3.6E-07**	**7.1E-03**	**3.9E-08**	**4.8E-04**	**4.2E-08**	**3.3E-04**	**4.6E-08**	**8.0E-04**	**2.4E-08**	**7.1E-04**	**9.1E-08**	**1.2E-03**	**4.1E-08**	**9.5E-04**	**1.3E-07**	**4.2E-03**

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Difluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	3.5E-05	ND	1.0E-05	ND	1.5E-05	ND	ND	ND	ND	ND	8.7E-06
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	1.8E-07	3.4E-02	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	1.1E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Ethyl-4-methylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	1.3E-06	ND	4.4E-08	ND	6.7E-08	ND	ND	ND	2.4E-08	ND	1.9E-07
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1.2E-08	4.0E-04	3.1E-08	1.0E-03	4.8E-09	1.5E-04	ND	ND	ND	ND	ND	ND
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	2.4E-06	ND	1.1E-06	ND	1.6E-06	ND	ND	ND	ND	ND	1.1E-06
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5E-06
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	1.0E+00	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	3.7E-07	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	6.4E-06	ND	7.1E-06	ND	ND	ND	ND	ND	7.8E-06	ND	7.3E-06
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4E-09	1.5E-06	2.0E-09	2.2E-06	1.0E-09	1.1E-06	ND	ND	ND	ND	7.7E-10	8.7E-07
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND	ND	ND	ND	ND	2.3E-06	ND	ND	ND	ND	ND	ND
Isooctane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropyl alcohol	ND	ND	ND	1.1E-04	ND	ND	ND	ND	ND	9.2E-07	ND	3.4E-05
Methyl ethyl ketone	ND	4.6E-06	ND	7.8E-08	ND	3.2E-07	ND	ND	ND	ND	ND	1.5E-06
Methyl iodide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl isobutyl ketone	ND	3.6E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4E-07
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E-5D. POINT RISK ESTIMATE SUMMARY - COMMERCIAL WORKER EXPOSURE TO SOIL VAPOR MIGRATING INTO INDOOR AIR (0.001 ATTENUATION FACTOR)

Sample Location:	VW55		VW56		VW57		SVM-1 (March 2021)		SVM-2 (March 2021)		SVM-3 (March 2021)	
Chemical	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)	Cancer Risk (1)	Noncancer Hazard (2)
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	ND	ND	2.2E-06	ND	1.0E-06	ND	ND	ND	ND	ND	ND
o-Xylene	ND	2.0E-05	ND	7.5E-06	ND	9.4E-06	ND	ND	ND	ND	ND	6.6E-06
p- & m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	4.3E-09	4.8E-05	9.0E-09	1.0E-04	1.6E-04	1.8E+00	7.5E-09	8.3E-05	2.0E-08	2.2E-04
Tetrahydrofuran	ND	8.9E-07	ND	ND	ND	1.4E-07	ND	ND	ND	ND	ND	1.1E-06
Toluene	ND	3.5E-05	ND	1.1E-05	ND	1.0E-05	ND	ND	ND	ND	ND	6.1E-06
Total Petroleum Hydrocarbons	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	7.8E-05	ND	3.9E-05	ND	3.9E-05	ND	ND	ND	ND	ND	2.7E-05
TPH - Gasoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	5.7E-04	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	5.0E-06	1.7E+00	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4E-07	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total (3):	**1.4E-08**	**6.0E-04**	**3.7E-08**	**1.2E-03**	**1.5E-08**	**3.3E-04**	**1.7E-04**	**4.5E+00**	**7.5E-09**	**9.2E-05**	**2.0E-08**	**3.1E-04**

Notes:
ND = nondetect
All results are from November or December 2020 unless noted otherwise.
When two sets of results are presented for a given location, the higher estimated risk or hazard was selected for that location.
Cancer risk and noncancer hazard calculated using the formula:

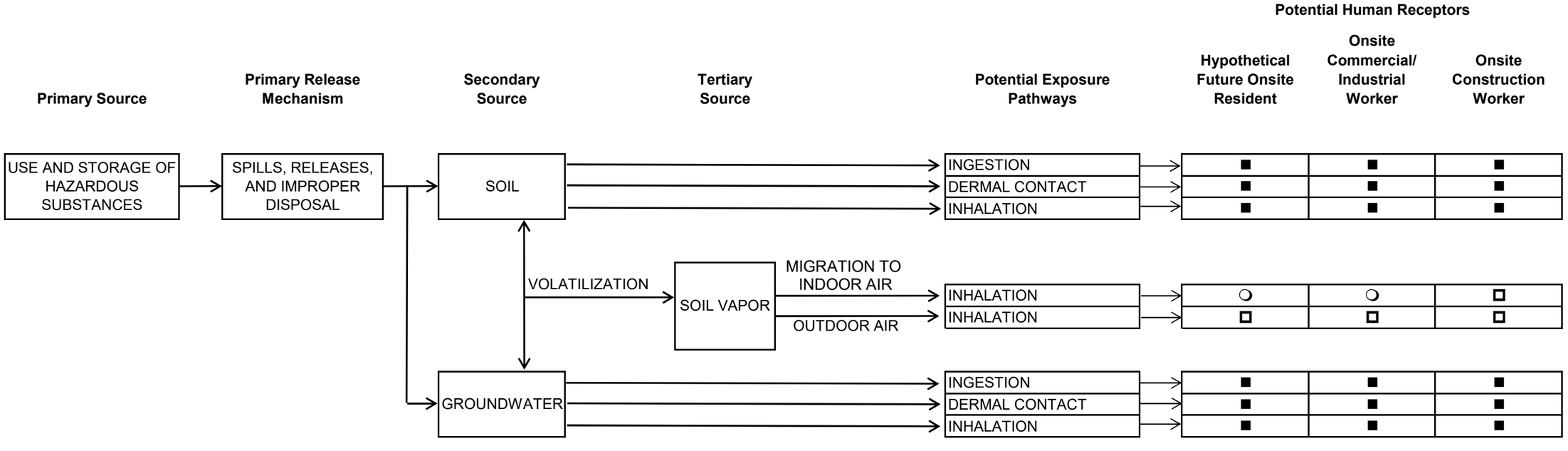
$$Cancer\ Risk\ or\ Noncancer\ Hazard\ = \frac{MDC}{SL} \times TR\ or\ THQ$$

where: MDC = Maximum detected concentration (microgram per cubic meter)
SL = Risk-based screening level (microgram per cubic meter)
TR = Target risk (1E-06)
THQ = Target hazard quotient (1.0)

(1) Noncancer hazard estimate for a commercial worker exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001) and a target noncancer hazard of 1.
(2) Cancer risk estimate for a commercial worker exposure scenario assuming an attenuation factor of 0.001 (risk-based screening level for indoor air / 0.001) and a target cancer risk of 1E-06.
(3) Cumualtive risk and hazards summed for each sample location.

Figure

FIGURE E-1. 59TH STREET CORPORATION YARD HUMAN HEALTH RISK ASSESSMENT CONCEPTUAL SITE MODEL



■ Pathway potentially complete, screening level evaluation performed in Site Characterization Report, SMUD 59th Street Corporation Yard (AECOM, 2019).

❍ Pathway potentially complete, quantitatively evaluated herein.

□ Pathway is potentially complete but insignificant; not quantitatively evaluated herein.