Fourth Quarter 2019 Groundwater Sampling and Analysis Report

Camp Bonneville
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Prepared for:
Clark County, Washington, and
Washington State Department of Ecology

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PBS Project 76151.009

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1 INTRODUCTION

This report documents the results of fourth quarter 2019 groundwater monitoring at the Camp Bonneville Military Reservation (Camp Bonneville) in Vancouver, Washington (Figure 1). The work was performed by PBS Engineering and Environmental Inc. (PBS) under contract to Clark County (County).

Groundwater monitoring was performed in accordance with the Health and Safety Plan for Groundwater and Surface Water Monitoring Activities (HASP),[1] the Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan (SAP/QAPP),[2] and Amendment #1 to the SAP/QAPP.[3] Laboratory analytical services were provided by TestAmerica Laboratories Inc. located in Tacoma, Washington (TestAmerica Seattle); Denver, Colorado (TestAmerica Denver); and Sacramento, California (TestAmerica Sacramento), under contract with PBS.

Acronyms used in this report are defined on first use. Please refer to Appendix A for a list of acronyms and abbreviations.

2 SITE BACKGROUND

2.1 Site History[4]

Camp Bonneville comprises approximately 3,840 acres and is in southwestern Washington, approximately 10 miles northeast of Vancouver (Figure 1). The United States Army used Camp Bonneville for live fire of small arms, assault weapons, artillery, and field and air defense artillery between 1910 and 1995. Since 1947, Camp Bonneville has also provided training for a variety of military and nonmilitary units including the National Guard; Army Reserves; Air Force; and federal, state, and local law enforcement agencies.

In July 1995, Camp Bonneville was selected for closure under the 1995 Base Realignment and Closure (BRAC) process, and transferred to the County for public benefit, education, law enforcement training, and parks. Transfer of Camp Bonneville to the Trust for Public Land, and subsequently to the County, began in 2006. On October 3, 2006, the County entered a Prospective Purchaser Consent Decree with the Washington State Department of Ecology (Ecology) that required investigating and remediating the site.

Ordnance and explosive (OE) items were found within Camp Bonneville's boundaries, and removal efforts of OE were performed, with a few ongoing efforts. Some of the OE items were determined to be unexploded ordnance (UXO). Current activities include assessment and management of OE and UXO by qualified munitions contractors with knowledge and experience in military ordnance, ordnance components, explosives location, identification, render safe, recovery/removal, transportation, and disposal safety precautions. The historical use and storage of OE and UXO have impacted groundwater at Camp Bonneville, and monitoring these impacts is the purpose of this monitoring event.

[1] PBS Engineering and Environmental Inc. (November 16, 2017). *Health and Safety Plan for Groundwater and Surface Water Monitoring Activities.*
[2] PBS Engineering and Environmental Inc. (February 22, 2018). *Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan, Remedial Action Units 2C and 3, Camp Bonneville, 23201 NE Pluss Road, Vancouver, Washington 98682.*
[3] PBS Engineering and Environmental Inc. (February 5, 2019). *Amendment #1 – Changes to Table 4-1A and 4-1B in the Supplemental Groundwater and Surface Water Remedial Investigation Sampling and Analysis Plan and Quality Assurance Project Plan, Remedial Action Units 2C and 3, Dated February 2018, Camp Bonneville, Vancouver, Washington*.
[4] Shannon & Wilson. (1999). *Multi-Sites Investigation Report, Camp Bonneville, Vancouver, Washington,* (Vol. 1). Contract No. DACA67-94-D-1014.

2.2 Camp Bonneville Geology

Camp Bonneville is situated north of the Portland Basin in the foothills of the Cascade Range. The general area consists of Eocene and Miocene volcanic and sedimentary rocks, with Holocene sedimentary rocks in valleys, and areas where gravels of the Troutdale Formation can be found.[5] The geology at Camp Bonneville can be divided into three general areas that correspond approximately to topographic divisions.[6]

Lacamas Creek flows through Camp Bonneville from the northeast to southwest. The area west of Lacamas Creek comprises a series of predominantly gravelly and semi-consolidated conglomerate with scattered lenses and stringers of sand (Upper Troutdale formation). Underlying the Troutdale formation, and comprising the area to the north and east of Lacamas Creek, are folded and faulted basalt flows, flow breccia, and pyroclastic and andesitic rocks.

The southwest corner of Camp Bonneville is where Lacamas Creek exits the site. The valley floor along Lacamas Creek contains unconsolidated silt, sand, and gravel valley fill, with some clay.

The northwest portion of the site is located on a terrace where the land slopes down from the west, north, and east. Two tributaries exit ravines at the north end of the terrace and drain across the western edge to become North Fork Lacamas Creek. The terraced area likely resulted from an accumulation of material historically transported by the tributaries, contributing to the predominantly low- to medium-plasticity clay observed in the borings for the wells installed in this area. According to the boring logs in the landfill/demolition area (Landfill 4/Demolition Area 1), competent bedrock (andesite) was encountered between 440 and 460 feet above mean sea level (amsl), which is approximately 50 to 75 feet below ground surface (bgs). Sub-rounded and sub-angular gravel in the borings point to colluvial deposition of the soil.

3 GROUNDWATER AND SURFACE WATER MONITORING PROGRAM

3.1 Project Objectives

The overall objectives of site investigations at Camp Bonneville have been to identify contaminated areas and determine the next appropriate steps toward their restoration. Contaminated areas at Camp Bonneville have been divided into five remedial action units (RAU) that are differentiated by the nature of a particular contaminant. This quarterly report describes the results of ongoing monitoring of RAU 2C, which is site-wide groundwater, to assist with achieving the goal of site restoration.

Two areas associated with RAU 2C are currently being monitored, which include Landfill 4/Demolition Area 1 located in the northwest portion of the site and Base Boundary at Lacamas Creek (Base Boundary) located in the southwest portion of the site (Figure 2). Wells have been installed in these areas to monitor shallow and deeper groundwater to maximum depths of approximately 75 feet bgs.

3.2 Chemicals of Potential Concern

Historical uses of Camp Bonneville's upgradient areas include firing ranges, a landfill, open burning locations, open detonation locations, and general maintenance facilities. Chemicals of potential concern (COPCs) include artillery propellants, high explosives residue, missile/rocket propellants, petroleum hydrocarbons, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), and metals. A summary of COPCs is provided in the SAP/QAPP, along with specific analytes and laboratory analysis methods, sample container types, preservation techniques, holding times, and data quality objectives (DQOs).

[5] Phillips, W.M. (1987). [Map]. Geologic Map of the Vancouver Quadrangle, Washington and Oregon: Washington Division of Geology and Earth Resources Open File Report 87-10, scale 1:100,000.
[6] Otak, Inc. (September 1998, 2nd Revision 15 November 2005). *Camp Bonneville Reuse Plan.* Prepared for The Camp Bonneville Local Redevelopment Authority (LRA).

Results from long-term monitoring indicate analysis for specific COPCs is warranted to assess contaminant levels throughout Camp Bonneville and to determine if impacts are leaving the site. For RAU 2C (analyzed at Landfill 4/Demolition Area 1 and Base Boundary), the COPC list for quarterly monitoring is as follows:

- Explosives by Environmental Protection Agency (EPA) Method 8330A
- Perchlorate by EPA Method 6850
- VOCs by EPA Method 8260C
- Field measurements of temperature, specific conductivity, dissolved oxygen (DO), pH, oxidation reduction potential (ORP), turbidity, and depth to water levels

In the first quarter of each year, analysis for the following COPCs occurs at three on-site water supply wells:

- Explosives by EPA Method 8330A
- Perchlorate by EPA Method 6850
- VOCs by EPA Method 8260B
- Field measurements of temperature, specific conductivity, DO, pH, and ORP

In the third quarter of each year, three surface water samples are collected. The COPC list for the surface water samples is as follows:

- 1,3,5-Trinitro-1,3,5-triazinane (RDX) by EPA Method 8330A
- Perchlorate by EPA Method 6850
- Field measurements of temperature, specific conductivity, DO, pH, ORP, and turbidity
- Observations of stream conditions are noted on the field form

In the fourth quarter of each year, analysis for the following additional COPCs occurs at the Base Boundary wells:

- Priority pollutant metals by EPA Methods 6020/7470A
- SVOCs by EPA Method 8270C

3.3 Monitoring Program Locations

The current RAU 2C Camp Bonneville monitoring program requires groundwater sampling and analysis for 28 monitoring wells, shown on Figure 3 (Base Boundary) and Figure 4 (Landfill 4/Demolition Area 1). In addition, three water supply wells and three surface water locations are sampled annually.

3.3.1 Monitoring Well Information[7]

Over the years, different numerical designations have been assigned to monitoring wells at the investigation areas. PBS uses the numbering system assigned by the US Army Center for Health Promotion and Preventive Medicine (CHPPM) in prior remedial investigation (RI) reports. Table 1 provides well information, including the monitoring well numbers used by PBS, Ecology well tag numbers, and well identification numbers for the Base Boundary and Landfill 4/Demolition Area 1 wells. The table also identifies the investigation area for each well along with total depth, screened interval, and top-of-casing elevation.

The monitoring wells located at Base Boundary and Landfill 4/Demolition Area 1 are listed below (S or A = shallow well; D or B = deeper well) according to CHPPM numbers.

[7] PBS Engineering and Environmental Inc. (August 16, 2004b). *Monitoring Well Installation Report, Landfill 4/Lacamas Creek: Camp Bonneville, Vancouver, Washington.*

- Base Boundary
    - Paired Monitoring Wells: LC-MW01S and LC-MW01D
    - Paired Monitoring Wells: LC-MW02S and LC-MW02D
    - Paired Monitoring Wells: LC-MW03S and LC-MW03D
    - Paired Monitoring Wells: LC-MW04S and LC-MW04D
    - Paired Monitoring Wells: LC-MW09S and LC-MW09D
- Landfill 4/Demolition Area 1
    - Paired Monitoring Wells: L4-MW01A and L4-MW01B
    - Paired Monitoring Wells: L4-MW02A and L4-MW02B
    - Paired Monitoring Wells: L4-MW03A and L4-MW03B
    - Monitoring Well L4-MW04A
    - Monitoring Well L4-MW05A
    - Monitoring Well L4-MW07B
    - Paired Monitoring Wells: L4-MW08A and L4-MW08B
    - Paired Monitoring Wells: L4-MW09A and L4-MW09B
    - Paired Monitoring Wells: L4-MW10A and L4-MW10B
    - Monitoring Well L4-MW11B
    - Monitoring Well L4-MW17
    - Monitoring Well L4-MW18

3.3.2 Water Supply Well Sampling Information

Three water supply well sample locations are monitored annually during the first quarter groundwater monitoring event, as follows:

- Bonneville (in the Camp Bonneville cantonment)
- Federal Bureau of Investigation ([FBI] at the on-site shooting range)
- Killpack (in the Killpack cantonment)

3.3.3 Surface Water Sampling Information

PBS retained the surface water sample location and numbering that was used for a 2012 EPA investigation.[8] Three surface water sample locations are monitored annually during the third quarter groundwater monitoring event, as follows:

- NF02 (North Fork of Lacamas Creek, approximately 1,000 feet south of Landfill 4/Demolition Area 1)
- LC15 (Lacamas Creek at the confluence with the North Fork)
- LC03 (Lacamas Creek approximately 300 feet north of well LC-MW01S)

3.4 Fourth Quarter 2019 Scope of Work

Monitoring activities include the following:

- Depth to water measurements from the currently sampled monitoring well network
- Collection and analysis of groundwater samples from Landfill 4/Demolition Area 1 and Base Boundary
- Priority pollutant metals and SVOCs at Base Boundary

This monitoring is conducted in accordance with the project SAP/QAPP. The analytical results obtained from quarterly monitoring are compared with cleanup levels established by Ecology under the Model Toxics

[8] Ecology and Environment, Inc. (May 2012). *Camp Bonneville Expanded Site Inspection, Vancouver, Washington, Technical Direction Document Number: 11-02-0010*.

Control Act (MTCA)[9] to determine if the groundwater or surface water potentially poses an unacceptable environmental risk to human health or the environment. All data are stored in an Earthsoft Environmental Quality Information System (EQuIS) electronic database that includes data from 2007 to present.

4 RECENT MONITORING ACTIVITIES

Groundwater samples were collected from the 10 monitoring wells located at Base Boundary (Figure 3) on December 3 and 4, 2019. A field duplicate sample (labeled 04Q19LCMW140W) was collected from monitoring well LC-MW04S. An additional volume of groundwater was collected from monitoring well LC-MW04D for laboratory matrix spike/matrix spike duplicate (MS/MSD) samples.

Groundwater samples were collected from the 18 monitoring wells at Landfill 4/Demolition Area 1 (Figure 4) on December 5, 6, and 12, 2019. Two field duplicate samples (labeled 04Q19L4MW145W and 04Q19L4MW150W) were collected from monitoring wells L4-MW08B and L4-MW09B, respectively. An additional volume of groundwater was collected from monitoring well LC-MW03A for laboratory MS/MSD samples.

Samples were collected in new laboratory-supplied sample containers directly from the end of the dedicated pump discharge hose or stream. Groundwater samples requiring preservatives were collected in sample bottles filled with the appropriate amounts of preservative solution by the contract laboratory.

The monitoring well locations were sampled in accordance with the procedures established in the SAP/QAPP. Additional sampling details are provided below.

4.1 Groundwater Sample Collection

A low-flow, minimal-drawdown technique was employed for monitoring well groundwater purging and sampling using dedicated Solinst bladder pumps constructed of a polyvinyl chloride (PVC) or stainless-steel body and a Teflon bladder. The low-flow purging technique is described in the SAP/QAPP. Low-flow sampling minimizes disturbance to the aquifer and is designed to ensure that representative samples are collected from the wells.

Similar to previous sampling events, wells L4-MW02B, L4-MW09B, and L4-MW11B at Landfill 4/Demolition Area 1 had groundwater elevations drop more than 2 feet during low-flow purging prior to parameter stabilization, while the remaining wells had less than a 2-foot drop during purging. The variable well drawdown is attributed to the presence of discrete zones of lower permeability soil in the subsurface.

4.2 Quality Assurance/Quality Control Samples

Duplicate samples were collected at a frequency of at least one per every 10 samples, with one collected from Base Boundary, and two from Landfill 4/Demolition Area 1. MS/MSD samples were collected at a frequency of at least one per every 20 samples, with one sample collected per area (Base Boundary and Landfill 4/Demolition Area 1). Trip blanks were submitted with all shipments containing samples for VOC analysis. Dedicated pumps in the wells at Base Boundary and Landfill 4/Demolition Area 1 eliminate the need for equipment blanks.

4.3 Deviations from SAP/QAPP

This section is intended to discuss deviations from established protocols as well as to note unusual conditions or equipment issues encountered. There were no unusual conditions or equipment issues during this sampling event.

[9] http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

4.4 Investigation-Derived Waste (IDW)

Gloves and other disposable field supplies were disposed as solid waste. Purged groundwater was placed in 55-gallon drums that were sealed, labeled, and placed in the maintenance shed area pending future disposal.

5 GROUNDWATER MONITORING RESULTS

5.1 Base Boundary at Lacamas Creek

Groundwater elevations and field parameters are provided in Table 2 for the fourth quarter 2019. Figure 5A illustrates groundwater contours and flow direction for the Base Boundary shallow wells, and Figure 5B for the Base Boundary deep wells.

Of the 10 wells in the Base Boundary area, one well (LC-MW01D) had a detection of lead at 20 micrograms per liter (µg/L) that exceeded MTCA Method B cleanup levels of 15 µg/L. The well will be resampled for lead during the first quarter 2020 sampling event to verify if lead is present. The remaining analyzed compounds were below the laboratory method reporting limit (MRL) in the 10 Base Boundary wells. Base Boundary data are summarized in Table 3.

5.2 Landfill 4/Demolition Area 1

Groundwater elevations and field parameters are provided in Table 2 for the fourth quarter 2019. Wells L4-MW17 and L4-MW18 are located topographically downgradient from the Landfill 4 area and are not included in groundwater flow discussion. Well L4-MW07B is screened in the same area of the aquifer as the other deep wells at the Landfill 4 area (above bedrock) and is included in the deep groundwater flow discussion. Figure 6A illustrates groundwater contours and flow direction for the Landfill 4 shallow wells, and Figure 6B for the Landfill 4 deep wells.

Of the 18 wells in the Landfill 4/Demolition Area 1 area, 13 had one or more detections of perchlorate, RDX, 2,4-dinitrotoluene, or 1,1,2,2-tetrachloroethane that exceeded MTCA Method B cleanup levels (Table 4). Five wells had VOC detections above laboratory MRLs and three of those detections were also above MTCA Method B cleanup levels. Table 4 provides detected concentrations or MRLs of non-detections for the contaminants of concern.

6 DATA QUALITY REVIEW AND VALIDATION

The overall DQO is to provide data of known and sufficient quality to evaluate the physical extent and concentration ranges of COPCs from analysis of groundwater samples, and to assure compliance with environmental and health-related agencies. DQOs for laboratory analysis are presented in the QAPP. Laboratory analytical data were evaluated with respect to quality assurance objectives for precision, accuracy, representativeness, comparability, and completeness parameters. The fourth quarter data met the following criteria:

- Analytical data were received from the laboratory in an electronic data deliverable (EDD) format that was imported into the EQuIS database.
- Qualifiers from the laboratory were included as well as any qualifiers resulting from data validation procedures conducted by PBS.
- The project specifications were met for all analytes, indicating that the sampling and analysis procedures were reproducible.
- The TestAmerica laboratory report narratives state that all quality control parameters that affect sample analysis were met, except as noted in section 6.7 below.

6.1 Data Validation

Analytical data were validated at a Level II review standard. Level II validation and reporting includes a brief narrative of the laboratory data along with presentation of the sample results and related quality assurance/quality control (QA/QC) analyses. Additionally, at least 20% of the analytical data (10 of 39 samples) were validated at a Level III review standard. Level III validation adds the following list to the reporting (not all method requirements are applicable to each analysis in this sampling event):

- Internal standards
- Blank association
- Serial dilution results
- Post-digestion spike results
- Gas chromatography/mass spectrometer (GC/MS) tune table
- Initial calibration table
- Continuing calibration verifications (CCV)
- Calibration blanks
- Column confirmation
- Instrument run log
- Interference check solution A/interference check solution AB (ICSA/AB), contract required detection limit (CRDL), method detection limit/instrument detection limit (MDL/IDL) form

These data validation levels follow the criteria in the EPA's *Data Quality Objectives for Remedial Response Activities Development Process*,[10] National Technical Information Service.

6.2 Presentation of Data

There were five sample submissions over six days. Samples were placed in seven sample delivery groups (SDGs). Five of the SDGs (580-91193-1, 580-91219-1, 580-91240-1, 580-91312-1, 580-91438-1) were processed at Level II, and two (580-91195-1, 580-91241-1) at Level III. Laboratory reports are included on a compact disc (CD) with the printed fourth quarter report and are in the electronic version of the fourth quarter report. Level II data packages are found in Appendix C, and Level III data packages are found in Appendix D.

6.3 Sample Handling and Control

The chain-of-custody (COC) forms indicate that samples were maintained under proper custody. Forms were signed upon release from the field and receipt at the laboratory. Samples were received by the laboratory at temperatures within acceptable limits and with proper preservation. All reported analytical results were performed within applicable method-specified holding times, except for reanalysis of explosives and pentachlorophenol due to quality control failures. Analyte detections in the affected samples were within the range of historical results for both the initial analysis and out of hold time analysis; therefore, the out of hold reanalysis is not expected to affect quality and the data are considered valid. As a conservative measure, the higher of the two values is reported.

6.4 Method Reporting Limits

Samples either met laboratory specified MRLs as presented in the project SAP/QAPP or were detected with elevated MRLs due to high analyte concentrations.

6.5 Field Data Quality Assessment

There are no specific DQOs for the measurement of field parameters (temperature, pH, ORP, conductivity, DO, and turbidity). Temperature, pH, ORP, conductivity, and DO were measured during purging. Turbidity was

[10] Environmental Protection Agency (EPA). (1987b). *Data Quality Objectives for Remedial Response Activities-Development Process.* EPA/540/G-87/003, OSWER Directive 9355.07B, EPA, Washington, DC (PB88-131370).

measured during sample collection. The PBS standard operating procedure (SOP) for low-flow groundwater sampling describes the acceptable criteria for the measurement of field parameters. A copy of the SOP is provided in the SAP/QAPP.

6.6 Field Quality Control Sample Assessment

6.6.1 Trip Blanks

Trip blanks and groundwater samples for VOC analysis were consolidated daily into one cooler for shipment to the laboratory. Trip blanks were included daily on December 3, 4, 5, 6, and 12, 2019. Five trip blanks were analyzed for VOCs, and there were no detections.

6.6.2 Duplicates

Duplicate samples were collected from the two study areas (Base Boundary and Landfill 4/Demolition Area 1). These samples were analyzed for the same constituents as the source samples. The relative percent difference (RPD) was calculated as the difference between the values divided by the average of the values. For samples with results greater than five times the practical quantitation limit (PQL), an RPD of less than 20% is considered good duplication. For samples with results less than five times the PQL, the difference between the sample and its duplicate must be less than the PQL to meet the quality assurance acceptance criteria. A significant difference between duplicate values for a few parameters would indicate potential problems with the precision of specific analyses. A significant difference for many parameters would indicate potential problems with the sample collection procedures. The following are the results of duplicate sampling for this event:

- **Base Boundary at Lacamas Creek Duplicate**
  The field duplicate analysis for well LC-MW04S met quality control requirements.
- **Landfill 4/Demolition Area 1 Duplicate**
  The field duplicate analysis for wells L4-MW08B and L4-MW09B met quality control requirements.

6.7 Laboratory Quality Control Assessment

The analytical data quality evaluations performed by TestAmerica are presented in the laboratory analysis reports in Appendix C and Appendix D (provided on the enclosed CD). Analytical results requiring qualification are flagged by the laboratory with codes describing data quality anomalies. Case narratives describing sample receipt, identification, and general comments by laboratory personnel are included in each report.

6.7.1 Laboratory Quality Control Samples/Indicators

6.7.1.1 Blanks

There were no detections of target compounds in the method blanks for analyses reported for this sampling event.

6.7.1.2 Laboratory Control Samples

Laboratory control samples (LCS) had recoveries within specified control limits with the following exceptions:

- The LCS and laboratory control sample duplicate (LCSD) for analytical batches 580-318500 and 580-318784 recovered above the upper control limit (biased high) for carbazole. It was not detected in the associated samples; therefore, the data are considered valid.
- The LCS and/or LCSD for preparation batches 580-318500 and 580-318784 recovered outside the control limits for 2,4-Dimethylphenol, 4-Nitroaniline and Hexachlorobenzene. The batches were reextracted with acceptable recovery control limits, and the analytes were not detected in the associated samples; therefore, the data are considered valid.

- The LCS and LCSD for analytical batches 320-3345977 and 320-348459 recovered above the upper control limit (biased high) for 2-Amino-4,6-dinitrotoluene. The compound was not detected in the associated samples; therefore, the data are considered valid.

6.7.1.3 Matrix Spike/Matrix Spike Duplicates

MS/MSD recoveries and RPDs for MS/MSD pairs were within specified control limits, except for the following:

- 4,6-dinitro-2-methylphenol and pentachlorophenol were biased low for the MS and MSD sample 04Q19LCMW04DWMS (580-91195-1) in batch 580-318784. 2,4-dimethylphenol, 3,3'-dichlorobenzidine and carbazole exceeded the RPD limit in the same batch. LCS/LCSD recoveries were within control limits, which indicates the instruments were working correctly for these compounds; therefore, the data are considered valid.
- Due to the high concentration of perchlorate, MS/MSD for preparation batch 320-349235 and analytical batch 320-351405 could not be evaluated for accuracy and precision. The associated LCS met acceptance criteria and the data are considered valid.
- Qualifier 4 relates to MS/MSD analysis and indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. MS/MSD recoveries are not applicable when this occurs, and data quality relies on the LCS/LCSD analysis. The affected data had acceptable LCS/LCSD recoveries and are considered valid.

6.7.1.4 Surrogates

Surrogate recoveries from VOC and explosive analyses were within specified control limits, except recovery for MB 320-345977/1-A, which was outside control limits. The analyte was not detected in associated samples; therefore, the data is considered valid.

6.7.1.5 Internal Standards

The following CCV anomalies were identified in the laboratory reports:

- The minimum response factor (RF) criteria for the CCV analyzed in batches 580-318735 and 580-318784 was outside criteria for n-nitrosodi-n-propylamine and chloroethane. The reference method states sample analysis may proceed, but the affected analytes have estimated results. LCS/LCSD and MS/MSD recoveries were within acceptance criteria, and the associated samples were non-detect for these analytes; therefore, the data are considered valid.
- The CCV associated with batches 580-318784, 580-318341, and 580-318933 recovered above the upper control limit (biased high) for the following:
    - n-Butylbenzene,
    - Carbazole,
    - 2-Chlorotoluene,
    - 4-Chlorotoluene,
    - 1,2-Dibromo-3-chloropropane,
    - 3,3'-Dichlorobenzidine,
    - cis-1,3-Dichloropropene,
    - Ethylbenzene,
    - Naphthalene,
    - 4-Nitroaniline,
    - n-Propylbenzene,
    - 1,1,1,2-Tetrachloroethane,
    - 1,2,3-Trichlorobenzene,
    - 1,3,5-Trimethylbenzene,

- 1,2,4-Trichlorobenzene,
- 1,2,4-Trimethylbenzene,
- m-Xylene,
- p-Xylene.

The samples associated with this CCV were non-detect for the affected analytes; therefore, the data are considered valid.

6.7.1.6 Other Issues

In the cases where a dilution factor was applied due to high concentrations within submitted samples, the same dilution factor was also applied to the internal control standard. Those internal standard results were within acceptable limits.

6.7.2 Level III Data Review

The data packages for the SDGs receiving Level III data reporting (580-91195-1 and 580-91241-1) were reviewed for adherence to method criteria that exceed Level II reporting. There were no deviations from method criteria.

7 HYDROGEOLOGY DISCUSSION

7.1 Base Boundary/Lacamas Creek

The fourth quarter 2019 shallow and deep monitoring well groundwater contours are shown on Figures 5A and 5B, respectively. Shallow (S) wells have screen intervals between 15 and 20 feet bgs with 5-foot-length screens, and deep (D) wells have screen intervals between 30 and 40 feet bgs with 10-foot-length screens. Well pairs have demonstrated a downward vertical gradient for measurements available in the EQuIS database (since 2008 or well installation), except for well pair LC-MW09S/LC-MW09D, which did not have a vertical gradient in September 2018. The calculated groundwater flow direction is to the west-northwest, which is consistent with historical trends.

7.2 Landfill 4/Demolition Area 1

The wells near and within the Landfill 4/Demolition Area 1 area are illustrated in Figure 4. The hydrogeology discussion for this area includes six pairs of nested wells in A/B pairs, shallow wells L4-MW04A and L4-MW05A, and deep wells L4-MW07B and L4-MW11B. Wells L4-MW17 and L4-MW18 are located topographically downgradient from the Landfill 4/Demolition Area 1 area and are considered sentinel wells; they are not included in the following discussion.

Groundwater elevations and contours are shown on Figures 6A and 6B in support of the following groundwater observations:

- For the eight wells in the A grouping, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01A and a westerly groundwater flow direction. From there, groundwater demonstrates a divergent flow pattern from the northwest (toward L4-MW04A) to southwest (toward well L4-MW05A). This is consistent with historical trends.
- For the eight B wells, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01B. Groundwater flow direction is primarily to the west with slight fluctuations from west-northwest to west-southwest and is consistently toward North Fork Lacamas Creek. South of well L4-MW05A, groundwater flow is primarily to the southwest toward L4-MW07B, which is consistent with historical trends.
- The well pairs demonstrated vertical gradients as follows:
  - L4-MW01A/L4-MW01B: Upward (since second quarter 2008)

- L4-MW02A/L4-MW02B: Downward (since second quarter 2008)
- L4-MW03A/L4-MW03B: Downward (since second quarter 2008)
- L4-MW08A/L4-MW08B: Downward (since third quarter 2017)
- L4-MW09A/L4-MW09B: Downward (since third quarter 2017)
- L4-MW10A/L4-MW10B: Downward (since third quarter 2017)

8 WATER QUALITY DATA ANALYSIS

The laboratory results for contaminants of concern were compared to previous quarterly monitoring events, along with groundwater elevation, to identify trends in the data. The monitoring events included in the trend analysis cover the period of February 2007 to present (data that are currently available in the EQuIS database for specific contaminants of concern) for the Base Boundary and Landfill 4/Demolition Area 1 wells. These monitoring events encompass the range of seasonal climatic (rainfall and temperature) and groundwater level variations.

The Base Boundary monitoring wells have had no reproducible detections of explosives or perchlorate above laboratory MRLs in the monitoring period from 2007 to present; therefore, these wells are not included in the trend discussion.

Groundwater concentration trends for the Landfill 4 area are discussed below. Analytical results are discussed for all Landfill 4/Demolition Area 1 wells, except for wells L4-MW17 and L4-MW18.

8.1 Spatial Distribution of Perchlorate and RDX

Perchlorate and RDX are the only two compounds consistently detected above MTCA Method B cleanup levels in multiple wells in the Landfill 4/Demolition Area 1 area. Isocontours of perchlorate concentrations in shallow (A) and deep (B) wells are illustrated in Figures 7A and 7B, and isocontours of RDX concentrations in shallow and deep wells are illustrated in Figures 8A and 8B.

Perchlorate

The highest perchlorate concentration in shallow wells is at well L4-MW09A and decreases in all directions, while the highest perchlorate concentration in deep wells is located at well L4-MW11B and decreases in all directions, with upgradient well L4-MW02B having the second highest concentration. This is consistent with historical trends. The shallow and deep groundwater flow direction near these wells is generally to the west.

RDX

The highest RDX concentration in shallow wells is located at well L4-MW08A and decreases in all directions. Shallow groundwater flow near well L4-MW08A is generally toward well L4-MW04A, and RDX concentrations have generally demonstrated an increasing trend in well L4-MW04A. This is consistent with historical trends. The highest RDX concentration in deep wells is located around wells L4-MW02B and L4-MW11B and decreases in all directions. Deep groundwater flow in this area is generally toward the west-southwest.

8.2 Perchlorate and RDX Concentration Trend Analysis

Trend graphs for perchlorate and RDX concentrations are included in Appendix D. The trend charts are provided as one chart each for perchlorate and RDX in shallow (A) and deep (B) wells (four charts total), and per-well charts with perchlorate, RDX, and groundwater elevation shown. Wells must have at least two detections above the MRL for that analyte to be graphed.

The MTCA Method B cleanup levels are 11.0 µg/L for perchlorate and 1.10 µg/L for RDX. Please note that Ecology requests that graphs showing wells with detections need to also include data points for non-detections in those wells, recorded as one-half the MRL for that analyte.

Overall, perchlorate and RDX are demonstrating stable or decreasing trends in all Landfill 4/Demolition Area 1 wells, except for wells L4-MW04A and L4-MW11B that are demonstrating an increasing trend for both perchlorate and RDX.

The following wells are demonstrating a stable trend for either perchlorate or RDX:

Perchlorate

- L4-MW01A
- L4-MW01B
- L4-MW02A
- L4-MW07B
- L4-MW09B
- L4-MW10A
- L4-MW10B

RDX

- L4-MW01A
- L4-MW02A
- L4-MW03B
- L4-MW08B
- L4-MW09A
- L4-MW09B
- L4-MW10A
- L4-MW10B

The following wells are demonstrating a decreasing trend for either perchlorate or RDX:

Perchlorate

- L4-MW02B
- L4-MW03A
- L4-MW03B
- L4-MW05A
- L4-MW08A
- L4-MW08B
- L4-MW09A

RDX

- L4-MW02B
- L4-MW03A
- L4-MW05A
- L4-MW08A

RDX continues not to be detected in wells L4-MW01B and L4-MW07B and they are therefore not included in this discussion.

Wells L4-MW01A and L4-MW08B are exhibiting an apparent positive correlation between groundwater elevation and perchlorate concentrations, and well L4-MW02A is exhibiting an apparent negative correlation. There are no apparent correlations between perchlorate or RDX in the remaining Landfill 4/Demolition Area 1 wells.

9 FUTURE ACTIVITIES

The first quarter monitoring is scheduled for March 2020.

PBS Engineering and Environmental Inc. is pleased to present the results of the fourth quarter 2019 groundwater sampling event. Please contact the undersigned if there are any questions.

Sincerely,
PBS Engineering and Environmental Inc.

Digitally signed by Matthew Randall
Date: 2020.03.31 18:02:01 -07'00'

Matt Randall, GIT — Date
Staff Geologist

Digitally signed by Lance A. Moen, PE
Date: 2020.03.31 08:14:46 -07'00'

Lance A. Moen, PE — Date
Senior Environmental Engineer

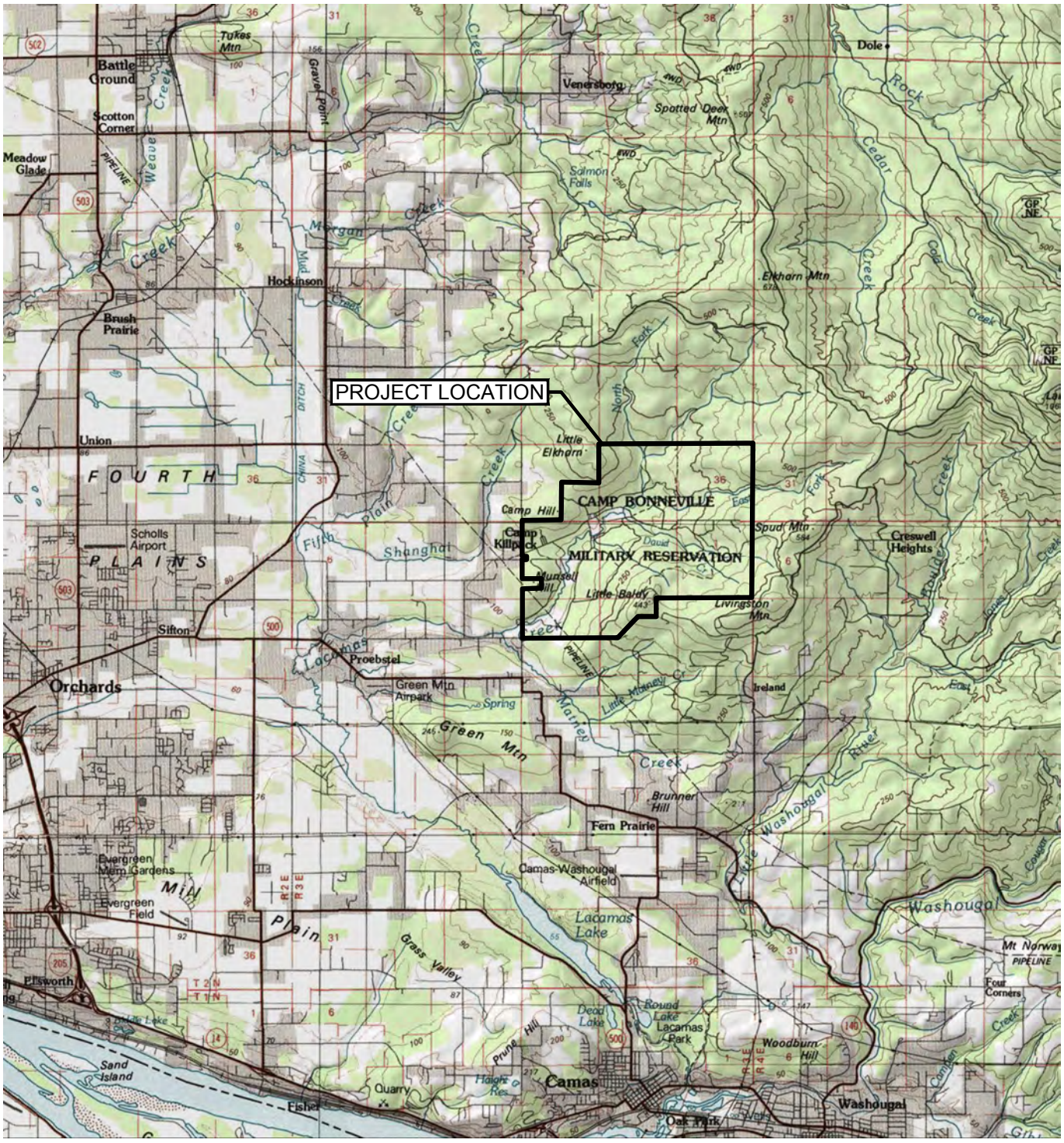
Digitally signed by Scott Braunsten
Date: 2020.03.31 07:32:23 -07'00'

Scott Braunsten, LG, CES — Date
Project Geologist

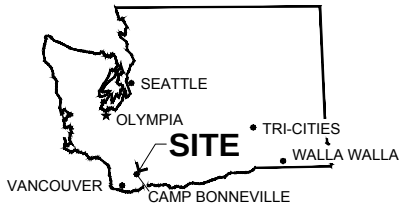
Digitally signed by Thomas Mergy
Date: 2020.03.31 08:20:16 -07'00'

Thomas Mergy, LHG
Senior Hydrogeologist

Figures



SOURCE: USGS 100K MAP SERIES



SCALE: 1" = 10,000'

0' 5,000' 10,000' 20,000'

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PBS

VICINITY MAP

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
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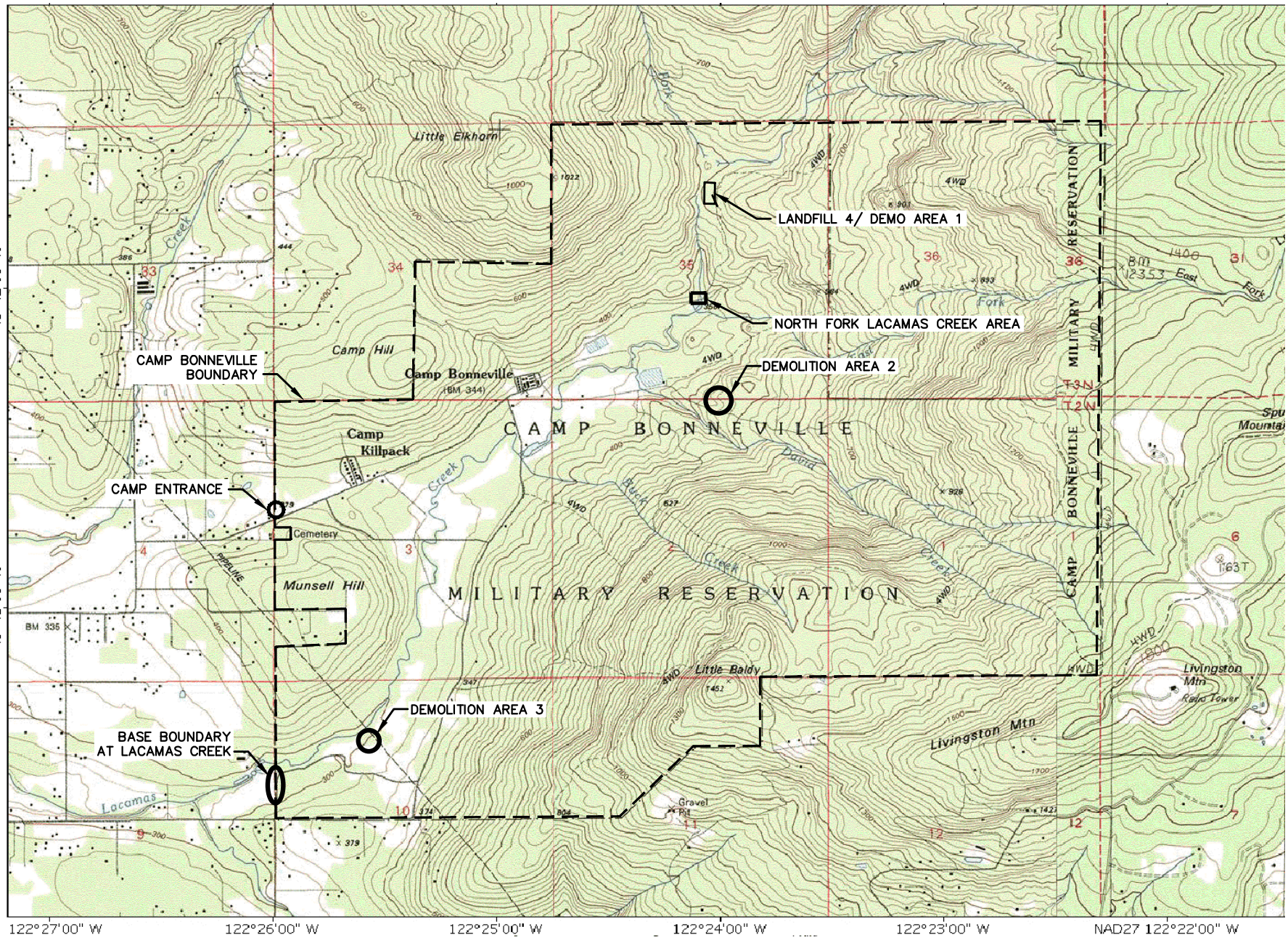
FIGURE
1

PBS

INVESTIGATION AREAS WITHIN CAMP BONNEVILLE BOUNDARY

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

PREPARED FOR: CLARK COUNTY, WASHINGTON



MAR 2020
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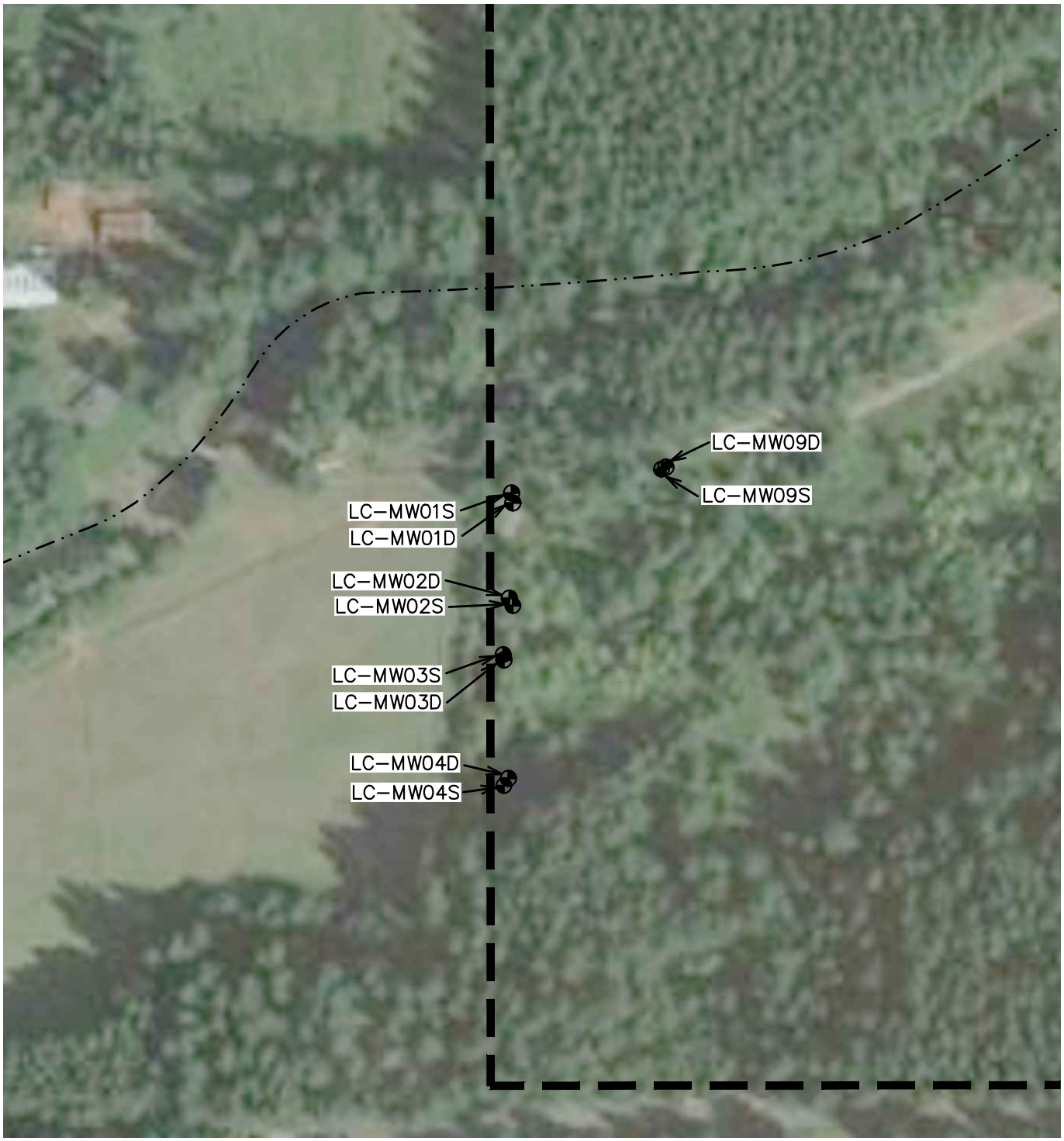
FIGURE
2



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LEGEND

- LC–MW01D DEEP MONITORING WELL AND WELL NUMBER
- LC–MW01S SHALLOW MONITORING WELL AND WELL NUMBER
- LACAMAS CREEK
- BASE BOUNDARY

Scale 1" = 200'

0' 100' 200' 400'

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MONITORING WELL LOCATIONS AT BASE BOUNDARY

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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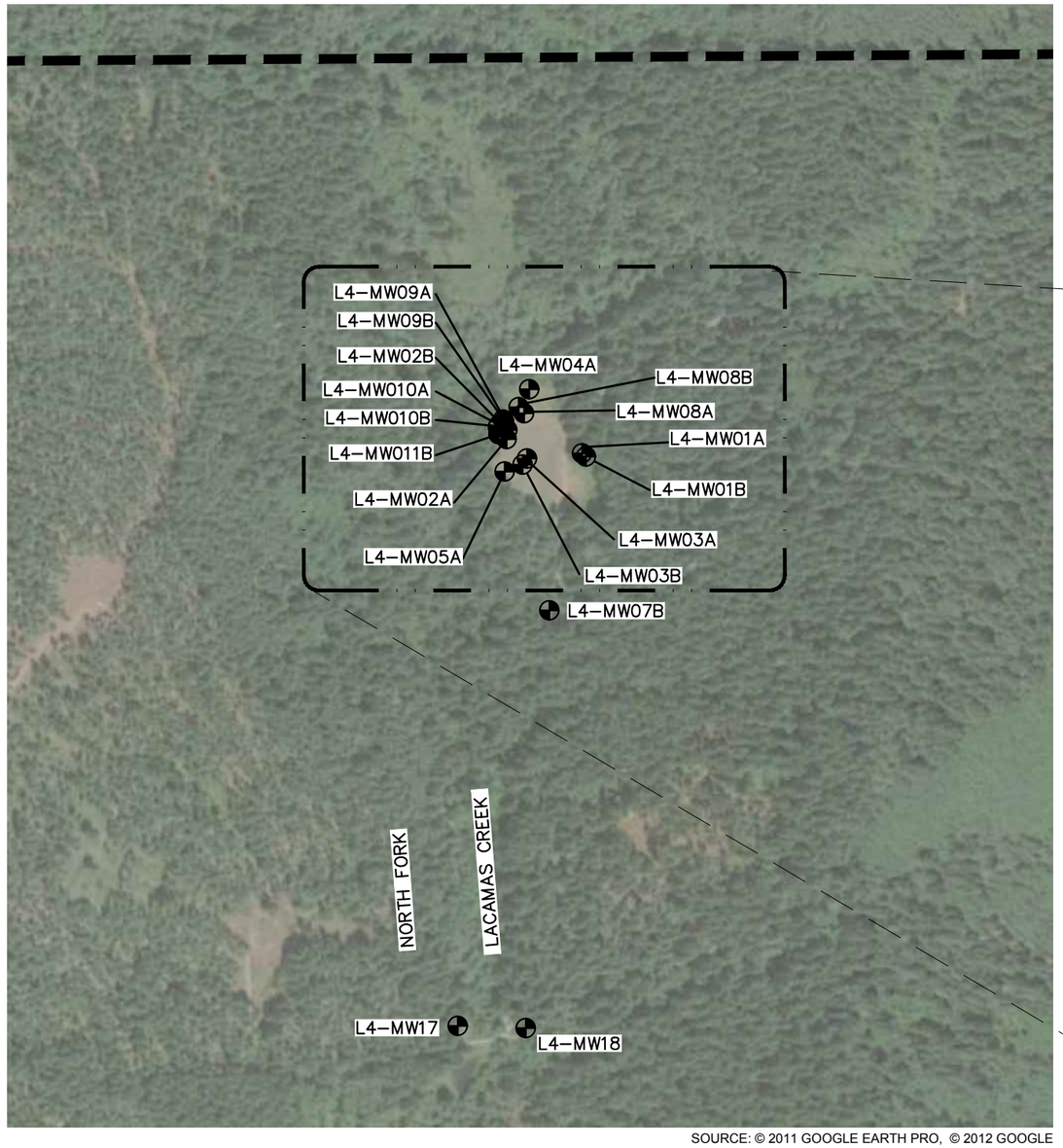
FIGURE
3

LEGEND

L4–MW01A — MONITORING WELL AND WELL NUMBER

BASE BOUNDARY

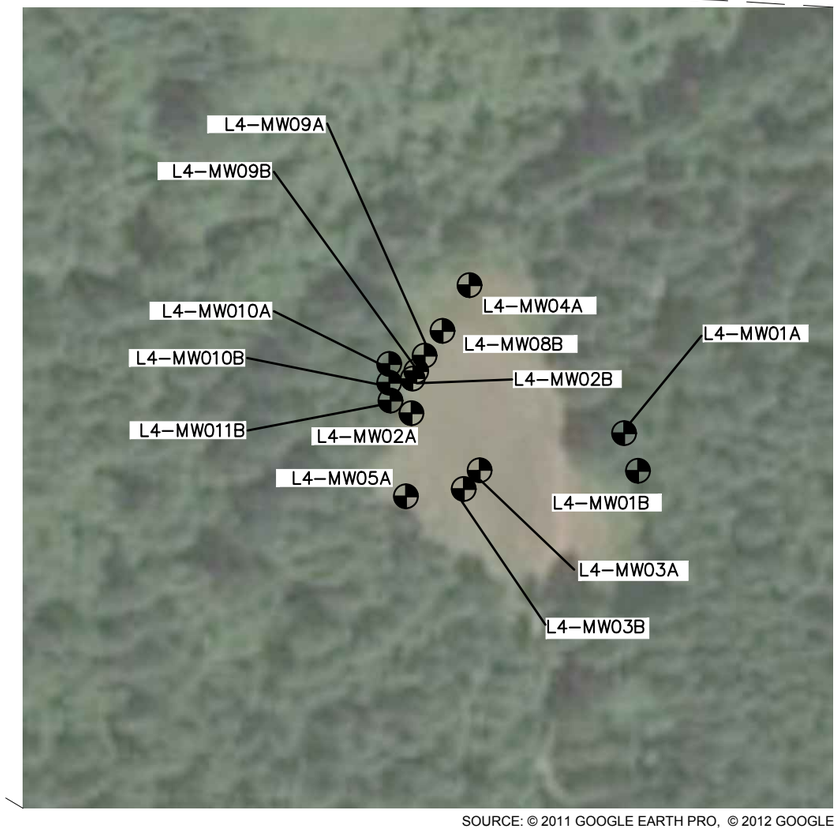


SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LANDFILL 4

SCALE: 1" = 500'

0' 250' 500' 1000'



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LANDFILL 4 - ENLARGED PLAN

SCALE: 1" = 200'

0' 100' 200' 400'

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PBS Engineering and Environmental Inc.
415 W 6th Street, Ste. 601
Vancouver, WA 98660
360.695.3488
pbsusa.com

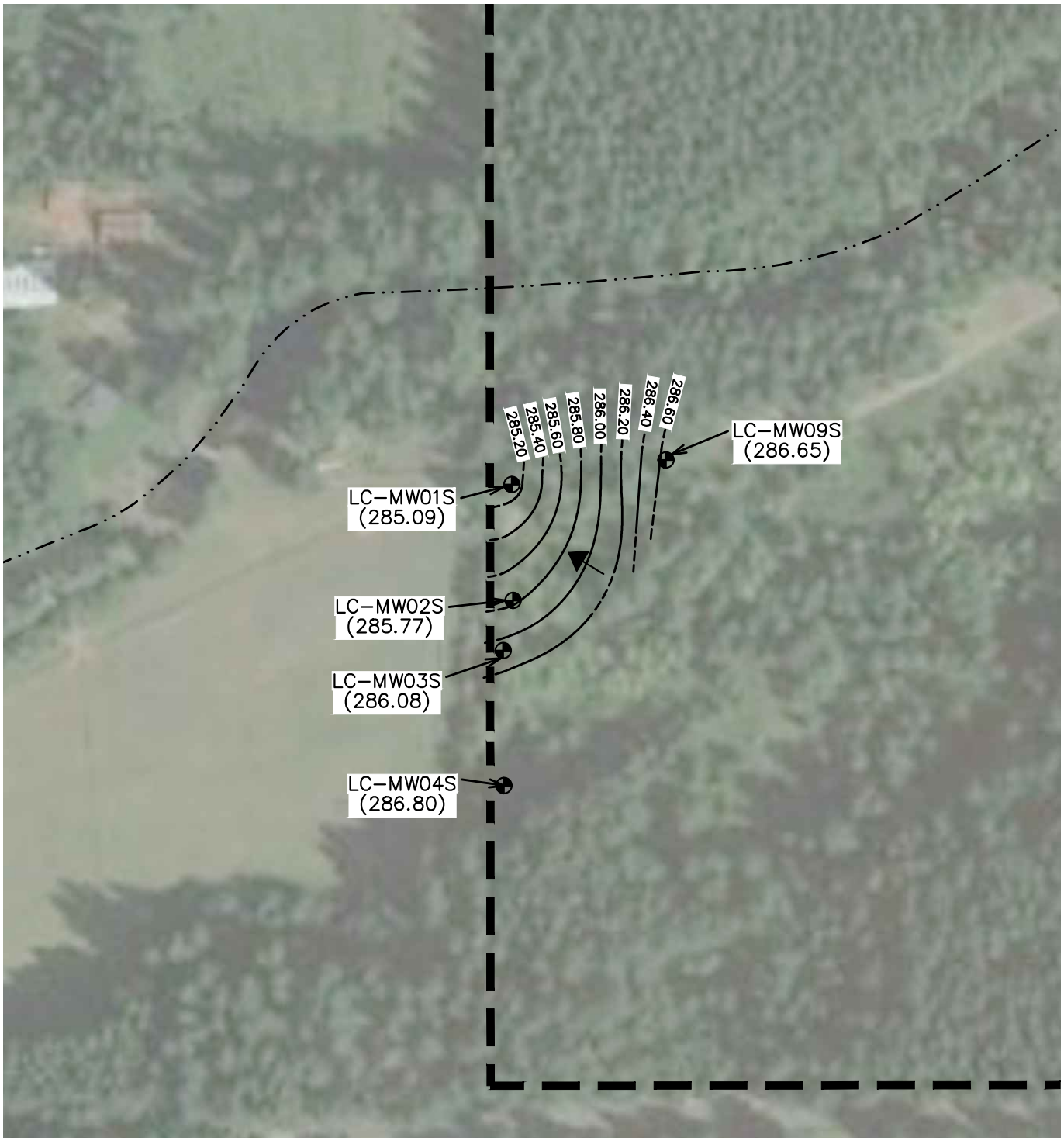
CAMP BONNEVILLE

MONITORING WELL SAMPLE LOCATIONS NEAR LANDFILL 4 / DEMO AREA 1

CLARK COUNTY,W ASHINGTON

PROJECT
76151.009
DATE
MAR 2020
FIGURE
4

Full Size Sheet Format Is 11x17; If Printed Size Is Not 11x17, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LEGEND

- LC–MW01S (285.09) — MONITORING WELL AND WELL NUMBER
- SHALLOW GROUNDWATER ELEVATION (FEET AMSL)
- LACAMAS CREEK
- BASE BOUNDARY
- 286.00 — SHALLOW GROUNDWATER CONTOUR (4TH QUARTER 2019)
- GROUNDWATER FLOW DIRECTION

Scale 1" = 200'

0' 100' 200' 400'

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SHALLOW BASE BOUNDARY MONITORING WELLS WITH 4TH QUARTER 2019 GROUNDWATER CONTOURS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
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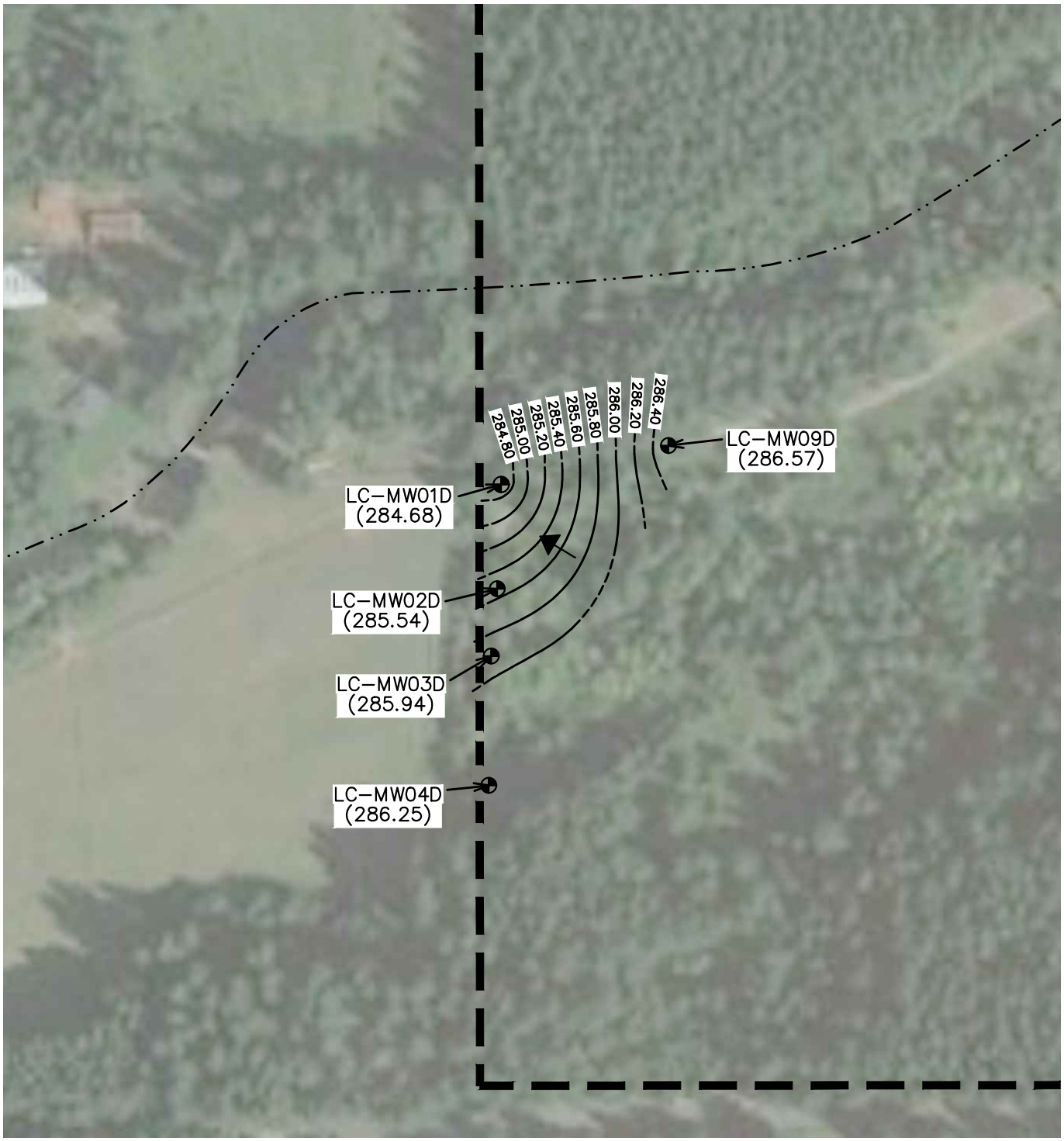
FIGURE
5A



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LEGEND

- LC–MW01D (284.68) — MONITORING WELL AND WELL NUMBER
- DEEP GROUNDWATER ELEVATION (FEET AMSL)
- LACAMAS CREEK
- BASE BOUNDARY
- 284.60 — DEEP GROUNDWATER CONTOUR (4TH QUARTER 2019)
- GROUNDWATER FLOW DIRECTION

Scale 1" = 200'

0' 100' 200' 400'

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DEEP BASE BOUNDARY MONITORING WELLS WITH 4TH QUARTER 2019 GROUNDWATER CONTOURS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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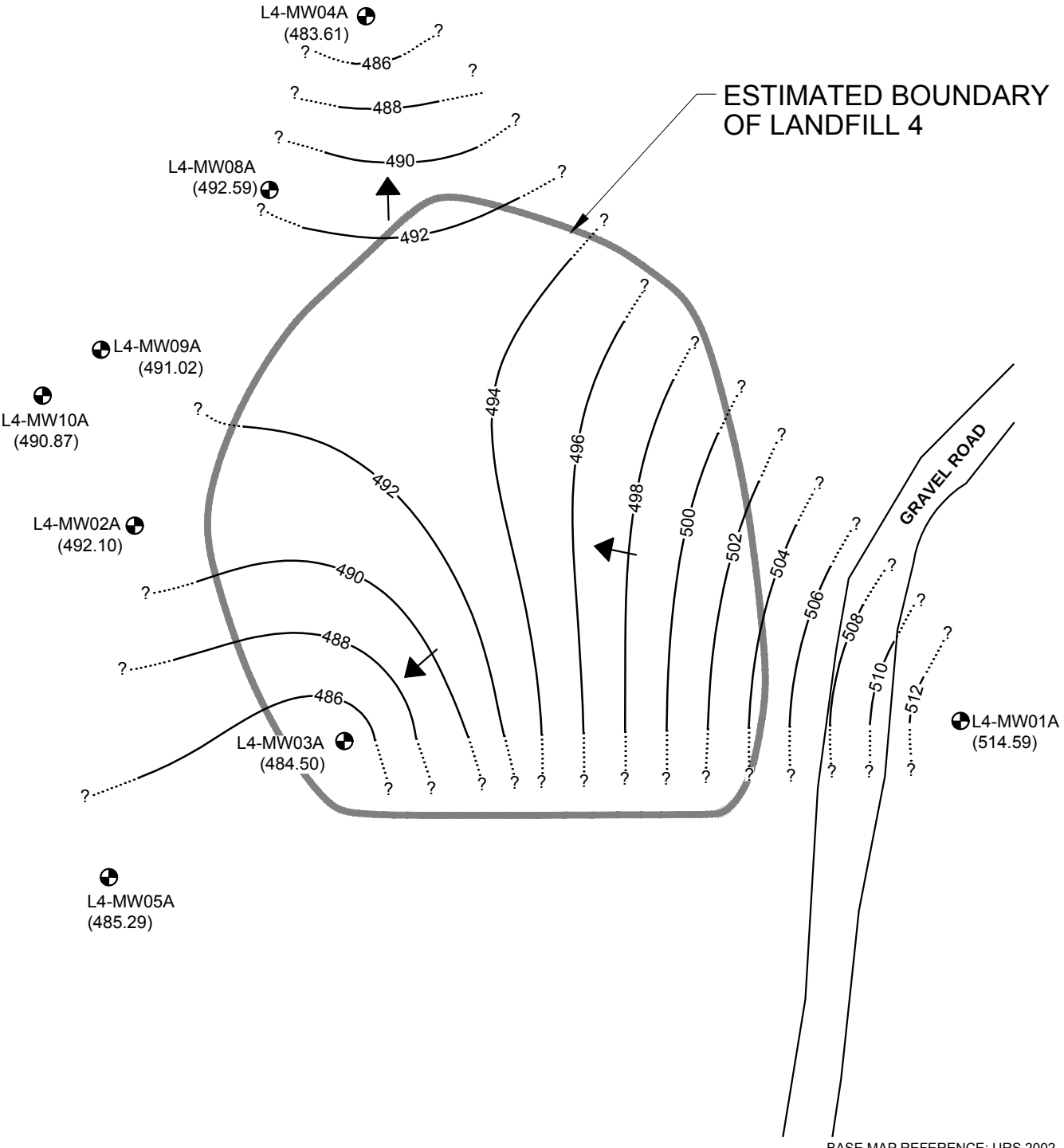
FIGURE
5B



BASE MAP REFERENCE: URS 2002

LEGEND

L4-MW01A	MONITORING WELL AND WELL NUMBER
(514.59)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
——	DEEP GROUNDWATER CONTOUR (4TH QUARTER 2019)
←	GROUNDWATER FLOW DIRECTION

N

SCALE: 1" = 50'

0' 25' 50' 100'

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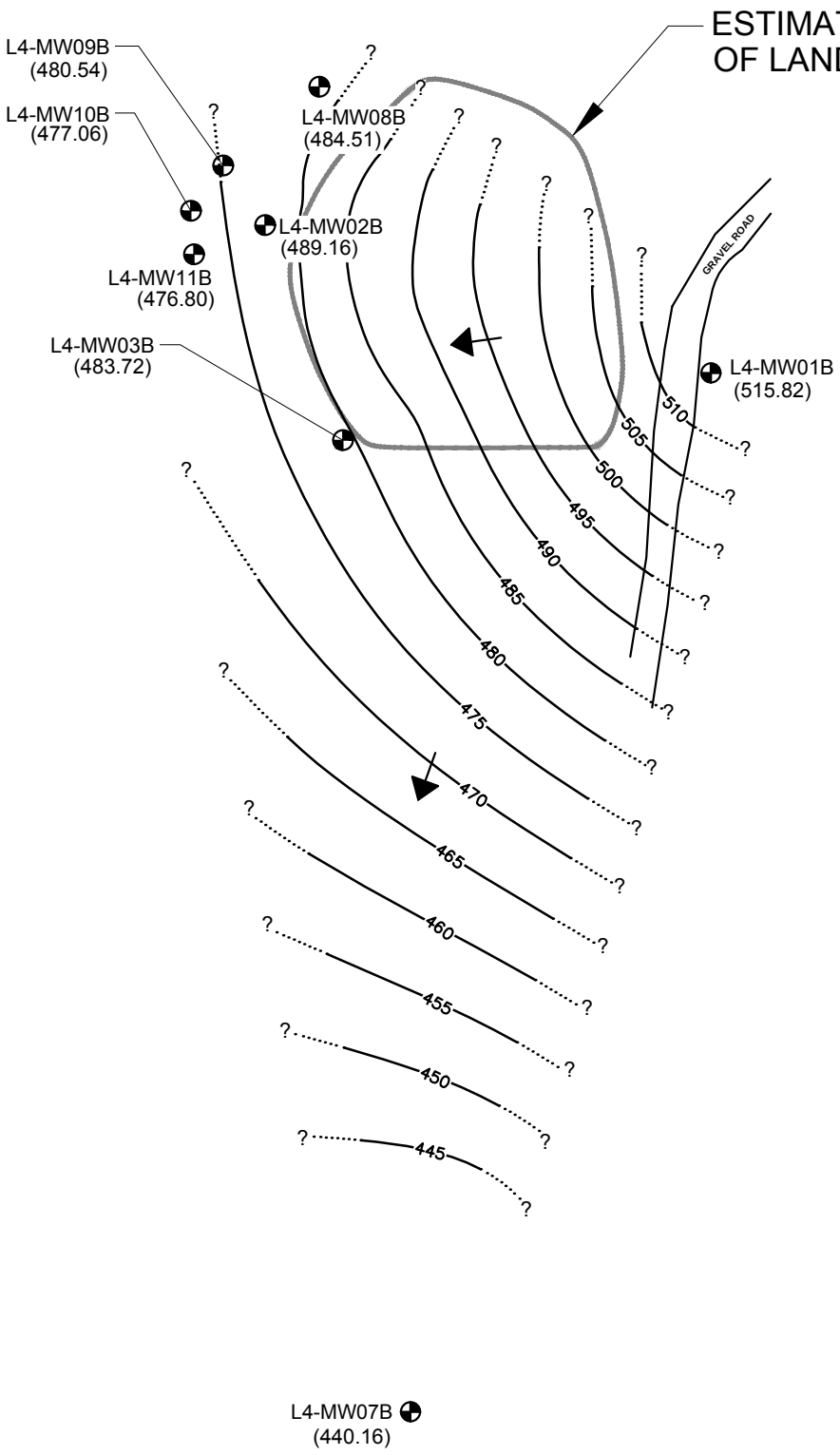
SHALLOW LANDFILL 4 MONITORING WELLS, 4TH QUARTER 2019
GROUNDWATER CONTOURS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
76151.009

FIGURE
6A



LEGEND

L4-MW01B	MONITORING WELL AND WELL NUMBER
(515.82)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
——	DEEP GROUNDWATER CONTOUR (4TH QUARTER 2019)
←	GROUNDWATER FLOW DIRECTION

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 100'

0' 50' 100' 200'

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PBS

DEEP LANDFILL 4 MONITORING WELLS, 4TH QUARTER 2019
GROUNDWATER CONTOURS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
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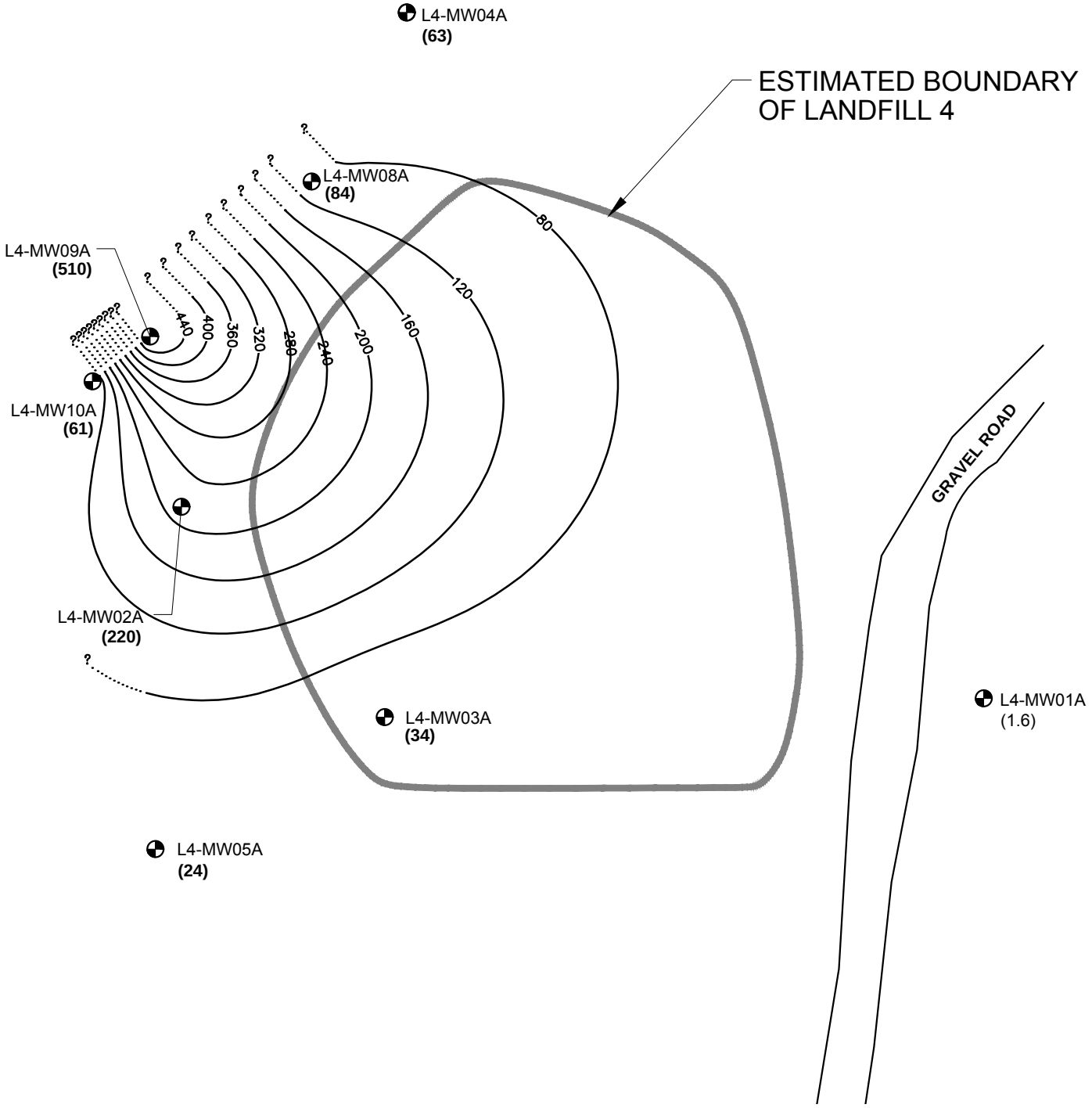
FIGURE
6B



LEGEND

L4-MW02A	MONITORING WELL AND WELL NUMBER
(220)	PERCHLORATE CONCENTRATION IN SHALLOW GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 11.0 µg/L
——	SHALLOW GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (4TH QUARTER 2019)

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 50'

0' 25' 50' 100'

PREPARED FOR: CLARK COUNTY, WASHINGTON

PERCHLORATE ISOCONTOURS (A WELLS)
4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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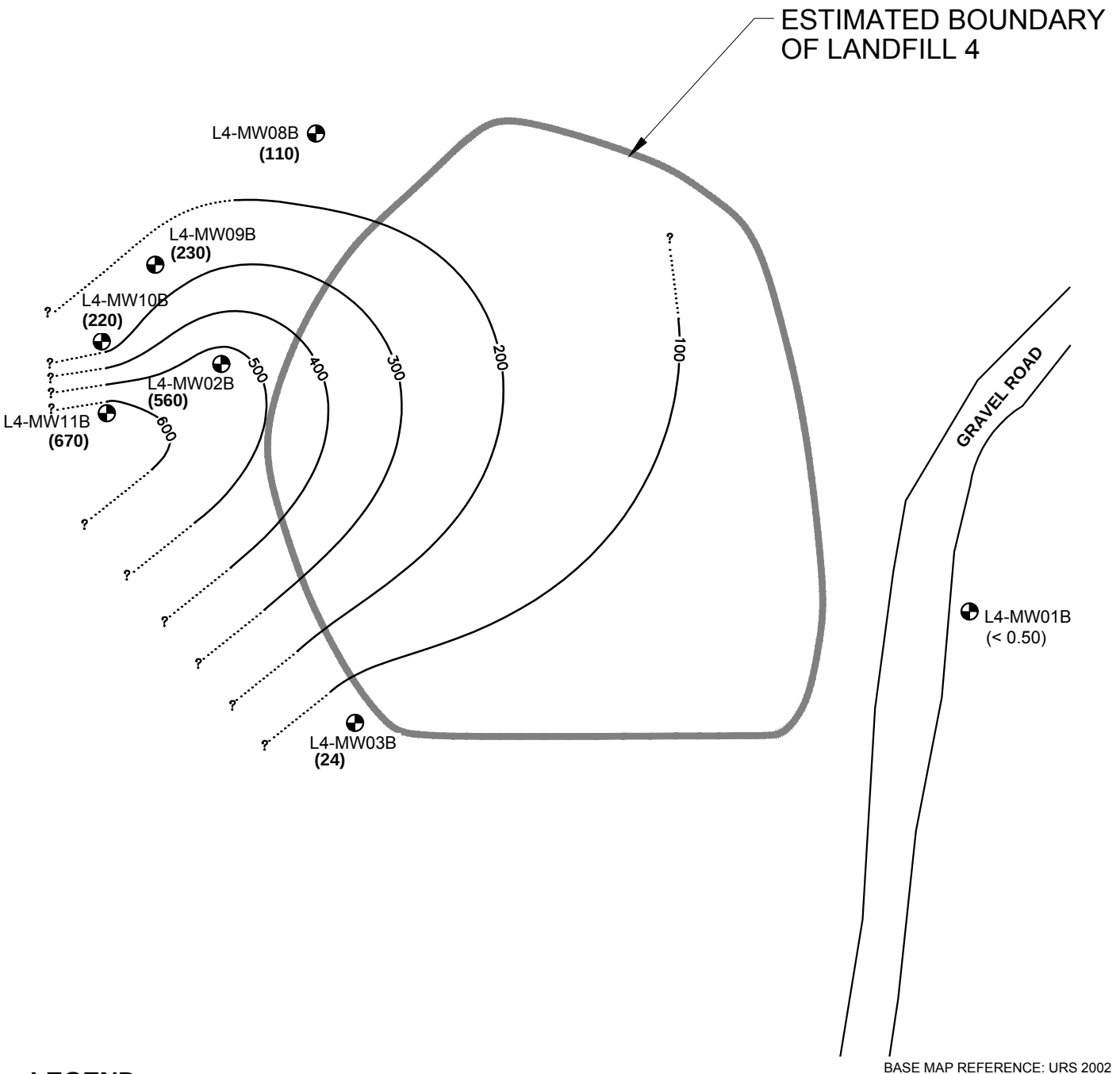
FIGURE
7A



BASE MAP REFERENCE: URS 2002

LEGEND

L4-MW02B	MONITORING WELL AND WELL NUMBER
(560)	PERCHLORATE CONCENTRATION IN DEEP GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 11.0 µg/L
——	DEEP GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (4TH QUARTER 2019)

SCALE: 1" = 50'

0' 25' 50' 100'

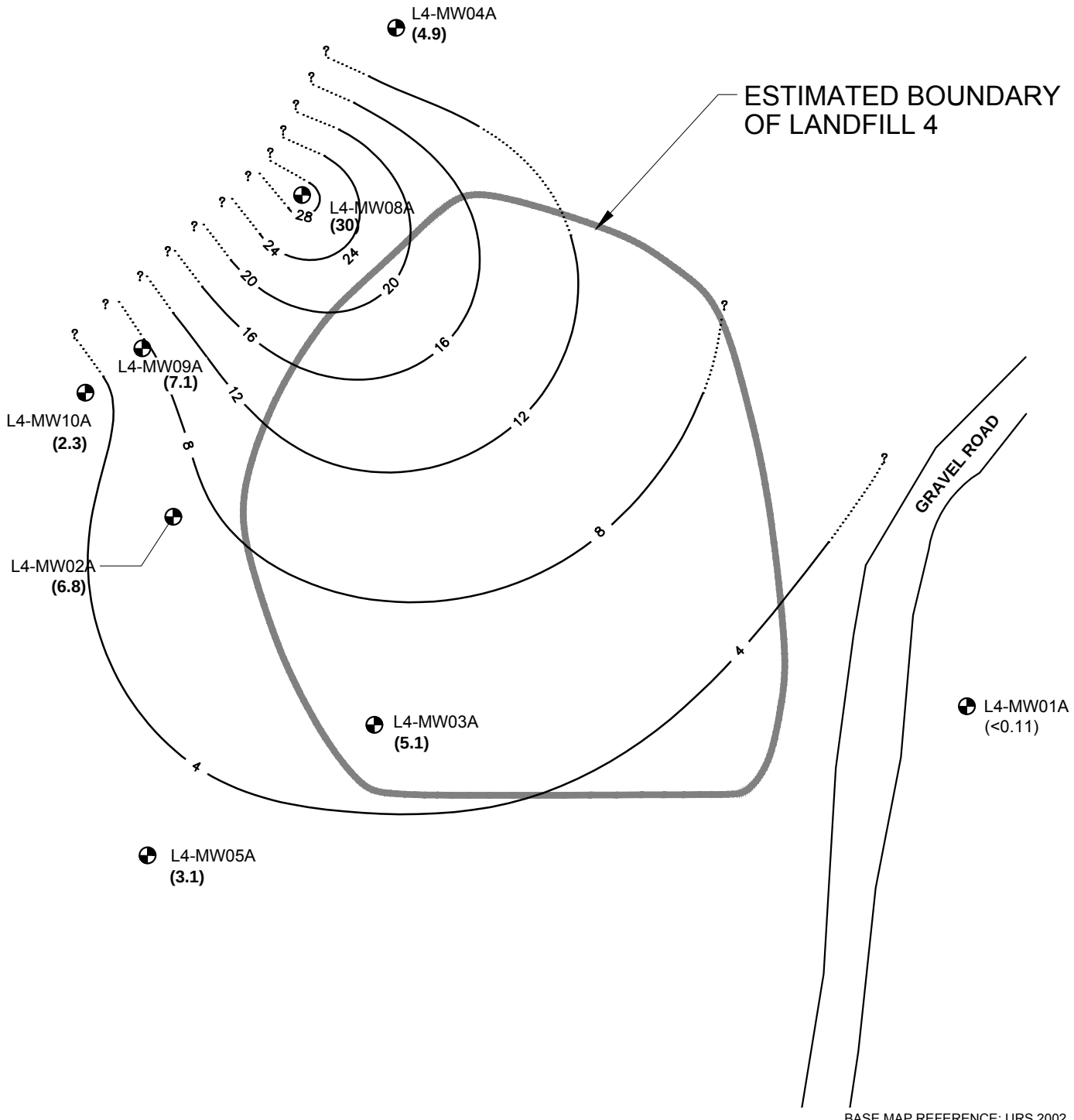
PREPARED FOR: CLARK COUNTY, WASHINGTON

PERCHLORATE ISOCONTOURS (B WELLS)
4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
76151.009

FIGURE
7B



BASE MAP REFERENCE: URS 2002

LEGEND

L4-MW02A	MONITORING WELL AND WELL NUMBER
(6.8)	RDX CONCENTRATION IN SHALLOW GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 1.10 µg/L
——	SHALLOW GROUNDWATER RDX CONCENTRATION CONTOUR (4TH QUARTER 2019)

SCALE: 1" = 50'

0' 25' 50' 100'

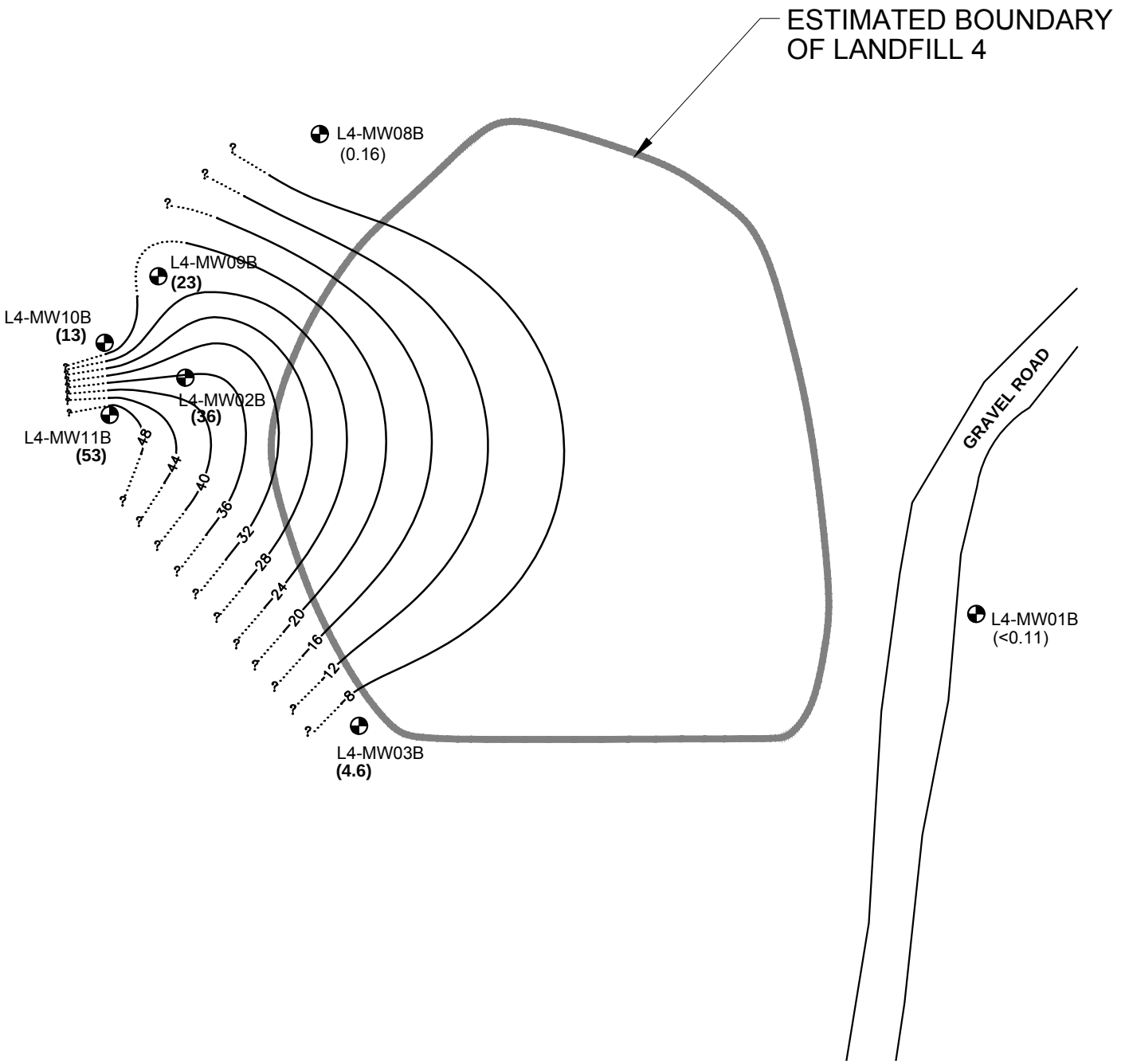
PREPARED FOR: CLARK COUNTY, WASHINGTON

PBS

RDX ISOCONTOURS (A WELLS)
4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
76151.009

FIGURE
8A



LEGEND

L4-MW02B	MONITORING WELL AND WELL NUMBER
(36)	RDX CONCENTRATION IN DEEP GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 1.10 µg/L
——	DEEP GROUNDWATER RDX CONCENTRATION CONTOUR (4TH QUARTER 2019)

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 50'

0' 25' 50' 100'

PREPARED FOR: CLARK COUNTY, WASHINGTON

RDX ISOCONTOURS (B WELLS)
4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

MAR 2020
76151.009

FIGURE
8B

Tables

Table 1. Well Number and Construction Details

Camp Bonneville, Vancouver, Washington

	Well No. in PBS Work Contract	Ecology Well Tag No.	Well Location	Measured Total Depth (feet)*	Well Log Total Depth (feet)**	Screened Interval (feet)***	Top of PVC Casing Elevation (feet amsl)	Well No. on Steel Casings/Caps (CHPPM No.)
Base Boundary	LC-MW01S	AHA-359	Lacamas Creek	22.71	23.00	10–20	290.15	LC-MW01S
	LC-MW01D	AHA-358	Lacamas Creek	42.21	42.50	29.5–39.5	290.26	LC-MW01D
	LC-MW02S	AHA-364	Lacamas Creek	17.46	17.70	10–15	291.15	LC-MW02S
	LC-MW02D	AHA-357	Lacamas Creek	37.83	38.10	25–35	291.57	LC-MW02D
	LC-MW03S	AHA-363	Lacamas Creek	20.09	20.35	13–18	290.87	LC-MW03S
	LC-MW03D	AHA-362	Lacamas Creek	39.36	39.48	27–37	290.93	LC-MW03D
	LC-MW04S	AHA-375	Lacamas Creek	16.49	16.80	9–14	291.63	LC-MW04S
	LC-MW04D	AHA-361	Lacamas Creek	37.03	37.13	24.5–34.5	291.79	LC-MW04D
	LC-MW09S	BJH-382	Lacamas Creek	22.05	22.38	15-20	293.52	LC-MW09S
	LC-MW09D	BJH-380	Lacamas Creek	41.60	42.27	30-40	294.10	LC-MW09D
Landfill 4 / Demolition Area 1	L4-MW01A	N/A	Landfill 4	30.17	30.40	17–27	531.43	L4-MW01A
	L4-MW01B	AGL-482	Landfill 4	55.54	56.00	43–53	529.57	L4-MW01B
	L4-MW02A	N/A	Landfill 4	40.21	40.20	27–37	519.97	L4-MW02A
	L4-MW02B	AGL-483	Landfill 4	74.97	75.00	62–72	521.70	L4-MW02B
	L4-MW03A	AGL-466	Landfill 4	48.71	49.00	41–46	514.90	L4-MW03A
	L4-MW03B	AGL-484	Landfill 4	61.85	63.00	50–60	511.49	L4-MW03B
	L4-MW04A	AGL-465	Landfill 4	46.44	46.00	33–43	511.84	L4-MW04A
	L4-MW05A	AGL-467	Landfill 4	36.63	36.00	28–33	509.74	L4-MW05A
	L4-MW07B	N/A	Landfill 4	58.86	58.90	46–56	480.49	L4-MW07B
	L4-MW08A	BJH-379	Landfill 4	40.72	40.31	28-38	515.52	L4-MW08A
	L4-MW08B	BJH-378	Landfill 4	67.41	67.31	55-65	515.72	L4-MW08B
	L4-MW09A	BJH-377	Landfill 4	42.45	42.43	30-40	523.00	L4-MW09A
	L4-MW09B	BJH-376	Landfill 4	77.65	77.36	65-75	523.27	L4-MW09B
	L4-MW10A	BJH-375	Landfill 4	42.71	42.43	30-40	523.05	L4-MW10A
	L4-MW10B	BJH-374	Landfill 4	77.30	77.17	65-75	522.48	L4-MW10B
	L4-MW11B	BJH-373	Landfill 4	77.57	77.27	65-75	522.29	L4-MW11B
	L4-MW17	ALB-252	Landfill 4	17.17	17.67	5–15	361.48	L4-MW17
	L4-MW18	ALB-251	Landfill 4	22.60	22.01	10–20	362.84	L4-MW18

Notes:

* = depth in feet measured from top of well PVC casing in December 2007 and August 2017; sediment present at bottom of some casings

** = casing depth in feet recorded on well log; measured from top of PVC casing

*** = screened interval reported on well completion logs; feet below ground surface

amsl = above mean sea level

N/A = not available

Table 2. Field Parameters for Groundwater and Surface Water Samples at Base Boundary and Landfill 4/Demolition Area 1, 4th Quarter 2019

Camp Bonneville, Vancouver, Washington

	Sample ID	Date Sampled	Depth to Water	Water Elevation	Dissolved Oxygen	Oxidation Reduction Potential	pH	Specific Conductivity	Temperature	Turbidity
			feet below TOC	feet amsl*	mg/L	millivolts	pH units	µS/cm	degrees Celsius	NTU
Base Boundary	04Q19LCMW01DW	12/4/2019	5.58	284.68	8.71	150.4	7.08	157	11.0	0.67
	04Q19LCMW01SW	12/4/2019	5.06	285.09	7.80	140.6	7.09	154	11.4	0.60
	04Q19LCMW02DW	12/4/2019	6.03	285.54	8.81	160.5	7.02	162	11.2	2.56
	04Q19LCMW02SW	12/4/2019	5.38	285.77	8.54	156.2	7.05	153	11.6	0.33
	04Q19LCMW03DW	12/3/2019	4.99	285.94	8.64	166.9	6.89	90	10.8	4.31
	04Q19LCMW03SW	12/3/2019	4.79	286.08	8.72	171.5	6.92	88	11.2	4.61
	04Q19LCMW04DW	12/3/2019	5.54	286.25	8.77	147.0	7.20	91	10.3	3.07
	04Q19LCMW04SW	12/3/2019	4.83	286.80	7.34	167.6	6.44	86	10.6	1.94
	04Q19LCMW09DW	12/4/2019	7.53	286.57	6.56	129.4	6.98	172	10.7	1.75
	04Q19LCMW09SW	12/4/2019	6.87	286.65	7.39	155.7	6.83	152	11.1	0.95
Landfill 4 / Demolition Area 1	04Q19L4MW01AW	12/5/2019	16.84	514.59	6.01	269.7	5.37	45	10.8	0.95
	04Q19L4MW01BW	12/5/2019	13.75	515.82	9.03	263.9	5.49	47	10.5	0.50
	04Q19L4MW02AW	12/5/2019	27.87	492.10	7.72	307.9	4.93	35	11.1	0.78
	04Q19L4MW02BW	12/5/2019	32.54	489.16	3.39	206.7	5.49	83	10.8	1.69
	04Q19L4MW03AW	12/6/2019	30.40	484.50	6.76	240.0	5.31	21	10.4	0.92
	04Q19L4MW03BW	12/6/2019	27.77	483.72	6.20	241.4	5.95	42	10.2	0.74
	04Q19L4MW04AW	12/12/2019	28.23	483.61	6.09	238.7	5.20	15	9.9	1.33
	04Q19L4MW05AW	12/6/2019	24.45	485.29	5.82	257.5	5.44	26	9.9	0.57
	04Q19L4MW07BW	12/5/2019	40.33	440.16	6.02	221.2	5.77	58	9.6	0.35
	04Q19L4MW08AW	12/6/2019	22.93	492.59	5.97	307.7	5.11	16	10.3	0.36
	04Q19L4MW08BW	12/6/2019	31.21	484.51	3.89	188.5	6.47	63	10.3	0.69
	04Q19L4MW09AW	12/6/2019	31.98	491.02	6.53	310.8	5.01	19	10.7	2.26
	04Q19L4MW09BW	12/12/2019	42.73	480.54	1.60	281.0	5.35	29	10.4	0.00
	04Q19L4MW10AW	12/12/2019	32.18	490.87	5.59	313.5	5.01	20	10.5	0.00
	04Q19L4MW10BW	12/12/2019	45.42	477.06	3.02	271.1	6.14	47	10.4	1.08
	04Q19L4MW11BW	12/12/2019	45.49	476.80	3.65	298.9	5.72	27	10.5	0.14
	04Q19L4MW17W	12/5/2019	10.67	350.85	5.45	100.5	7.65	408	11.1	0.61
	04Q19L4MW18W	12/5/2019	11.79	351.06	7.34	142.1	6.73	228	11.2	0.45

Field parameters were measured using a YSI Pro and a flow-through cell, with the exception of turbidity, which was measured using an HF Scientific TPW Meter

* water level in feet above mean sea level, relative to top of PVC casing elevation survey

TOC = top of casing

amsl = above mean sea level

mg/L = milligrams per liter

µS/cm = micro-siemens per centimeter

NTU = Nephelometric Turbidity Units

Water level measurements are not collected from the water wells

Table 3. Constituents Detected in Groundwater (Base Boundary), 4th Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	LCMW01D 12/04/2019	LCMW01S 12/04/2019	LCMW02D 12/04/2019	LCMW02S 12/04/2019	LCMW03D 12/03/2019	LCMW03S 12/03/2019	LCMW04D 12/03/2019	LCMW04S 12/03/2019	LCMW04S Duplicate 12/03/2019	RPD (<20%)	LCMW09D 12/04/2019	LCMW09S 12/04/2019
Explosives (µg/L)													
2,4,6-Trinitrotoluene	2.92	< 0.11	< 0.10	< 0.11	< 0.11	< 0.11	< 0.10	< 0.10	< 0.11	< 0.11	Acceptable	< 0.10	< 0.10
2,4-Dinitrotoluene	0.282	< 0.11	< 0.10	< 0.11	< 0.11	< 0.11	< 0.10	< 0.10	< 0.11	< 0.11	Acceptable	< 0.10	< 0.10
HMX	800	< 0.11	< 0.10	< 0.11	< 0.11	< 0.11	< 0.10	< 0.10	< 0.11	< 0.11	Acceptable	< 0.10	< 0.10
RDX	0.795	< 0.11	< 0.10	< 0.11	< 0.11	< 0.11	< 0.10	< 0.10	< 0.11	< 0.11	Acceptable	< 0.10	< 0.10
Remaining Explosives	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND
Total Priority Metals (µg/L)													
Chromium	50	0.44	0.4	< 0.40	0.42	0.46	< 0.40	0.51	0.57	0.61	6.8%	0.5	0.56
Lead	15	**20**	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	Acceptable	< 0.80	< 0.80
Silver	80	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	Acceptable	< 0.40	0.54
Zinc	4,800	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	Acceptable	8	< 7.0
Antimony, Beryllium, Cadmium, Copper, Mercury, Nickel, Selenium, Thallium	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND
Perchlorate (µg/L)													
Perchlorate	11.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	Acceptable	< 0.50	< 0.50
Semi-Volatile Organic Compounds (µg/L)													
All SVOCs	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND
Volatile Organic Compounds (µg/L)													
1,1,1-Trichloroethane	16,000	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.219	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	Acceptable	< 0.40	< 0.40
Naphthalene	160	< 0.39	< 0.38	< 0.38	< 0.39	< 3.8	0.4	< 0.38	< 0.39	< 0.39	Acceptable	< 0.38	< 0.38
Trichloroethene	0.54	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20
Remaining VOCs	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND

Notes:

µg/L = micrograms per liter

< = not detected above the indicated method reporting limit

BOLD = exceeds cleanup values

Acceptable = No detection in original or duplicate, or the difference in detection values is less than the reporting limit

ND = not detected

RPD = relative percent different

Table 4. Constituents Detected in Groundwater (Landfill 4), 4th Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	L4MW01A 12/05/2019	L4MW01B 12/05/2019	L4MW02A 12/05/2019	L4MW02B 12/05/2019	L4MW03A 12/06/2019	L4MW03B 12/06/2019	L4MW04A 12/12/2019	L4MW05A 12/06/2019	L4MW07B 12/05/2019	L4MW08A 12/06/2019
Explosives (µg/L)											
2,4,6-Trinitrotoluene	2.90	< 0.11	< 0.11	< 0.11	0.18	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.11
2,4-Dinitrotoluene	0.280	< 0.11	< 0.11	< 0.11	**0.36**	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
HMX	800	< 0.11	< 0.11	3.2	6.7	0.37	< 0.11	< 0.11	0.13	< 0.11	1.5
RDX	1.10	< 0.11	< 0.11	**6.8**	**36**	**5.1**	**4.6**	**4.9**	**3.1**	< 0.11	**30**
Remaining Explosives	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate (µg/L)											
Perchlorate	11.0	1.6	< 0.50	**220**	**560**	**34**	**24**	**63**	**24**	1.9	**84**
Volatile Organic Compounds (µg/L)											
1,1,1-Trichloroethane	16,000	< 0.20	< 0.20	< 0.20	0.46	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.220	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	< 0.20	1.9	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	< 0.20	0.34	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	< 0.40	< 0.40	< 0.40	2.3	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Trichloroethene	0.540	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Remaining VOCs	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

< = not detected above the indicated method reporting limit

BOLD = exceeds cleanup values

Acceptable = No detection in original or duplicate, or the difference in detection values is less than the reporting limit

ND = not detected

RPD = relative percent different

Table 4. Constituents Detected in Groundwater (Landfill 4), 4th Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	L4MW08B 12/06/2019	L4MW08B Duplicate 12/06/2019	RPD (<20%)	L4MW09A 12/06/2019	L4MW09B 12/12/2019	L4MW09B Duplicate 12/12/2019	RPD (<20%)	L4MW10A 12/12/2019	L4MW10B 12/12/2019	L4MW11B 12/12/2019	L4MW17 12/05/2019	L4MW18 12/05/2019
Explosives (µg/L)													
2,4,6-Trinitrotoluene	2.90	< 0.11	< 0.11	Acceptable	< 0.11	< 0.11	< 0.11	Acceptable	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
2,4-Dinitrotoluene	0.280	< 0.11	< 0.11	Acceptable	< 0.11	< 0.11	< 0.11	Acceptable	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
HMX	800	< 0.11	< 0.11	Acceptable	1.6	1.7	1.7	0%	0.38	< 0.11	< 0.11	< 0.11	< 0.11
RDX	1.10	0.16	0.15	6%	**7.1**	**23**	**24**	4%	**2.3**	**13**	**53**	< 0.11	< 0.11
Remaining Explosives	Varies	ND	ND	Acceptable	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND
Perchlorate (µg/L)													
Perchlorate	11.0	**110**	**110**	0%	**510**	**230**	**230**	0%	**61**	**220**	**670**	< 0.50	< 0.50
Volatile Organic Compounds (µg/L)													
1,1,1-Trichloroethane	16,000	< 0.20	< 0.20	Acceptable	< 0.20	5.8	5.9	2%	< 0.20	7.1	4.5	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.220	< 0.20	< 0.20	Acceptable	< 0.20	**1.7**	**1.8**	6%	< 0.20	**0.59**	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	Acceptable	< 0.20	9.7	9.6	1%	< 0.20	9.1	7.2	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	Acceptable	< 0.20	6.3	6.1	3%	< 0.20	8.8	4.5	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	0.62	0.65	5%	< 0.40	18	18	0%	< 0.40	25	14	< 0.40	< 0.40
Trichloroethene	0.540	< 0.20	< 0.20	Acceptable	< 0.20	0.47	0.51	8%	< 0.20	0.22	< 0.20	< 0.20	< 0.20
Remaining VOCs	Varies	ND	ND	Acceptable	ND	ND	ND	Acceptable	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

< = not detected above the indicated method reporting limit

BOLD = exceeds cleanup values

Acceptable = No detection in original or duplicate, or the difference in detection values is less than the reporting limit

ND = not detected

RPD = relative percent different

Appendix A
List of Acronyms and Abbreviations

List of Acronyms and Abbreviations

amsl	above mean sea level
AP	ammonium perchlorate
bgs	below ground surface
CD	compact disc
BRAC	Base Realignment and Closure
CHPPM	US Army Center for Health Promotion and Preventative Medicine
COC	chain of custody
COPC	chemical of potential concern
DNR	State of Washington Department of Natural Resources
DO	dissolved oxygen
DQO	data quality objectives
EDD	electronic data deliverable
EPA	US Environmental Protection Agency
FBI	Federal Bureau of Investigation
GC/MS	gas chromatography/mass spectrometer
HASP	health and safety plan
HE	high explosives 2,4 DNT, 2,6 DNT
HMX	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
IC	ion chromatography
IDW	investigation-derived waste
LCS	laboratory control spike
µg/L	micrograms per liter (approximately equal ppb)
µm	micrometer
MDL	method detection limit
mg/L	milligrams per liter (approximately equal ppm)
mL	milliliters
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate
MTCA	Washington Model Toxics Control Act (Chapter 173-340 WAC)
NG	nitroglycerine
OE	ordinance and explosives
ORP	oxidation reduction potential
PA	picric acid
PAH	polycyclic aromatic hydrocarbons
PBS	PBS Engineering and Environmental Inc.
PCBs	polychlorinated biphenyls
PES	polyethersulfone
PETN	pentaerythitol tetranitrate
ppb	parts per billion

ppm	parts per million
PQL	practical quantitation limit
PVC	polyvinyl chloride
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine (Cyclonite)
RI	remedial investigation
RPD	relative percent difference
SAP	sampling and analysis plan
SDG	sample delivery groups
SDS	sample data sheets
SI	site investigation
SOP	standard operating procedure
SOW	statement of work
SVOC	semi-volatile organic compound
TBD	to be determined
TIC	tentatively identified compound
TNT	2,4,6-trinitrotoluene
TOC	total organic carbon
TPH	total petroleum hydrocarbons
USACE	United States Army Corps of Engineers
UXO	unexploded ordnance
VOC	volatile organic compound

Appendix B

TestAmerica, Level II Data Package

(Electronic files provided on enclosed CD)

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91193-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
1/7/2020 1:40:48 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91193-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-91193-1

Comments
No additional comments.

Receipt
The samples were received on 12/4/2019 1:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 580-318341 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, Naphthalene, cis-1,3-Dichloropropene, 1,2,4-Trichlorobenzene, N-Propylbenzene, n-Butylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, Ethylbenzene and m-Xylene & p-Xylene.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW03DW (580-91193-1), 04Q19LCMW03SW (580-91193-2), and (CCVIS 580-318341/3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-318784 recovered above the upper control limit for 3,3'-Dichlorobenzidine, 4-Nitroaniline and Carbazole . The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW03DW (580-91193-1), 04Q19LCMW03SW (580-91193-2) and (CCVIS 580-318784/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-318784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270D: 04Q19LCMW03DW (580-91193-1), 04Q19LCMW03SW (580-91193-2), (LCS 580-319850/2-A) and (LCSD 580-319850/3-A) are associated with 580-319850 which was re-extracted outside of holding time due to quality control failures in the initial extraction. For well-performing analytes which failed recovery criteria in the LCS/LCSD of the initial extraction, two sets of data are reported.

Pentachlorophenol, a poor-performing compound, passed recovery but failed precision criteria in the LCS/LCSD of the re-extracted batch. Two sets of data for this poor-performing analyte are reported. For other poor performers which failed in the initial extraction, no noticeable improvement was found in the re-extraction batch. The in-hold set of data is reported for these compounds.

Method 8270D: (LCS 580-318500/2-A) and (LCSD 580-318500/3-A) recover outside control and precision limits for several analytes. Affected client samples were re-extracted outside of holding time with better LCS/LCSD results. For the affected analytes, two sets of data are reported.

Method 8270D: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analyte: Carbazole. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analytes: 2,4-Dimethylphenol, 4-Nitroaniline and Hexachlorobenzene .

Method 8270D: The following sample was diluted due to the nature of the sample matrix: 04Q19LCMW03DW (580-91193-1). Elevated reporting limits (RLs) are provided.

Method 8270D: (CCVIS 580-318784/3) recovers outside drift criteria for Pentachlorophenol. This compound has been demonstrated by the laboratory to exhibit poor and/or erratic performance; it is classified as a poor performing compound. Results for this analyte have

Job ID: 580-91193-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

been qualified and reported. Re-extraction of samples associated with 580-318500 present concurring results for this analyte; two sets of data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

LCMS
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3520C: A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Due to power issues samples only received 16 hours of extraction time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW03DW
Lab Sample ID: 580-91193-1
Date Collected: 12/03/19 13:53
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 22:39	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 22:39	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 22:39	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 22:39	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 22:39	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 22:39	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 22:39	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 22:39	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 22:39	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 22:39	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 22:39	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 22:39	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:39	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 22:39	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 22:39	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 22:39	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:39	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 22:39	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:39	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 22:39	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 22:39	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 22:39	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 22:39	1
Benzene	ND		0.20		ug/L			12/05/19 22:39	1
Bromobenzene	ND		0.20		ug/L			12/05/19 22:39	1
Bromoform	ND		0.50		ug/L			12/05/19 22:39	1
Bromomethane	ND		0.50		ug/L			12/05/19 22:39	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 22:39	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 22:39	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 22:39	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 22:39	1
Chloroethane	ND		0.50		ug/L			12/05/19 22:39	1
Chloroform	ND		0.20		ug/L			12/05/19 22:39	1
Chloromethane	ND		0.50		ug/L			12/05/19 22:39	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:39	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:39	1
Dibromomethane	ND		0.20		ug/L			12/05/19 22:39	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 22:39	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 22:39	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 22:39	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 22:39	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 22:39	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 22:39	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 22:39	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 22:39	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 22:39	1
Naphthalene	ND		1.0		ug/L			12/05/19 22:39	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 22:39	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 22:39	1

Client Sample ID: 04Q19LCMW03DW
Lab Sample ID: 580-91193-1

Date Collected: 12/03/19 13:53
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/05/19 22:39	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 22:39	1
Styrene	ND		0.50		ug/L			12/05/19 22:39	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 22:39	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 22:39	1
Toluene	ND		0.20		ug/L			12/05/19 22:39	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:39	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:39	1
Trichloroethene	ND		0.20		ug/L			12/05/19 22:39	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 22:39	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/05/19 22:39*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/05/19 22:39*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/05/19 22:39*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 22:39*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/05/19 22:39*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	3.9		ug/L		12/30/19 13:18	01/03/20 16:56	10
1,2,4-Trichlorobenzene	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
1,2-Dichlorobenzene	ND	H	5.8		ug/L		12/30/19 13:18	01/03/20 16:56	10
1,2-Dichlorobenzene	ND	*	5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
1,3-Dichlorobenzene	ND	H	3.9		ug/L		12/30/19 13:18	01/03/20 16:56	10
1,3-Dichlorobenzene	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
1,4-Dichlorobenzene	ND	H	3.9		ug/L		12/30/19 13:18	01/03/20 16:56	10
1,4-Dichlorobenzene	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
1-Methylnaphthalene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4,5-Trichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4,6-Trichlorophenol	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4-Dichlorophenol	ND		38		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4-Dimethylphenol	ND	*	38		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4-Dinitrophenol	ND	*	190		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,4-Dinitrotoluene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
2,6-Dinitrotoluene	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Chloronaphthalene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Chlorophenol	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Methylnaphthalene	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Methylphenol	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Nitroaniline	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
2-Nitrophenol	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
3 & 4 Methylphenol	ND		7.6		ug/L		12/09/19 14:43	12/13/19 17:21	10
3,3'-Dichlorobenzidine	ND		140		ug/L		12/09/19 14:43	12/13/19 17:21	10
3-Nitroaniline	ND		29		ug/L		12/09/19 14:43	12/13/19 17:21	10
4,6-Dinitro-2-methylphenol	ND		95		ug/L		12/09/19 14:43	12/13/19 17:21	10
4-Bromophenyl phenyl ether	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
4-Chloro-3-methylphenol	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
4-Chloroaniline	ND	*	95		ug/L		12/09/19 14:43	12/13/19 17:21	10

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91193-1

Client Sample ID: 04Q19LCMW03DW
Date Collected: 12/03/19 13:53
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91193-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
4-Nitroaniline	ND	*	19		ug/L		12/09/19 14:43	12/13/19 17:21	10
4-Nitrophenol	ND		140		ug/L		12/09/19 14:43	12/13/19 17:21	10
Acenaphthene	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
Acenaphthylene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Anthracene	ND		140		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzo[a]anthracene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzo[a]pyrene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzo[b]fluoranthene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzo[g,h,i]perylene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzo[k]fluoranthene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzoic acid	ND		38		ug/L		12/09/19 14:43	12/13/19 17:21	10
Benzyl alcohol	ND		29		ug/L		12/09/19 14:43	12/13/19 17:21	10
Bis(2-chloroethoxy)methane	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Bis(2-chloroethyl)ether	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Bis(2-ethylhexyl) phthalate	ND		140		ug/L		12/09/19 14:43	12/13/19 17:21	10
bis(chloroisopropyl) ether	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Butyl benzyl phthalate	ND		95		ug/L		12/09/19 14:43	12/13/19 17:21	10
Carbazole	ND	*	5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Chrysene	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Dibenz(a,h)anthracene	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Dibenzofuran	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
Diethyl phthalate	ND		110		ug/L		12/09/19 14:43	12/13/19 17:21	10
Dimethyl phthalate	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Di-n-butyl phthalate	ND		29		ug/L		12/09/19 14:43	12/13/19 17:21	10
Di-n-octyl phthalate	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Fluoranthene	ND		29		ug/L		12/09/19 14:43	12/13/19 17:21	10
Fluorene	ND		19		ug/L		12/09/19 14:43	12/13/19 17:21	10
Hexachlorobenzene	ND	*	5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
Hexachlorobutadiene	ND	H	9.7		ug/L		12/30/19 13:18	01/03/20 16:56	10
Hexachlorobutadiene	ND	*	9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Hexachlorocyclopentadiene	ND	*	29		ug/L		12/09/19 14:43	12/13/19 17:21	10
Hexachloroethane	ND	H	9.7		ug/L		12/30/19 13:18	01/03/20 16:56	10
Hexachloroethane	ND	*	9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Indeno[1,2,3-cd]pyrene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Isophorone	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
Naphthalene	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:21	10
Nitrobenzene	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
N-Nitrosodi-n-propylamine	ND		5.7		ug/L		12/09/19 14:43	12/13/19 17:21	10
N-Nitrosodiphenylamine	ND	H *	29		ug/L		12/30/19 13:18	01/03/20 16:56	10
N-Nitrosodiphenylamine	ND	*	29		ug/L		12/09/19 14:43	12/13/19 17:21	10
Pentachlorophenol	ND	H *	97		ug/L		12/30/19 13:18	01/03/20 16:56	10
Pentachlorophenol	ND	*	95		ug/L		12/09/19 14:43	12/13/19 17:21	10
Phenanthrene	ND		9.5		ug/L		12/09/19 14:43	12/13/19 17:21	10
Phenol	ND		38		ug/L		12/09/19 14:43	12/13/19 17:21	10
Pyrene	ND		19		ug/L		12/09/19 14:43	12/13/19 17:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*52*		*48 - 125*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
2,4,6-Tribromophenol (Surr)	*56*		*48 - 125*	*12/09/19 14:43*	*12/13/19 17:21*	*10*

Client Sample ID: 04Q19LCMW03DW
Lab Sample ID: 580-91193-1
Date Collected: 12/03/19 13:53
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*50 - 120*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
2-Fluorobiphenyl	*86*		*50 - 120*	*12/09/19 14:43*	*12/13/19 17:21*	*10*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
2-Fluorophenol (Surr)	*62*		*36 - 120*	*12/09/19 14:43*	*12/13/19 17:21*	*10*
Nitrobenzene-d5 (Surr)	*62*		*46 - 129*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*	*12/09/19 14:43*	*12/13/19 17:21*	*10*
Phenol-d5 (Surr)	*75*		*38 - 120*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
Phenol-d5 (Surr)	*63*		*38 - 120*	*12/09/19 14:43*	*12/13/19 17:21*	*10*
Terphenyl-d14 (Surr)	*117*		*61 - 126*	*12/30/19 13:18*	*01/03/20 16:56*	*10*
Terphenyl-d14 (Surr)	*125*		*61 - 126*	*12/09/19 14:43*	*12/13/19 17:21*	*10*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 07:47	1
2-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 07:47	1
3-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 07:47	1
4-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 07:47	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
HMX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
RDX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
Nitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
Tetryl	ND		0.11		ug/L		12/06/19 12:05	12/26/19 07:47	1
Nitroglycerin	ND		0.69		ug/L		12/06/19 12:05	12/26/19 07:47	1
PETN	ND		0.69		ug/L		12/06/19 12:05	12/26/19 07:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/06/19 12:05*	*12/26/19 07:47*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 13:19	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:45	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:45	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:45	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:45	1
Chromium	**0.00046**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:45	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:45	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:45	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:45	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:45	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:45	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:45	1

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW03DW
Lab Sample ID: 580-91193-1
Date Collected: 12/03/19 13:53
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:33	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91193-1

Client Sample ID: 04Q19LCMW03SW
Date Collected: 12/03/19 14:40
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91193-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 23:06	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 23:06	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 23:06	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 23:06	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 23:06	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 23:06	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 23:06	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 23:06	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 23:06	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 23:06	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 23:06	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 23:06	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 23:06	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 23:06	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 23:06	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 23:06	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 23:06	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 23:06	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 23:06	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 23:06	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 23:06	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 23:06	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 23:06	1
Benzene	ND		0.20		ug/L			12/05/19 23:06	1
Bromobenzene	ND		0.20		ug/L			12/05/19 23:06	1
Bromoform	ND		0.50		ug/L			12/05/19 23:06	1
Bromomethane	ND		0.50		ug/L			12/05/19 23:06	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 23:06	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 23:06	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 23:06	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 23:06	1
Chloroethane	ND		0.50		ug/L			12/05/19 23:06	1
Chloroform	ND		0.20		ug/L			12/05/19 23:06	1
Chloromethane	ND		0.50		ug/L			12/05/19 23:06	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 23:06	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 23:06	1
Dibromomethane	ND		0.20		ug/L			12/05/19 23:06	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 23:06	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 23:06	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 23:06	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 23:06	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 23:06	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 23:06	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 23:06	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 23:06	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 23:06	1
Naphthalene	ND		1.0		ug/L			12/05/19 23:06	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 23:06	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 23:06	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91193-1

Client Sample ID: 04Q19LCMW03SW
Date Collected: 12/03/19 14:40
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91193-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/05/19 23:06	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 23:06	1
Styrene	ND		0.50		ug/L			12/05/19 23:06	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 23:06	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 23:06	1
Toluene	ND		0.20		ug/L			12/05/19 23:06	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 23:06	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 23:06	1
Trichloroethene	ND		0.20		ug/L			12/05/19 23:06	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 23:06	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/05/19 23:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 23:06*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/05/19 23:06*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*12/05/19 23:06*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*12/05/19 23:06*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 17:20	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 17:20	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 17:20	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 17:20	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4-Dimethylphenol	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 17:44	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 17:44	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 17:44	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 17:44	1

Client Sample ID: 04Q19LCMW03SW
Lab Sample ID: 580-91193-2
Date Collected: 12/03/19 14:40
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 17:44	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:44	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Bis(2-ethylhexyl) phthalate	ND	H	15		ug/L		12/30/19 13:18	01/03/20 17:20	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 17:44	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 17:44	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 17:20	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 17:20	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
Naphthalene	**0.40**		0.38		ug/L		12/09/19 14:43	12/13/19 17:44	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 17:44	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 17:20	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 17:44	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 17:20	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 17:44	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 17:44	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 17:44	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
2,4,6-Tribromophenol (Surr)	*55*		*48 - 125*	*12/09/19 14:43*	*12/13/19 17:44*	*1*

Client Sample ID: 04Q19LCMW03SW
Lab Sample ID: 580-91193-2

Date Collected: 12/03/19 14:40
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*50 - 120*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
2-Fluorobiphenyl	*81*		*50 - 120*	*12/09/19 14:43*	*12/13/19 17:44*	*1*
2-Fluorophenol (Surr)	*81*		*36 - 120*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
2-Fluorophenol (Surr)	*74*		*36 - 120*	*12/09/19 14:43*	*12/13/19 17:44*	*1*
Nitrobenzene-d5 (Surr)	*88*		*46 - 129*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
Nitrobenzene-d5 (Surr)	*77*		*46 - 129*	*12/09/19 14:43*	*12/13/19 17:44*	*1*
Phenol-d5 (Surr)	*82*		*38 - 120*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
Phenol-d5 (Surr)	*77*		*38 - 120*	*12/09/19 14:43*	*12/13/19 17:44*	*1*
Terphenyl-d14 (Surr)	*99*		*61 - 126*	*12/30/19 13:18*	*01/03/20 17:20*	*1*
Terphenyl-d14 (Surr)	*105*		*61 - 126*	*12/09/19 14:43*	*12/13/19 17:44*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 08:40	1
2-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 08:40	1
3-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 08:40	1
4-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 08:40	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 08:40	1
Nitroglycerin	ND		0.68		ug/L		12/06/19 12:05	12/26/19 08:40	1
PETN	ND		0.68		ug/L		12/06/19 12:05	12/26/19 08:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/06/19 12:05*	*12/26/19 08:40*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 13:59	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:47	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:47	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:47	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:47	1
Chromium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:47	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:47	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:47	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:47	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:47	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:47	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:47	1

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW03SW
Lab Sample ID: 580-91193-2
Date Collected: 12/03/19 14:40
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:36	1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 20:00	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 20:00	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 20:00	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 20:00	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 20:00	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 20:00	1
Benzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromoform	ND		0.50		ug/L			12/05/19 20:00	1
Bromomethane	ND		0.50		ug/L			12/05/19 20:00	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chloroethane	ND		0.50		ug/L			12/05/19 20:00	1
Chloroform	ND		0.20		ug/L			12/05/19 20:00	1
Chloromethane	ND		0.50		ug/L			12/05/19 20:00	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Dibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 20:00	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 20:00	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 20:00	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 20:00	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 20:00	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 20:00	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
Naphthalene	ND		1.0		ug/L			12/05/19 20:00	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
o-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Styrene	ND		0.50		ug/L			12/05/19 20:00	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 20:00	1
Toluene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Trichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 20:00	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 20:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/05/19 20:00*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 20:00*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/05/19 20:00*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 20:00*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/05/19 20:00*	*1*

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.21		ug/L		104	79 - 127
1,1,1-Trichloroethane	5.00	5.08		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.97		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	5.09		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.08		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.04		ug/L		101	71 - 126
1,1-Dichloropropene	5.00	5.14		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.00		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	5.06		ug/L		101	80 - 127
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	79 - 130
1,2,4-Trimethylbenzene	5.00	5.29		ug/L		106	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.65		ug/L		93	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	5.03		ug/L		101	80 - 130
1,3,5-Trimethylbenzene	5.00	5.34		ug/L		107	80 - 139
1,3-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 130
1,3-Dichloropropane	5.00	5.19		ug/L		104	80 - 130
1,4-Dichlorobenzene	5.00	4.91		ug/L		98	80 - 129
2,2-Dichloropropane	5.00	4.66		ug/L		93	58 - 150
2-Chlorotoluene	5.00	5.32		ug/L		106	80 - 136
4-Chlorotoluene	5.00	5.43		ug/L		109	80 - 130
4-Isopropyltoluene	5.00	5.15		ug/L		103	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.12		ug/L		102	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.29		ug/L		106	68 - 120
Carbon tetrachloride	5.00	5.04		ug/L		101	71 - 132
Chlorobenzene	5.00	4.89		ug/L		98	80 - 123
Chlorobromomethane	5.00	4.96		ug/L		99	79 - 131
Chlorodibromomethane	5.00	4.57		ug/L		91	76 - 131
Chloroethane	5.00	5.29		ug/L		106	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.59		ug/L		92	32 - 143
cis-1,2-Dichloroethene	5.00	5.12		ug/L		102	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.94		ug/L		99	65 - 141
Dichlorobromomethane	5.00	4.55		ug/L		91	74 - 131
Dichlorodifluoromethane	5.00	4.70		ug/L		94	20 - 137
Ethylbenzene	5.00	5.34		ug/L		107	80 - 130
Ethylene Dibromide	5.00	5.07		ug/L		101	80 - 126
Hexachlorobutadiene	5.00	4.84		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.16		ug/L		103	75 - 137
Methyl tert-butyl ether	5.00	5.03		ug/L		101	60 - 150
Methylene Chloride	5.00	5.10		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.62		ug/L		112	78 - 130
Naphthalene	5.00	4.72		ug/L		94	64 - 132
n-Butylbenzene	5.00	5.27		ug/L		105	73 - 135
N-Propylbenzene	5.00	5.63		ug/L		113	77 - 142
o-Xylene	5.00	5.04		ug/L		101	80 - 139
sec-Butylbenzene	5.00	5.22		ug/L		104	78 - 140
Styrene	5.00	4.88		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.74		ug/L		95	77 - 140
Tetrachloroethene	5.00	5.10		ug/L		102	75 - 131
Toluene	5.00	4.83		ug/L		97	80 - 126
trans-1,2-Dichloroethene	5.00	4.98		ug/L		100	63 - 133
trans-1,3-Dichloropropene	5.00	4.71		ug/L		94	71 - 128
Trichloroethene	5.00	4.98		ug/L		100	72 - 136
Trichlorofluoromethane	5.00	4.96		ug/L		99	60 - 132
Vinyl chloride	5.00	5.12		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.17		ug/L		103	79 - 127	1	20
1,1,1-Trichloroethane			5.00	5.05		ug/L		101	74 - 128	1	14
1,1,2,2-Tetrachloroethane			5.00	4.98		ug/L		100	69 - 139	0	22
1,1,2-Trichloroethane			5.00	5.01		ug/L		100	80 - 127	2	19
1,1-Dichloroethane			5.00	5.10		ug/L		102	74 - 135	0	20
1,1-Dichloroethene			5.00	5.09		ug/L		102	71 - 126	1	17
1,1-Dichloropropene			5.00	5.06		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene			5.00	5.18		ug/L		104	75 - 137	4	20
1,2,3-Trichloropropane			5.00	5.13		ug/L		103	80 - 127	1	20
1,2,4-Trichlorobenzene			5.00	4.97		ug/L		99	79 - 130	2	20
1,2,4-Trimethylbenzene			5.00	5.13		ug/L		103	78 - 136	3	20
1,2-Dibromo-3-Chloropropane			5.00	4.83		ug/L		97	69 - 130	4	26
1,2-Dichlorobenzene			5.00	4.98		ug/L		100	80 - 129	1	14
1,2-Dichloroethane			5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane			5.00	4.90		ug/L		98	80 - 130	3	14
1,3,5-Trimethylbenzene			5.00	5.12		ug/L		102	80 - 139	4	20
1,3-Dichlorobenzene			5.00	4.96		ug/L		99	80 - 130	4	12
1,3-Dichloropropane			5.00	5.11		ug/L		102	80 - 130	1	19
1,4-Dichlorobenzene			5.00	4.70		ug/L		94	80 - 129	4	11
2,2-Dichloropropane			5.00	4.71		ug/L		94	58 - 150	1	28
2-Chlorotoluene			5.00	5.09		ug/L		102	80 - 136	4	20
4-Chlorotoluene			5.00	5.19		ug/L		104	80 - 130	4	20
4-Isopropyltoluene			5.00	4.96		ug/L		99	78 - 132	4	14
Benzene			5.00	5.04		ug/L		101	73 - 133	2	20
Bromobenzene			5.00	4.89		ug/L		98	80 - 130	3	20
Bromoform			5.00	4.57		ug/L		91	69 - 137	1	20
Bromomethane			5.00	5.18		ug/L		104	68 - 120	2	18
Carbon tetrachloride			5.00	5.02		ug/L		100	71 - 132	0	15
Chlorobenzene			5.00	4.80		ug/L		96	80 - 123	2	12
Chlorobromomethane			5.00	5.02		ug/L		100	79 - 131	1	20
Chlorodibromomethane			5.00	4.61		ug/L		92	76 - 131	1	20
Chloroethane			5.00	5.17		ug/L		103	49 - 135	2	27
Chloroform			5.00	5.07		ug/L		101	80 - 130	0	20
Chloromethane			5.00	4.42		ug/L		88	32 - 143	4	23
cis-1,2-Dichloroethene			5.00	5.18		ug/L		104	72 - 130	1	20
cis-1,3-Dichloropropene			5.00	5.06		ug/L		101	66 - 141	1	22
Dibromomethane			5.00	4.96		ug/L		99	65 - 141	0	20
Dichlorobromomethane			5.00	4.48		ug/L		90	74 - 131	2	20
Dichlorodifluoromethane			5.00	4.66		ug/L		93	20 - 137	1	22
Ethylbenzene			5.00	5.18		ug/L		104	80 - 130	3	20
Ethylene Dibromide			5.00	5.05		ug/L		101	80 - 126	0	20
Hexachlorobutadiene			5.00	4.78		ug/L		96	72 - 138	1	20
Isopropylbenzene			5.00	5.04		ug/L		101	75 - 137	2	20
Methyl tert-butyl ether			5.00	5.25		ug/L		105	60 - 150	4	25
Methylene Chloride			5.00	5.14		ug/L		103	75 - 134	1	18
m-Xylene & p-Xylene			5.00	5.45		ug/L		109	78 - 130	3	20
Naphthalene			5.00	4.93		ug/L		99	64 - 132	4	20
n-Butylbenzene			5.00	5.02		ug/L		100	73 - 135	5	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.36		ug/L		107	77 - 142	5	20
o-Xylene			5.00	4.95		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	5.01		ug/L		100	78 - 140	4	20
Styrene			5.00	4.74		ug/L		95	74 - 136	3	20
tert-Butylbenzene			5.00	4.51		ug/L		90	77 - 140	5	20
Tetrachloroethene			5.00	5.02		ug/L		100	75 - 131	2	20
Toluene			5.00	4.67		ug/L		93	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	4.96		ug/L		99	63 - 133	0	17
trans-1,3-Dichloropropene			5.00	4.63		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.89		ug/L		98	72 - 136	2	14
Trichlorofluoromethane			5.00	4.91		ug/L		98	60 - 132	1	20
Vinyl chloride			5.00	4.94		ug/L		99	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,3-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,4-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1-Methylnaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,5-Trichlorophenol	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,6-Trichlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dichlorophenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dimethylphenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrophenol	ND		10		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrotoluene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,6-Dinitrotoluene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chloronaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylnaphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitroaniline	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitrophenol	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
3 & 4 Methylphenol	ND		0.40		ug/L		12/09/19 14:43	12/13/19 11:08	1
3,3'-Dichlorobenzidine	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
3-Nitroaniline	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
4,6-Dinitro-2-methylphenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloro-3-methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloroaniline	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chlorophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitroaniline	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitrophenol	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Anthracene	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]anthracene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[b]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[g,h,i]perylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[k]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzoic acid	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzyl alcohol	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethoxy)methane	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethyl)ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-ethylhexyl) phthalate	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
bis(chloroisopropyl) ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Butyl benzyl phthalate	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Carbazole	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Chrysene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenz(a,h)anthracene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenzofuran	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Diethyl phthalate	ND		6.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dimethyl phthalate	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-butyl phthalate	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-octyl phthalate	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluoranthene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluorene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobutadiene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorocyclopentadiene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachloroethane	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Indeno[1,2,3-cd]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Isophorone	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Naphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodi-n-propylamine	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodiphenylamine	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pentachlorophenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenanthrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pyrene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/09/19 14:43*	*12/13/19 11:08*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		50 - 120	12/09/19 14:43	12/13/19 11:08	1
2-Fluorophenol (Surr)	81		36 - 120	12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene-d5 (Surr)	82		46 - 129	12/09/19 14:43	12/13/19 11:08	1
Phenol-d5 (Surr)	88		38 - 120	12/09/19 14:43	12/13/19 11:08	1
Terphenyl-d14 (Surr)	112		61 - 126	12/09/19 14:43	12/13/19 11:08	1

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.00	0.369	*	ug/L		37	46 - 120
1,2-Dichlorobenzene	1.00	0.383	*	ug/L		38	44 - 120
1,3-Dichlorobenzene	1.00	0.283	*	ug/L		28	36 - 120
1,4-Dichlorobenzene	1.00	0.314	*	ug/L		31	40 - 120
1-Methylnaphthalene	1.00	0.668		ug/L		67	59 - 120
2,4,5-Trichlorophenol	1.00	0.946		ug/L		95	56 - 122
2,4,6-Trichlorophenol	1.00	0.636		ug/L		64	50 - 126
2,4-Dichlorophenol	1.00	0.699	J	ug/L		70	54 - 120
2,4-Dimethylphenol	1.00	ND		ug/L		23	20 - 120
2,4-Dinitrophenol	2.00	ND	*	ug/L		0	20 - 150
2,4-Dinitrotoluene	1.00	0.770		ug/L		77	44 - 142
2,6-Dinitrotoluene	1.00	0.814		ug/L		81	54 - 137
2-Chloronaphthalene	1.00	0.645		ug/L		64	45 - 120
2-Chlorophenol	1.00	0.811		ug/L		81	54 - 120
2-Methylnaphthalene	1.00	0.622		ug/L		62	53 - 120
2-Methylphenol	1.00	0.662		ug/L		66	43 - 120
2-Nitroaniline	1.00	0.667		ug/L		67	50 - 137
2-Nitrophenol	1.00	0.801		ug/L		80	41 - 127
3 & 4 Methylphenol	1.00	0.632		ug/L		63	43 - 120
3,3'-Dichlorobenzidine	2.00	ND		ug/L		39	20 - 150
3-Nitroaniline	1.00	0.661	J	ug/L		66	34 - 120
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		34	20 - 150
4-Bromophenyl phenyl ether	1.00	0.651		ug/L		65	62 - 120
4-Chloro-3-methylphenol	1.00	0.593		ug/L		59	47 - 126
4-Chloroaniline	1.00	ND	*	ug/L		15	20 - 120
4-Chlorophenyl phenyl ether	1.00	0.690		ug/L		69	53 - 125
4-Nitroaniline	1.00	0.734	J	ug/L		73	51 - 120
4-Nitrophenol	2.00	1.84	J	ug/L		92	33 - 150
Acenaphthene	1.00	0.711		ug/L		71	56 - 120
Acenaphthylene	1.00	0.771		ug/L		77	50 - 120
Anthracene	1.00	0.615	J	ug/L		62	44 - 120
Benzo[a]anthracene	1.00	0.827		ug/L		83	65 - 124
Benzo[a]pyrene	1.00	0.494	J	ug/L		49	41 - 120
Benzo[b]fluoranthene	1.00	0.744		ug/L		74	62 - 131
Benzo[g,h,i]perylene	1.00	0.799		ug/L		80	65 - 125
Benzo[k]fluoranthene	1.00	0.716		ug/L		72	57 - 128
Benzoic acid	2.00	0.751	J	ug/L		38	20 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	1.00	0.565	J	ug/L		56	20 - 150
Bis(2-chloroethoxy)methane	1.00	0.819		ug/L		82	53 - 120
Bis(2-chloroethyl)ether	1.00	0.829		ug/L		83	47 - 120
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		119	20 - 150
bis(chloroisopropyl) ether	1.00	0.793		ug/L		79	32 - 142
Butyl benzyl phthalate	1.00	1.15	J	ug/L		115	55 - 150
Carbazole	1.00	1.48	*	ug/L		148	67 - 135
Chrysene	1.00	0.914		ug/L		91	57 - 126
Dibenz(a,h)anthracene	1.00	0.796		ug/L		80	62 - 131
Dibenzofuran	1.00	0.754		ug/L		75	60 - 120
Diethyl phthalate	1.00	0.889	J	ug/L		89	55 - 135
Dimethyl phthalate	1.00	0.852		ug/L		85	64 - 128
Di-n-butyl phthalate	1.00	0.979	J	ug/L		98	57 - 136
Di-n-octyl phthalate	1.00	0.812		ug/L		81	51 - 150
Fluoranthene	1.00	0.842	J	ug/L		84	64 - 128
Fluorene	1.00	0.780	J	ug/L		78	64 - 120
Hexachlorobenzene	1.00	0.586		ug/L		59	50 - 120
Hexachlorobutadiene	1.00	0.0554	J *	ug/L		6	21 - 120
Hexachlorocyclopentadiene	1.00	0.0493	J *	ug/L		5	20 - 120
Hexachloroethane	1.00	0.128	J *	ug/L		13	30 - 120
Indeno[1,2,3-cd]pyrene	1.00	0.755		ug/L		75	55 - 148
Isophorone	1.00	0.876		ug/L		88	56 - 125
Naphthalene	1.00	0.727		ug/L		73	63 - 120
Nitrobenzene	1.00	0.832		ug/L		83	45 - 139
N-Nitrosodi-n-propylamine	1.00	0.766		ug/L		77	46 - 120
N-Nitrosodiphenylamine	1.00	0.423	J	ug/L		42	33 - 120
Pentachlorophenol	2.00	ND	*	ug/L		13	20 - 135
Phenanthrene	1.00	0.719		ug/L		72	63 - 120
Phenol	1.00	0.727	J	ug/L		73	41 - 120
Pyrene	1.00	0.856	J	ug/L		86	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol (Surr)	*62*		*36 - 120*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*
Phenol-d5 (Surr)	*78*		*38 - 120*
Terphenyl-d14 (Surr)	*86*		*61 - 126*

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1.00	0.458		ug/L		46	46 - 120	21	35
1,2-Dichlorobenzene	1.00	0.421	*	ug/L		42	44 - 120	9	35
1,3-Dichlorobenzene	1.00	0.324	*	ug/L		32	36 - 120	13	35
1,4-Dichlorobenzene	1.00	0.363	*	ug/L		36	40 - 120	15	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	1.00	0.743		ug/L		74	59 - 120	11	25
2,4,5-Trichlorophenol	1.00	0.831		ug/L		83	56 - 122	13	35
2,4,6-Trichlorophenol	1.00	0.675		ug/L		68	50 - 126	6	20
2,4-Dichlorophenol	1.00	0.791	J	ug/L		79	54 - 120	12	35
2,4-Dimethylphenol	1.00	0.505	J *	ug/L		51	20 - 120	76	35
2,4-Dinitrophenol	2.00	ND	*	ug/L		20	20 - 150	200	35
2,4-Dinitrotoluene	1.00	0.810		ug/L		81	44 - 142	5	36
2,6-Dinitrotoluene	1.00	0.831		ug/L		83	54 - 137	2	33
2-Chloronaphthalene	1.00	0.661		ug/L		66	45 - 120	3	35
2-Chlorophenol	1.00	0.830		ug/L		83	54 - 120	2	35
2-Methylnaphthalene	1.00	0.688		ug/L		69	53 - 120	10	29
2-Methylphenol	1.00	0.722		ug/L		72	43 - 120	9	35
2-Nitroaniline	1.00	0.762		ug/L		76	50 - 137	13	35
2-Nitrophenol	1.00	0.791		ug/L		79	41 - 127	1	35
3 & 4 Methylphenol	1.00	0.699		ug/L		70	43 - 120	10	35
3,3'-Dichlorobenzidine	2.00	ND		ug/L		30	20 - 150	26	35
3-Nitroaniline	1.00	0.608	J	ug/L		61	34 - 120	8	35
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		42	20 - 150	20	35
4-Bromophenyl phenyl ether	1.00	0.735		ug/L		74	62 - 120	12	20
4-Chloro-3-methylphenol	1.00	0.709		ug/L		71	47 - 126	18	35
4-Chloroaniline	1.00	ND	*	ug/L		5	20 - 120	103	35
4-Chlorophenyl phenyl ether	1.00	0.698		ug/L		70	53 - 125	1	27
4-Nitroaniline	1.00	1.09	*	ug/L		109	51 - 120	39	35
4-Nitrophenol	2.00	1.63	J	ug/L		81	33 - 150	12	35
Acenaphthene	1.00	0.723		ug/L		72	56 - 120	2	35
Acenaphthylene	1.00	0.724		ug/L		72	50 - 120	6	35
Anthracene	1.00	0.678	J	ug/L		68	44 - 120	10	26
Benzo[a]anthracene	1.00	0.843		ug/L		84	65 - 124	2	27
Benzo[a]pyrene	1.00	0.635		ug/L		63	41 - 120	25	29
Benzo[b]fluoranthene	1.00	0.830		ug/L		83	62 - 131	11	27
Benzo[g,h,i]perylene	1.00	0.856		ug/L		86	65 - 125	7	25
Benzo[k]fluoranthene	1.00	0.744		ug/L		74	57 - 128	4	26
Benzoic acid	2.00	0.872	J	ug/L		44	20 - 120	15	35
Benzyl alcohol	1.00	0.671	J	ug/L		67	20 - 150	17	35
Bis(2-chloroethoxy)methane	1.00	0.802		ug/L		80	53 - 120	2	27
Bis(2-chloroethyl)ether	1.00	0.817		ug/L		82	47 - 120	1	35
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		102	20 - 150	16	35
bis(chloroisopropyl) ether	1.00	0.758		ug/L		76	32 - 142	4	33
Butyl benzyl phthalate	1.00	1.08	J	ug/L		108	55 - 150	6	35
Carbazole	1.00	1.58	*	ug/L		158	67 - 135	7	20
Chrysene	1.00	0.856		ug/L		86	57 - 126	7	26
Dibenz(a,h)anthracene	1.00	0.902		ug/L		90	62 - 131	12	28
Dibenzofuran	1.00	0.758		ug/L		76	60 - 120	0	35
Diethyl phthalate	1.00	0.892	J	ug/L		89	55 - 135	0	35
Dimethyl phthalate	1.00	0.888		ug/L		89	64 - 128	4	24
Di-n-butyl phthalate	1.00	1.08	J	ug/L		108	57 - 136	10	20
Di-n-octyl phthalate	1.00	0.886		ug/L		89	51 - 150	9	26
Fluoranthene	1.00	0.910	J	ug/L		91	64 - 128	8	20
Fluorene	1.00	0.793	J	ug/L		79	64 - 120	2	28

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			1.00	0.783	*	ug/L		78	50 - 120	29	26
Hexachlorobutadiene			1.00	0.0996	J *	ug/L		10	21 - 120	57	35
Hexachlorocyclopentadiene			1.00	ND	*	ug/L		3	20 - 120	55	35
Hexachloroethane			1.00	0.156	J *	ug/L		16	30 - 120	20	35
Indeno[1,2,3-cd]pyrene			1.00	0.771		ug/L		77	55 - 148	2	20
Isophorone			1.00	0.847		ug/L		85	56 - 125	3	20
Naphthalene			1.00	0.769		ug/L		77	63 - 120	6	34
Nitrobenzene			1.00	0.817		ug/L		82	45 - 139	2	33
N-Nitrosodi-n-propylamine			1.00	0.766		ug/L		77	46 - 120	0	28
N-Nitrosodiphenylamine			1.00	0.325	J *	ug/L		32	33 - 120	26	35
Pentachlorophenol			2.00	ND	*	ug/L		38	20 - 135	97	35
Phenanthrene			1.00	0.791		ug/L		79	63 - 120	10	20
Phenol			1.00	0.807	J	ug/L		81	41 - 120	10	35
Pyrene			1.00	0.921	J	ug/L		92	64 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*71*		*50 - 120*
2-Fluorophenol (Surr)	*73*		*36 - 120*
Nitrobenzene-d5 (Surr)	*86*		*46 - 129*
Phenol-d5 (Surr)	*83*		*38 - 120*
Terphenyl-d14 (Surr)	*94*		*61 - 126*

Lab Sample ID: MB 580-319850/1-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,2-Dichlorobenzene	ND		0.60		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,3-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,4-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
Anthracene	ND		15		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachlorobutadiene	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachloroethane	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Pentachlorophenol	ND		10		ug/L		12/30/19 13:18	01/03/20 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*48 - 125*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorobiphenyl	*94*		*50 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Nitrobenzene-d5 (Surr)	*67*		*46 - 129*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Phenol-d5 (Surr)	*87*		*38 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Terphenyl-d14 (Surr)	*94*		*61 - 126*	*12/30/19 13:18*	*01/03/20 15:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-319850/2-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,4-Trichlorobenzene			2.00	1.69		ug/L		85	46 - 120		
1,2-Dichlorobenzene			2.00	1.80		ug/L		90	44 - 120		
1,3-Dichlorobenzene			2.00	1.76		ug/L		88	36 - 120		
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 120		
Hexachlorobutadiene			2.00	1.63		ug/L		82	21 - 120		
Hexachloroethane			2.00	1.74		ug/L		87	30 - 120		
Pentachlorophenol			4.00	ND		ug/L		30	20 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*48 - 125*
2-Fluorobiphenyl	*92*		*50 - 120*
2-Fluorophenol (Surr)	*89*		*36 - 120*
Nitrobenzene-d5 (Surr)	*94*		*46 - 129*
Phenol-d5 (Surr)	*90*		*38 - 120*
Terphenyl-d14 (Surr)	*91*		*61 - 126*

Lab Sample ID: LCSD 580-319850/3-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.81		ug/L		90	46 - 120	7	35
1,2-Dichlorobenzene			2.00	1.84		ug/L		92	44 - 120	2	35
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	36 - 120	4	35
1,4-Dichlorobenzene			2.00	1.84		ug/L		92	40 - 120	3	35
Hexachlorobutadiene			2.00	1.85		ug/L		92	21 - 120	12	35
Hexachloroethane			2.00	1.87		ug/L		94	30 - 120	7	35
Pentachlorophenol			4.00	ND	*	ug/L		44	20 - 135	37	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*48 - 125*
2-Fluorobiphenyl	*89*		*50 - 120*
2-Fluorophenol (Surr)	*87*		*36 - 120*
Nitrobenzene-d5 (Surr)	*92*		*46 - 129*
Phenol-d5 (Surr)	*95*		*38 - 120*
Terphenyl-d14 (Surr)	*100*		*61 - 126*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-343665/1-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: MB 320-343665/1-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
3-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitroglycerin	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1
PETN	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/06/19 12:05*	*12/26/19 05:59*	*1*

Lab Sample ID: LCS 320-343665/2-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.936		ug/L		94	74 - 120
1,3-Dinitrobenzene	1.00	0.977		ug/L		98	72 - 123
2,4,6-Trinitrotoluene	1.00	0.849		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.929		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.924		ug/L		92	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.01		ug/L		101	77 - 123
2-Nitrotoluene	1.00	0.849		ug/L		85	64 - 120
3-Nitrotoluene	1.00	0.928		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.920		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.913		ug/L		91	68 - 113
HMX	1.00	1.06		ug/L		106	67 - 115
RDX	1.00	1.08		ug/L		108	68 - 122
Nitrobenzene	1.00	0.978		ug/L		98	69 - 119
Tetryl	1.00	0.856		ug/L		86	66 - 105
Nitroglycerin	5.00	4.57		ug/L		91	85 - 115
PETN	5.00	4.37		ug/L		87	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*84*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Lab Sample ID: 580-91193-1 MS
Matrix: Water
Analysis Batch: 344441

Client Sample ID: 04Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	ND		5.00	5.71		ug/L		112	80 - 120

Lab Sample ID: 580-91193-1 MSD
Matrix: Water
Analysis Batch: 344441

Client Sample ID: 04Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		5.00	5.84		ug/L		115	80 - 120	2	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-318385/10-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Chromium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:04	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:04	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:04	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:04	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:04	1

Lab Sample ID: LCS 580-318385/11-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.00		mg/L		100	80 - 120
Antimony	1.00	1.00		mg/L		100	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-318385/11-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	1.00	0.982		mg/L		98	80 - 120
Cadmium	1.00	1.01		mg/L		101	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Copper	1.00	1.06		mg/L		106	80 - 120
Lead	1.00	1.01		mg/L		101	80 - 120
Nickel	1.00	1.05		mg/L		105	80 - 120
Selenium	1.00	0.980		mg/L		98	80 - 120
Silver	1.00	1.02		mg/L		102	80 - 120
Thallium	1.00	0.971		mg/L		97	80 - 120
Zinc	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: LCSD 580-318385/12-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.00		mg/L		100	80 - 120	0	20
Antimony	1.00	0.999		mg/L		100	80 - 120	0	20
Beryllium	1.00	0.985		mg/L		99	80 - 120	0	20
Cadmium	1.00	1.02		mg/L		102	80 - 120	1	20
Chromium	1.00	1.03		mg/L		103	80 - 120	2	20
Copper	1.00	1.04		mg/L		104	80 - 120	1	20
Lead	1.00	1.01		mg/L		101	80 - 120	0	20
Nickel	1.00	1.03		mg/L		103	80 - 120	2	20
Selenium	1.00	1.00		mg/L		100	80 - 120	2	20
Silver	1.00	1.02		mg/L		102	80 - 120	0	20
Thallium	1.00	0.974		mg/L		97	80 - 120	0	20
Zinc	1.00	1.03		mg/L		103	80 - 120	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-318467/17-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:18	12/09/19 13:55	1

Lab Sample ID: LCS 580-318467/18-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-318467/19-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318467

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00210		mg/L		105	80 - 120	1	20

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW03DW
Lab Sample ID: 580-91193-1
Date Collected: 12/03/19 13:53
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 22:39	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		10	318784	12/13/19 17:21	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		10	319972	01/03/20 16:56	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 07:47	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 13:19	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:45	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:33	A1B	TAL SEA

Client Sample ID: 04Q19LCMW03SW
Lab Sample ID: 580-91193-2
Date Collected: 12/03/19 14:40
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 23:06	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 17:44	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 17:20	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 08:40	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 13:59	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:47	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:36	A1B	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91193-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91193-1	04Q19LCMW03DW	Water	12/03/19 13:53	12/04/19 13:05	
580-91193-2	04Q19LCMW03SW	Water	12/03/19 14:40	12/04/19 13:05	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Matt Randall and Scott Brausten
Company: PBS Engineering and Environmental
Address: 4412 SW Corbett Ave
City: Portland
State, Zip: OR, 97239
Phone:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com
Project Name: Camp Bonneville
Site:

Sampler: Matt Randall & Sam Vega
Phone: 360.601.7712
Lab PM: Cruz, Sheri L
E-Mail: sheri.cruz@testamericainc.com
Carrier Tracking No(s):
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 58011152
SSOW#:

COC No: 580-31510-10297.1
Page: Page 1 of 1
Job #:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8260C_LL Full list Explosives 8330	8360A Nitroaromatics and Nitramines SVOCs	Total RP metals 6020/7470A VOCs 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
04Q19LCMW03DW	12/3/19	1353	G	W	Y		X	X	X	X	9	
04Q19LCMW03SW	12/3/19	1440	G	↓	Y		X	X	X	X	9	

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

580-91193 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	12/3/19 1700	PBS	Received by:	12/4/19 1230	M.E.
Relinquished by:	12/4/19 1305	M.E.	Received by:	12/4/19 1305	TAKOR
Relinquished by:			Received by:		

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 4.4,

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt Randall & Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	82606-LL Full List Explosives 8330	8260B-Nitroaromatics and Nitramines SVOCs	Total RP metals 6020/7470A VOCs 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X					X	
04Q19LCMW03DW	12/3/19	1353	G	W	Y		X	XX	XX	XX	9	
04Q19LCMW03SW	12/3/19	1440	G	↓	Y		X	XX	XX	XX	9	

580-91193 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/3/19 1700	PBS		12/4/19 1230	M.E.
2		12/4/19 1305	M.E.		12/4/19 1305	TAOR
3		12/4/19 1700	TAOR		12-5-19 0930	TASea

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.4, 7=0.5/0.8

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72801.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91193-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/20/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B/8330_SPE_P_IWWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
04Q19LCMW03DW (580-91193-1)	12/3/19	13:53 Pacific		Water			X	3	
04Q19LCMW03SW (580-91193-2)	12/3/19	14:40 Pacific		Water			X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by:	Date/Time: 12/4/19 1700	Company TPOR	Received by:	Date/Time: 12/5/19 950	Company EDA SEC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes ☐ No	Custody Seal No.: 614822	Cooler Temperature(s) °C and Other Remarks: 3.3 CF 3.1

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91193-1

Login Number: 91193
List Number: 1
Creator: Antonson, Angeline D

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91193-1

Login Number: 91193
List Number: 2
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/05/19 05:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619522
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	OBS 3.5 CORR 3.3C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento Sample Receiving Notes

580-91193 Field Sheet

Tracking # : 1250 7882 7285

SO / (PO) / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other_____

Job:_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:_____

Therm. ID: AK5 Corr. Factor: (+ / -) 0.2 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 619522

Cooler ID: —

Temp Observed: 3.5 °C Corrected: 3.3 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: ST Date: 12/5/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JG Date: 12/5/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W9-A

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91195-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
1/7/2020 3:03:47 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91195-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

CASE NARRATIVE

Client: PBS Engineering and Environmental

Project: Camp Bonneville Groundwater 2019-2020

Report Number: 580-91195-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/04/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 4.1º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3) and TB120319 (580-91195-4) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 12/05/2019 and 12/06/2019.

The continuing calibration verification (CCV) associated with batch 580-318341 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, Naphthalene, cis-1,3-Dichloropropene, 1,2,4-Trichlorobenzene, N-Propylbenzene, n-Butylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, Ethylbenzene and m-Xylene & p-Xylene.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04DW (580-91195-1[MS]), 04Q19LCMW04DW (580-91195-1[MSD]), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3), TB120319 (580-91195-4) and (CCVIS 580-318341/3).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/09/2019 and 12/30/2019 and analyzed on 01/03/2020 and 12/13/2019.

Job ID: 580-91195-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analyte: Carbazole. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analytes: 2,4-Dimethylphenol, 4-Nitroaniline and Hexachlorobenzene .

4,6-Dinitro-2-methylphenol and Pentachlorophenol failed the recovery criteria low for the MS of sample 04Q19LCMW04DWMS (580-91195-1) in batch 580-318784. Carbazole failed the recovery criteria high.

The MSD of sample 04Q19LCMW04DWMSD (580-91195-1) in batch 580-318784, 4,6-Dinitro-2-methylphenol and Pentachlorophenol failed the recovery criteria low. Carbazole failed the recovery criteria high. Also, 2,4-Dimethylphenol, 3,3'-Dichlorobenzidine and Carbazole exceeded the RPD limit.

The continuing calibration verification (CCV) associated with batch 580-318784 recovered above the upper control limit for 3,3'-Dichlorobenzidine, 4-Nitroaniline and Carbazole . The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3) and (CCVIS 580-318784/3).

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-318784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3), (LCS 580-319850/2-A) and (LCSD 580-319850/3-A) are associated with 580-319850 which was re-extracted outside of holding time due to quality control failures in the initial extraction. For well-performing analytes which failed recovery criteria in the LCS/LCSD of the initial extraction, two sets of data are reported.

Pentachlorophenol, a poor-performing compound, passed recovery but failed precision criteria in the LCS/LCSD of the re-extracted batch. Two sets of data for this poor-performing analyte are reported. For other poor performers which failed in the initial extraction, no noticeable improvement was found in the re-extraction batch. The in-hold set of data is reported for these compounds.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-318500 and analytical batch 580-318784 were outside control limits. The samples associated with this MS/MSD were non-detects for the affected analytes; therefore, the data have been reported.

The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 580-318500 and analytical batch 580-318784 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

(LCS 580-318500/2-A) and (LCSD 580-318500/3-A) recover outside control and precision limits for several analytes. Affected client samples were re-extracted outside of holding time with better LCS/LCSD results. For the affected analytes, two sets of data are reported.

Quality control samples 04Q19LCMW04DW (580-91195-1[MS]) and 04Q19LCMW04DW (580-91195-1[MSD]) recovered outside control limits, low-biased, for 4,6-Dinitro-2-methylphenol and Pentachlorophenol. Precision was also outside control limits for several analytes. Samples associated with this MS/MSD pair were re-extracted with concurring results. There was insufficient volume to re-extract this MS/MSD pair; this data is reported as is.

(CCVIS 580-318784/3) recovers outside drift criteria for Pentachlorophenol. This compound has been demonstrated by the laboratory to exhibit poor and/or erratic performance; it is classified as a poor performing compound. Results for this analyte have been qualified and reported. Re-extraction of samples associated with 580-318500 present concurring results for this analyte; two sets of data are reported.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Due to power issues samples only received

Job ID: 580-91195-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

16 hours of extraction time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCHLORATE

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for Perchlorate in accordance with 6850. The samples were prepared on 12/09/2019 and analyzed on 12/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXPLOSIVES

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for explosives in accordance with 8330B. The samples were prepared on 12/06/2019 and analyzed on 12/26/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for metals (ICPMS) in accordance with 6020A. The samples were prepared on 12/06/2019 and analyzed on 12/09/2019.

Chromium exceeded the RPD limit for the duplicate of sample 04Q19LCMW04DWDU (580-91195-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW04DW
Date Collected: 12/03/19 11:00
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/06/19 03:04	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/06/19 03:04	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/06/19 03:04	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2-Dichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,2-Dichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,3-Dichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
2,2-Dichloropropane	ND		0.50		ug/L			12/06/19 03:04	1
2-Chlorotoluene	ND		0.50		ug/L			12/06/19 03:04	1
4-Chlorotoluene	ND		0.30		ug/L			12/06/19 03:04	1
4-Isopropyltoluene	ND		0.30		ug/L			12/06/19 03:04	1
Benzene	ND		0.20		ug/L			12/06/19 03:04	1
Bromobenzene	ND		0.20		ug/L			12/06/19 03:04	1
Bromoform	ND		0.50		ug/L			12/06/19 03:04	1
Bromomethane	ND		0.50		ug/L			12/06/19 03:04	1
Carbon tetrachloride	ND		0.20		ug/L			12/06/19 03:04	1
Chlorobenzene	ND		0.20		ug/L			12/06/19 03:04	1
Chlorobromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Chlorodibromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Chloroethane	ND		0.50		ug/L			12/06/19 03:04	1
Chloroform	ND		0.20		ug/L			12/06/19 03:04	1
Chloromethane	ND		0.50		ug/L			12/06/19 03:04	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
Dibromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Dichlorobromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/06/19 03:04	1
Ethylbenzene	ND		0.20		ug/L			12/06/19 03:04	1
Ethylene Dibromide	ND		0.10		ug/L			12/06/19 03:04	1
Hexachlorobutadiene	ND		0.50		ug/L			12/06/19 03:04	1
Isopropylbenzene	ND		1.0		ug/L			12/06/19 03:04	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/06/19 03:04	1
Methylene Chloride	ND		5.0		ug/L			12/06/19 03:04	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/06/19 03:04	1
Naphthalene	ND		1.0		ug/L			12/06/19 03:04	1
n-Butylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
N-Propylbenzene	ND		0.30		ug/L			12/06/19 03:04	1

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/06/19 03:04	1
sec-Butylbenzene	ND		1.0		ug/L			12/06/19 03:04	1
Styrene	ND		0.50		ug/L			12/06/19 03:04	1
tert-Butylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
Tetrachloroethene	ND		0.50		ug/L			12/06/19 03:04	1
Toluene	ND		0.20		ug/L			12/06/19 03:04	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
Trichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
Trichlorofluoromethane	ND		0.50		ug/L			12/06/19 03:04	1
Vinyl chloride	ND		0.020		ug/L			12/06/19 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/06/19 03:04*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/06/19 03:04*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/06/19 03:04*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/06/19 03:04*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/06/19 03:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,2-Dichlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4,6-Trichlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dimethylphenol	ND	F2 *	3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,6-Dinitrotoluene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Chlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Nitroaniline	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 15:24	1
3,3'-Dichlorobenzidine	ND	F2	14		ug/L		12/09/19 14:43	12/13/19 15:24	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
4,6-Dinitro-2-methylphenol	ND	F1	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Bromophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Chloro-3-methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-chloroethoxy)methane	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-chloroethyl)ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
bis(chloroisopropyl) ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
Carbazole	ND	* F2 F1	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Chrysene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dibenz(a,h)anthracene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Diethyl phthalate	ND		11		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dimethyl phthalate	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:07	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:07	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Nitrobenzene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
N-Nitrosodi-n-propylamine	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:07	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 18:07	1
Pentachlorophenol	ND	F1 *	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*67*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/09/19 14:43*	*12/13/19 15:24*	*1*

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
2-Fluorophenol (Surr)	*73*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2-Fluorophenol (Surr)	*74*		*36 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Nitrobenzene-d5 (Surr)	*83*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Nitrobenzene-d5 (Surr)	*83*		*46 - 129*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Phenol-d5 (Surr)	*75*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Phenol-d5 (Surr)	*81*		*38 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Terphenyl-d14 (Surr)	*99*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Terphenyl-d14 (Surr)	*113*		*61 - 126*	*12/09/19 14:43*	*12/13/19 15:24*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 09:34	1
2-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
3-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
4-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Nitroglycerin	ND		0.68		ug/L		12/06/19 12:05	12/26/19 09:34	1
PETN	ND		0.68		ug/L		12/06/19 12:05	12/26/19 09:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/06/19 12:05*	*12/26/19 09:34*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:13	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:06	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Chromium	**0.00051**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:06	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:06	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:06	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:06	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:06	1

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:02	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW04SW
Date Collected: 12/03/19 12:20
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 21:46	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 21:46	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 21:46	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 21:46	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 21:46	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 21:46	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 21:46	1
Benzene	ND		0.20		ug/L			12/05/19 21:46	1
Bromobenzene	ND		0.20		ug/L			12/05/19 21:46	1
Bromoform	ND		0.50		ug/L			12/05/19 21:46	1
Bromomethane	ND		0.50		ug/L			12/05/19 21:46	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 21:46	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 21:46	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Chloroethane	ND		0.50		ug/L			12/05/19 21:46	1
Chloroform	ND		0.20		ug/L			12/05/19 21:46	1
Chloromethane	ND		0.50		ug/L			12/05/19 21:46	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
Dibromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 21:46	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 21:46	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 21:46	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 21:46	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 21:46	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 21:46	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 21:46	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 21:46	1
Naphthalene	ND		1.0		ug/L			12/05/19 21:46	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 21:46	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW04SW
Date Collected: 12/03/19 12:20
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/05/19 21:46	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 21:46	1
Styrene	ND		0.50		ug/L			12/05/19 21:46	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 21:46	1
Toluene	ND		0.20		ug/L			12/05/19 21:46	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
Trichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 21:46	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/05/19 21:46*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/05/19 21:46*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/05/19 21:46*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 21:46*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/05/19 21:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 16:34	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW04SW
Date Collected: 12/03/19 12:20
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:31	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:31	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:31	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 18:31	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*	*12/09/19 14:43*	*12/13/19 16:34*	*1*

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2-Fluorobiphenyl	*95*		*50 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2-Fluorophenol (Surr)	*75*		*36 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Nitrobenzene-d5 (Surr)	*88*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Nitrobenzene-d5 (Surr)	*89*		*46 - 129*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Phenol-d5 (Surr)	*78*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Phenol-d5 (Surr)	*80*		*38 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Terphenyl-d14 (Surr)	*104*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Terphenyl-d14 (Surr)	*116*		*61 - 126*	*12/09/19 14:43*	*12/13/19 16:34*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 13:08	1
2-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
3-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
4-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
HMX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
RDX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Nitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Tetryl	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Nitroglycerin	ND		0.69		ug/L		12/06/19 12:05	12/26/19 13:08	1
PETN	ND		0.69		ug/L		12/06/19 12:05	12/26/19 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/06/19 12:05*	*12/26/19 13:08*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:26	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:39	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Chromium	**0.00057**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:39	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:39	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:39	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:39	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:39	1

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2
Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:11	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW140W
Date Collected: 12/03/19 12:00
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 22:13	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 22:13	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 22:13	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 22:13	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 22:13	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 22:13	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 22:13	1
Benzene	ND		0.20		ug/L			12/05/19 22:13	1
Bromobenzene	ND		0.20		ug/L			12/05/19 22:13	1
Bromoform	ND		0.50		ug/L			12/05/19 22:13	1
Bromomethane	ND		0.50		ug/L			12/05/19 22:13	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 22:13	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 22:13	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Chloroethane	ND		0.50		ug/L			12/05/19 22:13	1
Chloroform	ND		0.20		ug/L			12/05/19 22:13	1
Chloromethane	ND		0.50		ug/L			12/05/19 22:13	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
Dibromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 22:13	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 22:13	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 22:13	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 22:13	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 22:13	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 22:13	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 22:13	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 22:13	1
Naphthalene	ND		1.0		ug/L			12/05/19 22:13	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 22:13	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW140W
Date Collected: 12/03/19 12:00
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/05/19 22:13	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 22:13	1
Styrene	ND		0.50		ug/L			12/05/19 22:13	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 22:13	1
Toluene	ND		0.20		ug/L			12/05/19 22:13	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
Trichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 22:13	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/05/19 22:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 22:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/05/19 22:13*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/05/19 22:13*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/05/19 22:13*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,3-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,4-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 16:58	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: 04Q19LCMW140W
Date Collected: 12/03/19 12:00
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorobutadiene	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 18:54	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachloroethane	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 18:54	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:54	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Pentachlorophenol	ND	H *	9.6		ug/L		12/30/19 13:18	01/03/20 18:54	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*48 - 125*	*12/09/19 14:43*	*12/13/19 16:58*	*1*

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2-Fluorobiphenyl	*97*		*50 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
2-Fluorophenol (Surr)	*84*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2-Fluorophenol (Surr)	*75*		*36 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Nitrobenzene-d5 (Surr)	*85*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Nitrobenzene-d5 (Surr)	*85*		*46 - 129*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Phenol-d5 (Surr)	*84*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Phenol-d5 (Surr)	*80*		*38 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Terphenyl-d14 (Surr)	*109*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Terphenyl-d14 (Surr)	*123*		*61 - 126*	*12/09/19 14:43*	*12/13/19 16:58*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 15:49	1
2-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
3-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
4-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
HMX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
RDX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
Nitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
Tetryl	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
Nitroglycerin	ND		0.69		ug/L		12/06/19 12:05	12/26/19 15:49	1
PETN	ND		0.69		ug/L		12/06/19 12:05	12/26/19 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/06/19 12:05*	*12/26/19 15:49*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:39	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:42	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Chromium	**0.00061**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:42	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:42	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:42	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:42	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:42	1

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3
Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:13	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91195-1

Client Sample ID: TB120319
Date Collected: 12/03/19 00:01
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 20:27	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 20:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 20:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 20:27	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 20:27	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 20:27	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 20:27	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 20:27	1
Benzene	ND		0.20		ug/L			12/05/19 20:27	1
Bromobenzene	ND		0.20		ug/L			12/05/19 20:27	1
Bromoform	ND		0.50		ug/L			12/05/19 20:27	1
Bromomethane	ND		0.50		ug/L			12/05/19 20:27	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 20:27	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 20:27	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Chloroethane	ND		0.50		ug/L			12/05/19 20:27	1
Chloroform	ND		0.20		ug/L			12/05/19 20:27	1
Chloromethane	ND		0.50		ug/L			12/05/19 20:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
Dibromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 20:27	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 20:27	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 20:27	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 20:27	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 20:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 20:27	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 20:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 20:27	1
Naphthalene	ND		1.0		ug/L			12/05/19 20:27	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 20:27	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 20:27	1

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: TB120319
Lab Sample ID: 580-91195-4
Date Collected: 12/03/19 00:01
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/05/19 20:27	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 20:27	1
Styrene	ND		0.50		ug/L			12/05/19 20:27	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 20:27	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 20:27	1
Toluene	ND		0.20		ug/L			12/05/19 20:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
Trichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 20:27	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/05/19 20:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 20:27*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/05/19 20:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/05/19 20:27*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/05/19 20:27*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 20:00	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 20:00	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 20:00	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 20:00	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 20:00	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 20:00	1
Benzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromoform	ND		0.50		ug/L			12/05/19 20:00	1
Bromomethane	ND		0.50		ug/L			12/05/19 20:00	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chloroethane	ND		0.50		ug/L			12/05/19 20:00	1
Chloroform	ND		0.20		ug/L			12/05/19 20:00	1
Chloromethane	ND		0.50		ug/L			12/05/19 20:00	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Dibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 20:00	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 20:00	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 20:00	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 20:00	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 20:00	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 20:00	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
Naphthalene	ND		1.0		ug/L			12/05/19 20:00	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
o-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Styrene	ND		0.50		ug/L			12/05/19 20:00	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 20:00	1
Toluene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Trichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 20:00	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 20:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/05/19 20:00*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 20:00*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/05/19 20:00*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 20:00*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/05/19 20:00*	*1*

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.21		ug/L		104	79 - 127
1,1,1-Trichloroethane	5.00	5.08		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.97		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	5.09		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.08		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.04		ug/L		101	71 - 126
1,1-Dichloropropene	5.00	5.14		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.00		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	5.06		ug/L		101	80 - 127
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	79 - 130
1,2,4-Trimethylbenzene	5.00	5.29		ug/L		106	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.65		ug/L		93	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	5.03		ug/L		101	80 - 130
1,3,5-Trimethylbenzene	5.00	5.34		ug/L		107	80 - 139
1,3-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 130
1,3-Dichloropropane	5.00	5.19		ug/L		104	80 - 130
1,4-Dichlorobenzene	5.00	4.91		ug/L		98	80 - 129
2,2-Dichloropropane	5.00	4.66		ug/L		93	58 - 150
2-Chlorotoluene	5.00	5.32		ug/L		106	80 - 136
4-Chlorotoluene	5.00	5.43		ug/L		109	80 - 130
4-Isopropyltoluene	5.00	5.15		ug/L		103	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.12		ug/L		102	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.29		ug/L		106	68 - 120
Carbon tetrachloride	5.00	5.04		ug/L		101	71 - 132
Chlorobenzene	5.00	4.89		ug/L		98	80 - 123
Chlorobromomethane	5.00	4.96		ug/L		99	79 - 131
Chlorodibromomethane	5.00	4.57		ug/L		91	76 - 131
Chloroethane	5.00	5.29		ug/L		106	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.59		ug/L		92	32 - 143
cis-1,2-Dichloroethene	5.00	5.12		ug/L		102	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.94		ug/L		99	65 - 141
Dichlorobromomethane	5.00	4.55		ug/L		91	74 - 131
Dichlorodifluoromethane	5.00	4.70		ug/L		94	20 - 137
Ethylbenzene	5.00	5.34		ug/L		107	80 - 130
Ethylene Dibromide	5.00	5.07		ug/L		101	80 - 126
Hexachlorobutadiene	5.00	4.84		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.16		ug/L		103	75 - 137
Methyl tert-butyl ether	5.00	5.03		ug/L		101	60 - 150
Methylene Chloride	5.00	5.10		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.62		ug/L		112	78 - 130
Naphthalene	5.00	4.72		ug/L		94	64 - 132
n-Butylbenzene	5.00	5.27		ug/L		105	73 - 135
N-Propylbenzene	5.00	5.63		ug/L		113	77 - 142
o-Xylene	5.00	5.04		ug/L		101	80 - 139
sec-Butylbenzene	5.00	5.22		ug/L		104	78 - 140
Styrene	5.00	4.88		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.74		ug/L		95	77 - 140
Tetrachloroethene	5.00	5.10		ug/L		102	75 - 131
Toluene	5.00	4.83		ug/L		97	80 - 126
trans-1,2-Dichloroethene	5.00	4.98		ug/L		100	63 - 133
trans-1,3-Dichloropropene	5.00	4.71		ug/L		94	71 - 128
Trichloroethene	5.00	4.98		ug/L		100	72 - 136
Trichlorofluoromethane	5.00	4.96		ug/L		99	60 - 132
Vinyl chloride	5.00	5.12		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.17		ug/L		103	79 - 127	1	20
1,1,1-Trichloroethane			5.00	5.05		ug/L		101	74 - 128	1	14
1,1,2,2-Tetrachloroethane			5.00	4.98		ug/L		100	69 - 139	0	22
1,1,2-Trichloroethane			5.00	5.01		ug/L		100	80 - 127	2	19
1,1-Dichloroethane			5.00	5.10		ug/L		102	74 - 135	0	20
1,1-Dichloroethene			5.00	5.09		ug/L		102	71 - 126	1	17
1,1-Dichloropropene			5.00	5.06		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene			5.00	5.18		ug/L		104	75 - 137	4	20
1,2,3-Trichloropropane			5.00	5.13		ug/L		103	80 - 127	1	20
1,2,4-Trichlorobenzene			5.00	4.97		ug/L		99	79 - 130	2	20
1,2,4-Trimethylbenzene			5.00	5.13		ug/L		103	78 - 136	3	20
1,2-Dibromo-3-Chloropropane			5.00	4.83		ug/L		97	69 - 130	4	26
1,2-Dichlorobenzene			5.00	4.98		ug/L		100	80 - 129	1	14
1,2-Dichloroethane			5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane			5.00	4.90		ug/L		98	80 - 130	3	14
1,3,5-Trimethylbenzene			5.00	5.12		ug/L		102	80 - 139	4	20
1,3-Dichlorobenzene			5.00	4.96		ug/L		99	80 - 130	4	12
1,3-Dichloropropane			5.00	5.11		ug/L		102	80 - 130	1	19
1,4-Dichlorobenzene			5.00	4.70		ug/L		94	80 - 129	4	11
2,2-Dichloropropane			5.00	4.71		ug/L		94	58 - 150	1	28
2-Chlorotoluene			5.00	5.09		ug/L		102	80 - 136	4	20
4-Chlorotoluene			5.00	5.19		ug/L		104	80 - 130	4	20
4-Isopropyltoluene			5.00	4.96		ug/L		99	78 - 132	4	14
Benzene			5.00	5.04		ug/L		101	73 - 133	2	20
Bromobenzene			5.00	4.89		ug/L		98	80 - 130	3	20
Bromoform			5.00	4.57		ug/L		91	69 - 137	1	20
Bromomethane			5.00	5.18		ug/L		104	68 - 120	2	18
Carbon tetrachloride			5.00	5.02		ug/L		100	71 - 132	0	15
Chlorobenzene			5.00	4.80		ug/L		96	80 - 123	2	12
Chlorobromomethane			5.00	5.02		ug/L		100	79 - 131	1	20
Chlorodibromomethane			5.00	4.61		ug/L		92	76 - 131	1	20
Chloroethane			5.00	5.17		ug/L		103	49 - 135	2	27
Chloroform			5.00	5.07		ug/L		101	80 - 130	0	20
Chloromethane			5.00	4.42		ug/L		88	32 - 143	4	23
cis-1,2-Dichloroethene			5.00	5.18		ug/L		104	72 - 130	1	20
cis-1,3-Dichloropropene			5.00	5.06		ug/L		101	66 - 141	1	22
Dibromomethane			5.00	4.96		ug/L		99	65 - 141	0	20
Dichlorobromomethane			5.00	4.48		ug/L		90	74 - 131	2	20
Dichlorodifluoromethane			5.00	4.66		ug/L		93	20 - 137	1	22
Ethylbenzene			5.00	5.18		ug/L		104	80 - 130	3	20
Ethylene Dibromide			5.00	5.05		ug/L		101	80 - 126	0	20
Hexachlorobutadiene			5.00	4.78		ug/L		96	72 - 138	1	20
Isopropylbenzene			5.00	5.04		ug/L		101	75 - 137	2	20
Methyl tert-butyl ether			5.00	5.25		ug/L		105	60 - 150	4	25
Methylene Chloride			5.00	5.14		ug/L		103	75 - 134	1	18
m-Xylene & p-Xylene			5.00	5.45		ug/L		109	78 - 130	3	20
Naphthalene			5.00	4.93		ug/L		99	64 - 132	4	20
n-Butylbenzene			5.00	5.02		ug/L		100	73 - 135	5	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.36		ug/L		107	77 - 142	5	20
o-Xylene			5.00	4.95		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	5.01		ug/L		100	78 - 140	4	20
Styrene			5.00	4.74		ug/L		95	74 - 136	3	20
tert-Butylbenzene			5.00	4.51		ug/L		90	77 - 140	5	20
Tetrachloroethene			5.00	5.02		ug/L		100	75 - 131	2	20
Toluene			5.00	4.67		ug/L		93	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	4.96		ug/L		99	63 - 133	0	17
trans-1,3-Dichloropropene			5.00	4.63		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.89		ug/L		98	72 - 136	2	14
Trichlorofluoromethane			5.00	4.91		ug/L		98	60 - 132	1	20
Vinyl chloride			5.00	4.94		ug/L		99	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		5.00	5.23		ug/L		105	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.31		ug/L		106	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	4.87		ug/L		97	69 - 139
1,1,2-Trichloroethane	ND		5.00	5.20		ug/L		104	80 - 127
1,1-Dichloroethane	ND		5.00	5.26		ug/L		105	74 - 135
1,1-Dichloroethene	ND		5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	ND		5.00	5.51		ug/L		110	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	4.61		ug/L		92	75 - 137
1,2,3-Trichloropropane	ND		5.00	4.81		ug/L		96	80 - 127
1,2,4-Trichlorobenzene	ND		5.00	4.34		ug/L		87	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.10		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.30		ug/L		86	69 - 130
1,2-Dichlorobenzene	ND		5.00	4.87		ug/L		97	80 - 129
1,2-Dichloroethane	ND		5.00	4.98		ug/L		100	74 - 130
1,2-Dichloropropane	ND		5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	5.14		ug/L		103	80 - 139
1,3-Dichlorobenzene	ND		5.00	4.95		ug/L		99	80 - 130
1,3-Dichloropropane	ND		5.00	5.30		ug/L		106	80 - 130
1,4-Dichlorobenzene	ND		5.00	4.75		ug/L		95	80 - 129
2,2-Dichloropropane	ND		5.00	3.84		ug/L		77	58 - 150
2-Chlorotoluene	ND		5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	ND		5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	ND		5.00	5.01		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		5.00	5.40		ug/L		108	73 - 133
Bromobenzene	ND		5.00	4.84		ug/L		97	80 - 130
Bromoform	ND		5.00	4.56		ug/L		91	69 - 137
Bromomethane	ND		5.00	5.81		ug/L		116	68 - 120
Carbon tetrachloride	ND		5.00	5.52		ug/L		110	71 - 132
Chlorobenzene	ND		5.00	5.05		ug/L		101	80 - 123
Chlorobromomethane	ND		5.00	5.20		ug/L		104	79 - 131
Chlorodibromomethane	ND		5.00	4.65		ug/L		93	76 - 131
Chloroethane	ND		5.00	6.03		ug/L		121	49 - 135
Chloroform	ND		5.00	5.34		ug/L		107	80 - 130
Chloromethane	ND		5.00	5.23		ug/L		105	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.31		ug/L		106	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.58		ug/L		92	66 - 141
Dibromomethane	ND		5.00	5.15		ug/L		103	65 - 141
Dichlorobromomethane	ND		5.00	4.75		ug/L		95	74 - 131
Dichlorodifluoromethane	ND		5.00	4.99		ug/L		100	20 - 137
Ethylbenzene	ND		5.00	5.51		ug/L		110	80 - 130
Ethylene Dibromide	ND		5.00	5.01		ug/L		100	80 - 126
Hexachlorobutadiene	ND		5.00	4.55		ug/L		91	72 - 138
Isopropylbenzene	ND		5.00	5.22		ug/L		104	75 - 137
Methyl tert-butyl ether	ND		5.00	4.92		ug/L		98	60 - 150
Methylene Chloride	ND		5.00	5.17		ug/L		103	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.70		ug/L		114	78 - 130
Naphthalene	ND		5.00	4.28		ug/L		86	64 - 132
n-Butylbenzene	ND		5.00	4.92		ug/L		98	73 - 135
N-Propylbenzene	ND		5.00	5.52		ug/L		110	77 - 142
o-Xylene	ND		5.00	5.07		ug/L		101	80 - 139
sec-Butylbenzene	ND		5.00	5.10		ug/L		102	78 - 140
Styrene	ND		5.00	5.00		ug/L		100	74 - 136
tert-Butylbenzene	ND		5.00	4.56		ug/L		89	77 - 140
Tetrachloroethene	ND		5.00	5.26		ug/L		105	75 - 131
Toluene	ND		5.00	4.91		ug/L		98	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.25		ug/L		105	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.36		ug/L		87	71 - 128
Trichloroethene	ND		5.00	5.13		ug/L		103	72 - 136
Trichlorofluoromethane	ND		5.00	5.44		ug/L		109	60 - 132
Vinyl chloride	ND		5.00	5.83		ug/L		117	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*88*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		5.00	5.31		ug/L		106	79 - 127	1	20
1,1,1-Trichloroethane	ND		5.00	5.42		ug/L		108	74 - 128	2	14
1,1,2,2-Tetrachloroethane	ND		5.00	4.94		ug/L		99	69 - 139	2	22
1,1,2-Trichloroethane	ND		5.00	5.11		ug/L		102	80 - 127	2	19
1,1-Dichloroethane	ND		5.00	5.35		ug/L		107	74 - 135	2	20
1,1-Dichloroethene	ND		5.00	5.49		ug/L		110	71 - 126	5	17
1,1-Dichloropropene	ND		5.00	5.54		ug/L		111	72 - 132	1	13
1,2,3-Trichlorobenzene	ND		5.00	5.02		ug/L		100	75 - 137	9	20
1,2,3-Trichloropropane	ND		5.00	4.94		ug/L		99	80 - 127	3	20
1,2,4-Trichlorobenzene	ND		5.00	4.69		ug/L		94	79 - 130	8	20
1,2,4-Trimethylbenzene	ND		5.00	5.20		ug/L		104	78 - 136	2	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.60		ug/L		92	69 - 130	7	26
1,2-Dichlorobenzene	ND		5.00	5.00		ug/L		100	80 - 129	3	14
1,2-Dichloroethane	ND		5.00	4.94		ug/L		99	74 - 130	1	15
1,2-Dichloropropane	ND		5.00	5.13		ug/L		103	80 - 130	3	14
1,3,5-Trimethylbenzene	ND		5.00	5.21		ug/L		104	80 - 139	1	20
1,3-Dichlorobenzene	ND		5.00	4.91		ug/L		98	80 - 130	1	12
1,3-Dichloropropane	ND		5.00	5.27		ug/L		105	80 - 130	1	19
1,4-Dichlorobenzene	ND		5.00	4.71		ug/L		94	80 - 129	1	11
2,2-Dichloropropane	ND		5.00	4.05		ug/L		81	58 - 150	5	28
2-Chlorotoluene	ND		5.00	5.09		ug/L		102	80 - 136	1	20
4-Chlorotoluene	ND		5.00	5.15		ug/L		103	80 - 130	1	20
4-Isopropyltoluene	ND		5.00	5.01		ug/L		99	78 - 132	0	14
Benzene	ND		5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene	ND		5.00	4.85		ug/L		97	80 - 130	0	20
Bromoform	ND		5.00	4.54		ug/L		91	69 - 137	0	20
Bromomethane	ND		5.00	5.86		ug/L		117	68 - 120	1	18
Carbon tetrachloride	ND		5.00	5.49		ug/L		110	71 - 132	1	15
Chlorobenzene	ND		5.00	4.98		ug/L		100	80 - 123	1	12
Chlorobromomethane	ND		5.00	5.23		ug/L		105	79 - 131	1	20
Chlorodibromomethane	ND		5.00	4.61		ug/L		92	76 - 131	1	20
Chloroethane	ND		5.00	5.84		ug/L		117	49 - 135	3	27
Chloroform	ND		5.00	5.35		ug/L		107	80 - 130	0	20
Chloromethane	ND		5.00	5.13		ug/L		103	32 - 143	2	23
cis-1,2-Dichloroethene	ND		5.00	5.37		ug/L		107	72 - 130	1	20
cis-1,3-Dichloropropene	ND		5.00	4.67		ug/L		93	66 - 141	2	22
Dibromomethane	ND		5.00	5.07		ug/L		101	65 - 141	2	20
Dichlorobromomethane	ND		5.00	4.61		ug/L		92	74 - 131	3	20
Dichlorodifluoromethane	ND		5.00	5.37		ug/L		107	20 - 137	7	22
Ethylbenzene	ND		5.00	5.44		ug/L		109	80 - 130	1	20
Ethylene Dibromide	ND		5.00	5.05		ug/L		101	80 - 126	1	20
Hexachlorobutadiene	ND		5.00	4.65		ug/L		93	72 - 138	2	20
Isopropylbenzene	ND		5.00	5.23		ug/L		105	75 - 137	0	20
Methyl tert-butyl ether	ND		5.00	5.17		ug/L		103	60 - 150	5	25
Methylene Chloride	ND		5.00	5.32		ug/L		106	75 - 134	3	18
m-Xylene & p-Xylene	ND		5.00	5.67		ug/L		113	78 - 130	1	20
Naphthalene	ND		5.00	4.70		ug/L		94	64 - 132	9	20
n-Butylbenzene	ND		5.00	4.95		ug/L		99	73 - 135	1	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene	ND		5.00	5.51		ug/L		110	77 - 142	0	20
o-Xylene	ND		5.00	5.06		ug/L		101	80 - 139	0	20
sec-Butylbenzene	ND		5.00	5.15		ug/L		103	78 - 140	1	20
Styrene	ND		5.00	4.87		ug/L		97	74 - 136	3	20
tert-Butylbenzene	ND		5.00	4.57		ug/L		89	77 - 140	0	20
Tetrachloroethene	ND		5.00	5.28		ug/L		106	75 - 131	0	20
Toluene	ND		5.00	4.88		ug/L		98	80 - 126	1	20
trans-1,2-Dichloroethene	ND		5.00	5.32		ug/L		106	63 - 133	1	17
trans-1,3-Dichloropropene	ND		5.00	4.38		ug/L		88	71 - 128	1	21
Trichloroethene	ND		5.00	5.12		ug/L		102	72 - 136	0	14
Trichlorofluoromethane	ND		5.00	5.56		ug/L		111	60 - 132	2	20
Vinyl chloride	ND		5.00	5.90		ug/L		118	52 - 128	1	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,3-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,4-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1-Methylnaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,5-Trichlorophenol	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,6-Trichlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dichlorophenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dimethylphenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrophenol	ND		10		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrotoluene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,6-Dinitrotoluene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chloronaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylnaphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitroaniline	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitrophenol	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
3 & 4 Methylphenol	ND		0.40		ug/L		12/09/19 14:43	12/13/19 11:08	1
3,3'-Dichlorobenzidine	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
3-Nitroaniline	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
4,6-Dinitro-2-methylphenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloro-3-methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloroaniline	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chlorophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitroaniline	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitrophenol	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Anthracene	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]anthracene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[b]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[g,h,i]perylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[k]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzoic acid	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzyl alcohol	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethoxy)methane	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethyl)ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-ethylhexyl) phthalate	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
bis(chloroisopropyl) ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Butyl benzyl phthalate	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Carbazole	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Chrysene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenz(a,h)anthracene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenzofuran	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Diethyl phthalate	ND		6.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dimethyl phthalate	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-butyl phthalate	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-octyl phthalate	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluoranthene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluorene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobutadiene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorocyclopentadiene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachloroethane	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Indeno[1,2,3-cd]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Isophorone	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Naphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodi-n-propylamine	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodiphenylamine	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pentachlorophenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenanthrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pyrene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/09/19 14:43*	*12/13/19 11:08*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		50 - 120	12/09/19 14:43	12/13/19 11:08	1
2-Fluorophenol (Surr)	81		36 - 120	12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene-d5 (Surr)	82		46 - 129	12/09/19 14:43	12/13/19 11:08	1
Phenol-d5 (Surr)	88		38 - 120	12/09/19 14:43	12/13/19 11:08	1
Terphenyl-d14 (Surr)	112		61 - 126	12/09/19 14:43	12/13/19 11:08	1

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.00	0.369	*	ug/L		37	46 - 120
1,2-Dichlorobenzene	1.00	0.383	*	ug/L		38	44 - 120
1,3-Dichlorobenzene	1.00	0.283	*	ug/L		28	36 - 120
1,4-Dichlorobenzene	1.00	0.314	*	ug/L		31	40 - 120
1-Methylnaphthalene	1.00	0.668		ug/L		67	59 - 120
2,4,5-Trichlorophenol	1.00	0.946		ug/L		95	56 - 122
2,4,6-Trichlorophenol	1.00	0.636		ug/L		64	50 - 126
2,4-Dichlorophenol	1.00	0.699	J	ug/L		70	54 - 120
2,4-Dimethylphenol	1.00	ND		ug/L		23	20 - 120
2,4-Dinitrophenol	2.00	ND	*	ug/L		0	20 - 150
2,4-Dinitrotoluene	1.00	0.770		ug/L		77	44 - 142
2,6-Dinitrotoluene	1.00	0.814		ug/L		81	54 - 137
2-Chloronaphthalene	1.00	0.645		ug/L		64	45 - 120
2-Chlorophenol	1.00	0.811		ug/L		81	54 - 120
2-Methylnaphthalene	1.00	0.622		ug/L		62	53 - 120
2-Methylphenol	1.00	0.662		ug/L		66	43 - 120
2-Nitroaniline	1.00	0.667		ug/L		67	50 - 137
2-Nitrophenol	1.00	0.801		ug/L		80	41 - 127
3 & 4 Methylphenol	1.00	0.632		ug/L		63	43 - 120
3,3'-Dichlorobenzidine	2.00	ND		ug/L		39	20 - 150
3-Nitroaniline	1.00	0.661	J	ug/L		66	34 - 120
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		34	20 - 150
4-Bromophenyl phenyl ether	1.00	0.651		ug/L		65	62 - 120
4-Chloro-3-methylphenol	1.00	0.593		ug/L		59	47 - 126
4-Chloroaniline	1.00	ND	*	ug/L		15	20 - 120
4-Chlorophenyl phenyl ether	1.00	0.690		ug/L		69	53 - 125
4-Nitroaniline	1.00	0.734	J	ug/L		73	51 - 120
4-Nitrophenol	2.00	1.84	J	ug/L		92	33 - 150
Acenaphthene	1.00	0.711		ug/L		71	56 - 120
Acenaphthylene	1.00	0.771		ug/L		77	50 - 120
Anthracene	1.00	0.615	J	ug/L		62	44 - 120
Benzo[a]anthracene	1.00	0.827		ug/L		83	65 - 124
Benzo[a]pyrene	1.00	0.494	J	ug/L		49	41 - 120
Benzo[b]fluoranthene	1.00	0.744		ug/L		74	62 - 131
Benzo[g,h,i]perylene	1.00	0.799		ug/L		80	65 - 125
Benzo[k]fluoranthene	1.00	0.716		ug/L		72	57 - 128
Benzoic acid	2.00	0.751	J	ug/L		38	20 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	1.00	0.565	J	ug/L		56	20 - 150
Bis(2-chloroethoxy)methane	1.00	0.819		ug/L		82	53 - 120
Bis(2-chloroethyl)ether	1.00	0.829		ug/L		83	47 - 120
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		119	20 - 150
bis(chloroisopropyl) ether	1.00	0.793		ug/L		79	32 - 142
Butyl benzyl phthalate	1.00	1.15	J	ug/L		115	55 - 150
Carbazole	1.00	1.48	*	ug/L		148	67 - 135
Chrysene	1.00	0.914		ug/L		91	57 - 126
Dibenz(a,h)anthracene	1.00	0.796		ug/L		80	62 - 131
Dibenzofuran	1.00	0.754		ug/L		75	60 - 120
Diethyl phthalate	1.00	0.889	J	ug/L		89	55 - 135
Dimethyl phthalate	1.00	0.852		ug/L		85	64 - 128
Di-n-butyl phthalate	1.00	0.979	J	ug/L		98	57 - 136
Di-n-octyl phthalate	1.00	0.812		ug/L		81	51 - 150
Fluoranthene	1.00	0.842	J	ug/L		84	64 - 128
Fluorene	1.00	0.780	J	ug/L		78	64 - 120
Hexachlorobenzene	1.00	0.586		ug/L		59	50 - 120
Hexachlorobutadiene	1.00	0.0554	J *	ug/L		6	21 - 120
Hexachlorocyclopentadiene	1.00	0.0493	J *	ug/L		5	20 - 120
Hexachloroethane	1.00	0.128	J *	ug/L		13	30 - 120
Indeno[1,2,3-cd]pyrene	1.00	0.755		ug/L		75	55 - 148
Isophorone	1.00	0.876		ug/L		88	56 - 125
Naphthalene	1.00	0.727		ug/L		73	63 - 120
Nitrobenzene	1.00	0.832		ug/L		83	45 - 139
N-Nitrosodi-n-propylamine	1.00	0.766		ug/L		77	46 - 120
N-Nitrosodiphenylamine	1.00	0.423	J	ug/L		42	33 - 120
Pentachlorophenol	2.00	ND	*	ug/L		13	20 - 135
Phenanthrene	1.00	0.719		ug/L		72	63 - 120
Phenol	1.00	0.727	J	ug/L		73	41 - 120
Pyrene	1.00	0.856	J	ug/L		86	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol (Surr)	*62*		*36 - 120*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*
Phenol-d5 (Surr)	*78*		*38 - 120*
Terphenyl-d14 (Surr)	*86*		*61 - 126*

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1.00	0.458		ug/L		46	46 - 120	21	35
1,2-Dichlorobenzene	1.00	0.421	*	ug/L		42	44 - 120	9	35
1,3-Dichlorobenzene	1.00	0.324	*	ug/L		32	36 - 120	13	35
1,4-Dichlorobenzene	1.00	0.363	*	ug/L		36	40 - 120	15	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	1.00	0.743		ug/L		74	59 - 120	11	25
2,4,5-Trichlorophenol	1.00	0.831		ug/L		83	56 - 122	13	35
2,4,6-Trichlorophenol	1.00	0.675		ug/L		68	50 - 126	6	20
2,4-Dichlorophenol	1.00	0.791	J	ug/L		79	54 - 120	12	35
2,4-Dimethylphenol	1.00	0.505	J *	ug/L		51	20 - 120	76	35
2,4-Dinitrophenol	2.00	ND	*	ug/L		20	20 - 150	200	35
2,4-Dinitrotoluene	1.00	0.810		ug/L		81	44 - 142	5	36
2,6-Dinitrotoluene	1.00	0.831		ug/L		83	54 - 137	2	33
2-Chloronaphthalene	1.00	0.661		ug/L		66	45 - 120	3	35
2-Chlorophenol	1.00	0.830		ug/L		83	54 - 120	2	35
2-Methylnaphthalene	1.00	0.688		ug/L		69	53 - 120	10	29
2-Methylphenol	1.00	0.722		ug/L		72	43 - 120	9	35
2-Nitroaniline	1.00	0.762		ug/L		76	50 - 137	13	35
2-Nitrophenol	1.00	0.791		ug/L		79	41 - 127	1	35
3 & 4 Methylphenol	1.00	0.699		ug/L		70	43 - 120	10	35
3,3'-Dichlorobenzidine	2.00	ND		ug/L		30	20 - 150	26	35
3-Nitroaniline	1.00	0.608	J	ug/L		61	34 - 120	8	35
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		42	20 - 150	20	35
4-Bromophenyl phenyl ether	1.00	0.735		ug/L		74	62 - 120	12	20
4-Chloro-3-methylphenol	1.00	0.709		ug/L		71	47 - 126	18	35
4-Chloroaniline	1.00	ND	*	ug/L		5	20 - 120	103	35
4-Chlorophenyl phenyl ether	1.00	0.698		ug/L		70	53 - 125	1	27
4-Nitroaniline	1.00	1.09	*	ug/L		109	51 - 120	39	35
4-Nitrophenol	2.00	1.63	J	ug/L		81	33 - 150	12	35
Acenaphthene	1.00	0.723		ug/L		72	56 - 120	2	35
Acenaphthylene	1.00	0.724		ug/L		72	50 - 120	6	35
Anthracene	1.00	0.678	J	ug/L		68	44 - 120	10	26
Benzo[a]anthracene	1.00	0.843		ug/L		84	65 - 124	2	27
Benzo[a]pyrene	1.00	0.635		ug/L		63	41 - 120	25	29
Benzo[b]fluoranthene	1.00	0.830		ug/L		83	62 - 131	11	27
Benzo[g,h,i]perylene	1.00	0.856		ug/L		86	65 - 125	7	25
Benzo[k]fluoranthene	1.00	0.744		ug/L		74	57 - 128	4	26
Benzoic acid	2.00	0.872	J	ug/L		44	20 - 120	15	35
Benzyl alcohol	1.00	0.671	J	ug/L		67	20 - 150	17	35
Bis(2-chloroethoxy)methane	1.00	0.802		ug/L		80	53 - 120	2	27
Bis(2-chloroethyl)ether	1.00	0.817		ug/L		82	47 - 120	1	35
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		102	20 - 150	16	35
bis(chloroisopropyl) ether	1.00	0.758		ug/L		76	32 - 142	4	33
Butyl benzyl phthalate	1.00	1.08	J	ug/L		108	55 - 150	6	35
Carbazole	1.00	1.58	*	ug/L		158	67 - 135	7	20
Chrysene	1.00	0.856		ug/L		86	57 - 126	7	26
Dibenz(a,h)anthracene	1.00	0.902		ug/L		90	62 - 131	12	28
Dibenzofuran	1.00	0.758		ug/L		76	60 - 120	0	35
Diethyl phthalate	1.00	0.892	J	ug/L		89	55 - 135	0	35
Dimethyl phthalate	1.00	0.888		ug/L		89	64 - 128	4	24
Di-n-butyl phthalate	1.00	1.08	J	ug/L		108	57 - 136	10	20
Di-n-octyl phthalate	1.00	0.886		ug/L		89	51 - 150	9	26
Fluoranthene	1.00	0.910	J	ug/L		91	64 - 128	8	20
Fluorene	1.00	0.793	J	ug/L		79	64 - 120	2	28

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			1.00	0.783	*	ug/L		78	50 - 120	29	26
Hexachlorobutadiene			1.00	0.0996	J *	ug/L		10	21 - 120	57	35
Hexachlorocyclopentadiene			1.00	ND	*	ug/L		3	20 - 120	55	35
Hexachloroethane			1.00	0.156	J *	ug/L		16	30 - 120	20	35
Indeno[1,2,3-cd]pyrene			1.00	0.771		ug/L		77	55 - 148	2	20
Isophorone			1.00	0.847		ug/L		85	56 - 125	3	20
Naphthalene			1.00	0.769		ug/L		77	63 - 120	6	34
Nitrobenzene			1.00	0.817		ug/L		82	45 - 139	2	33
N-Nitrosodi-n-propylamine			1.00	0.766		ug/L		77	46 - 120	0	28
N-Nitrosodiphenylamine			1.00	0.325	J *	ug/L		32	33 - 120	26	35
Pentachlorophenol			2.00	ND	*	ug/L		38	20 - 135	97	35
Phenanthrene			1.00	0.791		ug/L		79	63 - 120	10	20
Phenol			1.00	0.807	J	ug/L		81	41 - 120	10	35
Pyrene			1.00	0.921	J	ug/L		92	64 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*71*		*50 - 120*
2-Fluorophenol (Surr)	*73*		*36 - 120*
Nitrobenzene-d5 (Surr)	*86*		*46 - 129*
Phenol-d5 (Surr)	*83*		*38 - 120*
Terphenyl-d14 (Surr)	*94*		*61 - 126*

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND	*	1.93	1.44		ug/L		75	46 - 120
1,2-Dichlorobenzene	ND	*	1.93	1.50		ug/L		78	44 - 120
1,3-Dichlorobenzene	ND	*	1.93	1.48		ug/L		77	36 - 120
1,4-Dichlorobenzene	ND	*	1.93	1.46		ug/L		76	40 - 120
1-Methylnaphthalene	ND		1.93	1.61		ug/L		84	59 - 120
2,4,5-Trichlorophenol	ND		1.93	1.43		ug/L		74	56 - 122
2,4,6-Trichlorophenol	ND		1.93	1.42		ug/L		74	50 - 126
2,4-Dichlorophenol	ND		1.93	ND		ug/L		79	54 - 120
2,4-Dimethylphenol	ND	F2 *	1.93	ND		ug/L		43	20 - 120
2,4-Dinitrophenol	ND	*	3.86	ND		ug/L		NC	20 - 150
2,4-Dinitrotoluene	ND		1.93	1.67		ug/L		87	44 - 142
2,6-Dinitrotoluene	ND		1.93	1.67		ug/L		87	54 - 137
2-Chloronaphthalene	ND		1.93	1.54		ug/L		80	45 - 120
2-Chlorophenol	ND		1.93	1.66		ug/L		86	54 - 120
2-Methylnaphthalene	ND		1.93	1.59		ug/L		82	53 - 120
2-Methylphenol	ND		1.93	1.47		ug/L		76	43 - 120
2-Nitroaniline	ND		1.93	1.62		ug/L		84	50 - 137
2-Nitrophenol	ND		1.93	1.56		ug/L		81	41 - 127
3 & 4 Methylphenol	ND		1.93	1.44		ug/L		75	43 - 120
3,3'-Dichlorobenzidine	ND	F2	3.86	ND		ug/L		89	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3-Nitroaniline	ND		1.93	ND		ug/L		70	34 - 120
4,6-Dinitro-2-methylphenol	ND	F1	3.86	ND	F1	ug/L		0	20 - 150
4-Bromophenyl phenyl ether	ND		1.93	1.63		ug/L		84	62 - 120
4-Chloro-3-methylphenol	ND		1.93	1.50		ug/L		78	47 - 126
4-Chloroaniline	ND	*	1.93	ND		ug/L		NC	20 - 120
4-Chlorophenyl phenyl ether	ND		1.93	1.72		ug/L		89	53 - 125
4-Nitroaniline	ND	*	1.93	ND		ug/L		90	51 - 120
4-Nitrophenol	ND		3.86	ND		ug/L		91	33 - 150
Acenaphthene	ND		1.93	1.57		ug/L		81	56 - 120
Acenaphthylene	ND		1.93	1.55		ug/L		80	50 - 120
Anthracene	ND		1.93	ND		ug/L		81	44 - 120
Benzo[a]anthracene	ND		1.93	1.60		ug/L		83	65 - 124
Benzo[a]pyrene	ND		1.93	1.46		ug/L		76	41 - 120
Benzo[b]fluoranthene	ND		1.93	1.75		ug/L		91	62 - 131
Benzo[g,h,i]perylene	ND		1.93	1.84		ug/L		95	65 - 125
Benzo[k]fluoranthene	ND		1.93	1.70		ug/L		88	57 - 128
Benzoic acid	ND		3.86	ND		ug/L		47	20 - 120
Benzyl alcohol	ND		1.93	ND		ug/L		78	20 - 150
Bis(2-chloroethoxy)methane	ND		1.93	1.62		ug/L		84	53 - 120
Bis(2-chloroethyl)ether	ND		1.93	1.65		ug/L		86	47 - 120
Bis(2-ethylhexyl) phthalate	ND		1.93	ND		ug/L		NC	20 - 150
bis(chloroisopropyl) ether	ND		1.93	1.53		ug/L		79	32 - 142
Butyl benzyl phthalate	ND		1.93	ND		ug/L		105	55 - 150
Carbazole	ND	* F2 F1	1.93	3.12	F1	ug/L		162	67 - 135
Chrysene	ND		1.93	1.64		ug/L		85	57 - 126
Dibenz(a,h)anthracene	ND		1.93	1.81		ug/L		94	62 - 131
Dibenzofuran	ND		1.93	1.70		ug/L		88	60 - 120
Diethyl phthalate	ND		1.93	ND		ug/L		96	55 - 135
Dimethyl phthalate	ND		1.93	1.76		ug/L		91	64 - 128
Di-n-butyl phthalate	ND		1.93	ND		ug/L		104	57 - 136
Di-n-octyl phthalate	ND		1.93	1.85		ug/L		96	51 - 150
Fluoranthene	ND		1.93	ND		ug/L		92	64 - 128
Fluorene	ND		1.93	ND		ug/L		89	64 - 120
Hexachlorobenzene	ND	*	1.93	1.54		ug/L		80	50 - 120
Hexachlorobutadiene	ND	*	1.93	1.45		ug/L		75	21 - 120
Hexachlorocyclopentadiene	ND	*	1.93	ND		ug/L		39	20 - 120
Hexachloroethane	ND	*	1.93	1.44		ug/L		75	30 - 120
Indeno[1,2,3-cd]pyrene	ND		1.93	1.73		ug/L		90	55 - 148
Isophorone	ND		1.93	1.71		ug/L		89	56 - 125
Naphthalene	ND		1.93	1.59		ug/L		83	63 - 120
Nitrobenzene	ND		1.93	1.64		ug/L		85	45 - 139
N-Nitrosodi-n-propylamine	ND		1.93	1.65		ug/L		85	46 - 120
N-Nitrosodiphenylamine	ND	*	1.93	ND		ug/L		64	33 - 120
Pentachlorophenol	ND	F1 *	3.86	ND	F1	ug/L		0	20 - 135
Phenanthrene	ND		1.93	1.62		ug/L		84	63 - 120
Phenol	ND		1.93	ND		ug/L		81	41 - 120
Pyrene	ND		1.93	ND		ug/L		92	64 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*87*		*50 - 120*
2-Fluorophenol (Surr)	*75*		*36 - 120*
Nitrobenzene-d5 (Surr)	*88*		*46 - 129*
Phenol-d5 (Surr)	*88*		*38 - 120*
Terphenyl-d14 (Surr)	*100*		*61 - 126*

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND	*	1.95	1.53		ug/L		78	46 - 120	6	35
1,2-Dichlorobenzene	ND	*	1.95	1.54		ug/L		79	44 - 120	3	35
1,3-Dichlorobenzene	ND	*	1.95	1.55		ug/L		80	36 - 120	4	35
1,4-Dichlorobenzene	ND	*	1.95	1.52		ug/L		78	40 - 120	4	35
1-Methylnaphthalene	ND		1.95	1.61		ug/L		82	59 - 120	0	25
2,4,5-Trichlorophenol	ND		1.95	1.50		ug/L		77	56 - 122	5	35
2,4,6-Trichlorophenol	ND		1.95	1.54		ug/L		79	50 - 126	8	20
2,4-Dichlorophenol	ND		1.95	ND		ug/L		78	54 - 120	0	35
2,4-Dimethylphenol	ND	F2 *	1.95	ND	F2	ug/L		66	20 - 120	44	35
2,4-Dinitrophenol	ND	*	3.90	ND		ug/L		NC	20 - 150	NC	35
2,4-Dinitrotoluene	ND		1.95	1.95		ug/L		100	44 - 142	16	36
2,6-Dinitrotoluene	ND		1.95	1.89		ug/L		97	54 - 137	13	33
2-Chloronaphthalene	ND		1.95	1.56		ug/L		80	45 - 120	1	35
2-Chlorophenol	ND		1.95	1.78		ug/L		91	54 - 120	7	35
2-Methylnaphthalene	ND		1.95	1.57		ug/L		81	53 - 120	1	29
2-Methylphenol	ND		1.95	1.59		ug/L		81	43 - 120	8	35
2-Nitroaniline	ND		1.95	1.79		ug/L		92	50 - 137	10	35
2-Nitrophenol	ND		1.95	1.61		ug/L		83	41 - 127	3	35
3 & 4 Methylphenol	ND		1.95	1.54		ug/L		79	43 - 120	7	35
3,3'-Dichlorobenzidine	ND	F2	3.90	ND	F2	ug/L		129	20 - 150	38	35
3-Nitroaniline	ND		1.95	ND		ug/L		98	34 - 120	34	35
4,6-Dinitro-2-methylphenol	ND	F1	3.90	ND	F1	ug/L		0	20 - 150	NC	35
4-Bromophenyl phenyl ether	ND		1.95	1.89		ug/L		97	62 - 120	15	20
4-Chloro-3-methylphenol	ND		1.95	1.54		ug/L		79	47 - 126	2	35
4-Chloroaniline	ND	*	1.95	ND		ug/L		NC	20 - 120	NC	35
4-Chlorophenyl phenyl ether	ND		1.95	1.79		ug/L		91	53 - 125	4	27
4-Nitroaniline	ND	*	1.95	2.20		ug/L		112	51 - 120	23	35
4-Nitrophenol	ND		3.90	ND		ug/L		70	33 - 150	25	35
Acenaphthene	ND		1.95	1.58		ug/L		81	56 - 120	1	35
Acenaphthylene	ND		1.95	1.66		ug/L		85	50 - 120	7	35
Anthracene	ND		1.95	ND		ug/L		103	44 - 120	26	26
Benzo[a]anthracene	ND		1.95	1.97		ug/L		101	65 - 124	21	27
Benzo[a]pyrene	ND		1.95	1.82		ug/L		93	41 - 120	22	29
Benzo[b]fluoranthene	ND		1.95	2.05		ug/L		105	62 - 131	16	27
Benzo[g,h,i]perylene	ND		1.95	2.10		ug/L		107	65 - 125	13	25
Benzo[k]fluoranthene	ND		1.95	2.01		ug/L		103	57 - 128	16	26

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid	ND		3.90	ND		ug/L		45	20 - 120	3	35
Benzyl alcohol	ND		1.95	ND		ug/L		73	20 - 150	6	35
Bis(2-chloroethoxy)methane	ND		1.95	1.60		ug/L		82	53 - 120	1	27
Bis(2-chloroethyl)ether	ND		1.95	1.66		ug/L		85	47 - 120	0	35
Bis(2-ethylhexyl) phthalate	ND		1.95	ND		ug/L		NC	20 - 150	NC	35
bis(chloroisopropyl) ether	ND		1.95	1.58		ug/L		81	32 - 142	4	33
Butyl benzyl phthalate	ND		1.95	ND		ug/L		128	55 - 150	21	35
Carbazole	ND	* F2 F1	1.95	3.84	F1 F2	ug/L		197	67 - 135	21	20
Chrysene	ND		1.95	1.98		ug/L		102	57 - 126	19	26
Dibenz(a,h)anthracene	ND		1.95	1.91		ug/L		98	62 - 131	5	28
Dibenzofuran	ND		1.95	1.75		ug/L		90	60 - 120	3	35
Diethyl phthalate	ND		1.95	ND		ug/L		105	55 - 135	11	35
Dimethyl phthalate	ND		1.95	2.02		ug/L		104	64 - 128	14	24
Di-n-butyl phthalate	ND		1.95	ND		ug/L		123	57 - 136	18	20
Di-n-octyl phthalate	ND		1.95	2.11		ug/L		108	51 - 150	13	26
Fluoranthene	ND		1.95	ND		ug/L		109	64 - 128	18	20
Fluorene	ND		1.95	ND		ug/L		94	64 - 120	7	28
Hexachlorobenzene	ND	*	1.95	1.76		ug/L		90	50 - 120	13	26
Hexachlorobutadiene	ND	*	1.95	1.47		ug/L		75	21 - 120	1	35
Hexachlorocyclopentadiene	ND	*	1.95	ND		ug/L		33	20 - 120	14	35
Hexachloroethane	ND	*	1.95	1.53		ug/L		78	30 - 120	6	35
Indeno[1,2,3-cd]pyrene	ND		1.95	2.00		ug/L		102	55 - 148	14	20
Isophorone	ND		1.95	1.76		ug/L		90	56 - 125	3	20
Naphthalene	ND		1.95	1.64		ug/L		84	63 - 120	3	34
Nitrobenzene	ND		1.95	1.70		ug/L		87	45 - 139	4	33
N-Nitrosodi-n-propylamine	ND		1.95	1.59		ug/L		82	46 - 120	3	28
N-Nitrosodiphenylamine	ND	*	1.95	ND		ug/L		82	33 - 120	26	35
Pentachlorophenol	ND	F1 *	3.90	ND	F1	ug/L		0	20 - 135	NC	35
Phenanthrene	ND		1.95	1.91		ug/L		98	63 - 120	16	20
Phenol	ND		1.95	ND		ug/L		87	41 - 120	9	35
Pyrene	ND		1.95	2.14		ug/L		109	64 - 120	19	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*93*		*48 - 125*
2-Fluorobiphenyl	*80*		*50 - 120*
2-Fluorophenol (Surr)	*75*		*36 - 120*
Nitrobenzene-d5 (Surr)	*82*		*46 - 129*
Phenol-d5 (Surr)	*84*		*38 - 120*
Terphenyl-d14 (Surr)	*104*		*61 - 126*

Lab Sample ID: MB 580-319850/1-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,2-Dichlorobenzene	ND		0.60		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,3-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-319850/1-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
Anthracene	ND		15		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachlorobutadiene	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachloroethane	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Pentachlorophenol	ND		10		ug/L		12/30/19 13:18	01/03/20 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*48 - 125*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorobiphenyl	*94*		*50 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Nitrobenzene-d5 (Surr)	*67*		*46 - 129*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Phenol-d5 (Surr)	*87*		*38 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Terphenyl-d14 (Surr)	*94*		*61 - 126*	*12/30/19 13:18*	*01/03/20 15:46*	*1*

Lab Sample ID: LCS 580-319850/2-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,4-Trichlorobenzene			2.00	1.69		ug/L		85	46 - 120		
1,2-Dichlorobenzene			2.00	1.80		ug/L		90	44 - 120		
1,3-Dichlorobenzene			2.00	1.76		ug/L		88	36 - 120		
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 120		
Hexachlorobutadiene			2.00	1.63		ug/L		82	21 - 120		
Hexachloroethane			2.00	1.74		ug/L		87	30 - 120		
Pentachlorophenol			4.00	ND		ug/L		30	20 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*48 - 125*
2-Fluorobiphenyl	*92*		*50 - 120*
2-Fluorophenol (Surr)	*89*		*36 - 120*
Nitrobenzene-d5 (Surr)	*94*		*46 - 129*
Phenol-d5 (Surr)	*90*		*38 - 120*
Terphenyl-d14 (Surr)	*91*		*61 - 126*

Lab Sample ID: LCSD 580-319850/3-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.81		ug/L		90	46 - 120	7	35
1,2-Dichlorobenzene			2.00	1.84		ug/L		92	44 - 120	2	35
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	36 - 120	4	35
1,4-Dichlorobenzene			2.00	1.84		ug/L		92	40 - 120	3	35
Hexachlorobutadiene			2.00	1.85		ug/L		92	21 - 120	12	35
Hexachloroethane			2.00	1.87		ug/L		94	30 - 120	7	35
Pentachlorophenol			4.00	ND	*	ug/L		44	20 - 135	37	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-319850/3-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319850

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	91		48 - 125
2-Fluorobiphenyl	89		50 - 120
2-Fluorophenol (Surr)	87		36 - 120
Nitrobenzene-d5 (Surr)	92		46 - 129
Phenol-d5 (Surr)	95		38 - 120
Terphenyl-d14 (Surr)	100		61 - 126

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-343665/1-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 343665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
3-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitroglycerin	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1
PETN	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	82		79 - 111	12/06/19 12:05	12/26/19 05:59	1

Lab Sample ID: LCS 320-343665/2-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.936		ug/L		94	74 - 120
1,3-Dinitrobenzene	1.00	0.977		ug/L		98	72 - 123
2,4,6-Trinitrotoluene	1.00	0.849		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.929		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.924		ug/L		92	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.01		ug/L		101	77 - 123
2-Nitrotoluene	1.00	0.849		ug/L		85	64 - 120
3-Nitrotoluene	1.00	0.928		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.920		ug/L		92	67 - 115

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-343665/2-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Amino-2,6-dinitrotoluene	1.00	0.913		ug/L		91	68 - 113
HMX	1.00	1.06		ug/L		106	67 - 115
RDX	1.00	1.08		ug/L		108	68 - 122
Nitrobenzene	1.00	0.978		ug/L		98	69 - 119
Tetryl	1.00	0.856		ug/L		86	66 - 105
Nitroglycerin	5.00	4.57		ug/L		91	85 - 115
PETN	5.00	4.37		ug/L		87	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*84*		*79 - 111*

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 347605

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	ND		1.05	1.00		ug/L		96	74 - 120
1,3-Dinitrobenzene	ND		1.05	1.07		ug/L		102	72 - 123
2,4,6-Trinitrotoluene	ND		1.05	0.923		ug/L		88	69 - 111
2,4-Dinitrotoluene	ND		1.05	1.03		ug/L		98	70 - 119
2,6-Dinitrotoluene	ND		1.05	1.02		ug/L		97	71 - 119
2-Amino-4,6-dinitrotoluene	ND		1.05	1.13		ug/L		108	77 - 123
2-Nitrotoluene	ND		1.05	0.973		ug/L		93	64 - 120
3-Nitrotoluene	ND		1.05	0.994		ug/L		95	67 - 114
4-Nitrotoluene	ND		1.05	1.00		ug/L		96	67 - 115
4-Amino-2,6-dinitrotoluene	ND		1.05	0.990		ug/L		95	68 - 113
HMX	ND		1.05	1.13		ug/L		108	67 - 115
RDX	ND		1.05	1.15		ug/L		110	68 - 122
Nitrobenzene	ND		1.05	1.07		ug/L		102	69 - 119
Tetryl	ND		1.05	0.930		ug/L		89	66 - 105
Nitroglycerin	ND		5.23	4.92		ug/L		94	85 - 115
PETN	ND		5.23	4.86		ug/L		93	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 347605

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.06	0.976		ug/L		92	74 - 120	2	29
1,3-Dinitrobenzene	ND		1.06	1.01		ug/L		95	72 - 123	6	29
2,4,6-Trinitrotoluene	ND		1.06	0.885		ug/L		83	69 - 111	4	28
2,4-Dinitrotoluene	ND		1.06	0.976		ug/L		92	70 - 119	5	30
2,6-Dinitrotoluene	ND		1.06	0.951		ug/L		89	71 - 119	7	29
2-Amino-4,6-dinitrotoluene	ND		1.06	1.10		ug/L		103	77 - 123	3	27
2-Nitrotoluene	ND		1.06	0.919		ug/L		86	64 - 120	6	36

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 347605

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 343665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3-Nitrotoluene	ND		1.06	0.944		ug/L		89	67 - 114	5	31
4-Nitrotoluene	ND		1.06	0.923		ug/L		87	67 - 115	8	32
4-Amino-2,6-dinitrotoluene	ND		1.06	0.951		ug/L		89	68 - 113	4	30
HMX	ND		1.06	1.09		ug/L		102	67 - 115	3	32
RDX	ND		1.06	1.12		ug/L		105	68 - 122	3	32
Nitrobenzene	ND		1.06	0.991		ug/L		93	69 - 119	7	31
Tetryl	ND		1.06	0.885		ug/L		83	66 - 105	5	26
Nitroglycerin	ND		5.32	4.96		ug/L		93	85 - 115	1	15
PETN	ND		5.32	4.84		ug/L		91	84 - 117	0	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*86*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-318385/10-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Chromium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:04	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:04	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:04	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:04	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:04	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-318385/11-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.00		mg/L		100	80 - 120
Antimony	1.00	1.00		mg/L		100	80 - 120
Beryllium	1.00	0.982		mg/L		98	80 - 120
Cadmium	1.00	1.01		mg/L		101	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Copper	1.00	1.06		mg/L		106	80 - 120
Lead	1.00	1.01		mg/L		101	80 - 120
Nickel	1.00	1.05		mg/L		105	80 - 120
Selenium	1.00	0.980		mg/L		98	80 - 120
Silver	1.00	1.02		mg/L		102	80 - 120
Thallium	1.00	0.971		mg/L		97	80 - 120
Zinc	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: LCSD 580-318385/12-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.00		mg/L		100	80 - 120	0	20
Antimony	1.00	0.999		mg/L		100	80 - 120	0	20
Beryllium	1.00	0.985		mg/L		99	80 - 120	0	20
Cadmium	1.00	1.02		mg/L		102	80 - 120	1	20
Chromium	1.00	1.03		mg/L		103	80 - 120	2	20
Copper	1.00	1.04		mg/L		104	80 - 120	1	20
Lead	1.00	1.01		mg/L		101	80 - 120	0	20
Nickel	1.00	1.03		mg/L		103	80 - 120	2	20
Selenium	1.00	1.00		mg/L		100	80 - 120	2	20
Silver	1.00	1.02		mg/L		102	80 - 120	0	20
Thallium	1.00	0.974		mg/L		97	80 - 120	0	20
Zinc	1.00	1.03		mg/L		103	80 - 120	2	20

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318532

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.06		mg/L		106	80 - 120
Antimony	ND		1.00	1.10		mg/L		110	80 - 120
Beryllium	ND		1.00	1.04		mg/L		104	80 - 120
Cadmium	ND		1.00	1.08		mg/L		108	80 - 120
Chromium	0.00051		1.00	1.08		mg/L		108	80 - 120
Copper	ND		1.00	1.10		mg/L		110	80 - 120
Lead	ND		1.00	1.07		mg/L		107	80 - 120
Nickel	ND		1.00	1.11		mg/L		111	80 - 120
Selenium	ND		1.00	1.04		mg/L		104	80 - 120
Silver	ND		1.00	1.02		mg/L		102	80 - 120
Thallium	ND		1.00	1.18		mg/L		118	80 - 120
Zinc	ND		1.00	1.04		mg/L		103	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318532

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.02		mg/L		102	80 - 120	4	20
Antimony	ND		1.00	1.07		mg/L		107	80 - 120	3	20
Beryllium	ND		1.00	1.01		mg/L		101	80 - 120	3	20
Cadmium	ND		1.00	1.01		mg/L		101	80 - 120	7	20
Chromium	0.00051		1.00	1.04		mg/L		104	80 - 120	4	20
Copper	ND		1.00	1.06		mg/L		106	80 - 120	4	20
Lead	ND		1.00	1.03		mg/L		103	80 - 120	4	20
Nickel	ND		1.00	1.06		mg/L		106	80 - 120	5	20
Selenium	ND		1.00	0.978		mg/L		98	80 - 120	6	20
Silver	ND		1.00	1.02		mg/L		102	80 - 120	0	20
Thallium	ND		1.00	1.16		mg/L		116	80 - 120	2	20
Zinc	ND		1.00	1.03		mg/L		103	80 - 120	1	20

Lab Sample ID: 580-91195-1 DU
Matrix: Water
Analysis Batch: 318532

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	ND			ND		mg/L				NC	20
Antimony	ND			ND		mg/L				NC	20
Beryllium	ND			ND		mg/L				NC	20
Cadmium	ND			ND		mg/L				NC	20
Chromium	0.00051			0.000631	F5	mg/L				21	20
Copper	ND			ND		mg/L				NC	20
Lead	ND			ND		mg/L				NC	20
Nickel	ND			ND		mg/L				NC	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Thallium	ND			ND		mg/L				NC	20
Zinc	ND			ND		mg/L				NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-318467/17-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:18	12/09/19 13:55	1

Lab Sample ID: LCS 580-318467/18-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318467

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00212		mg/L		106	80 - 120		

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-318467/19-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318502
Prep Batch: 318467

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00210		mg/L		105	80 - 120	1	20

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318502
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00200	0.00207		mg/L		104	80 - 120		

Lab Sample ID: 580-91195-1 MSD
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318502
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00215		mg/L		108	80 - 120	4	20

Lab Sample ID: 580-91195-1 DU
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318502
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/06/19 03:04	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 15:24	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:07	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 09:34	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:13	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:06	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:02	A1B	TAL SEA

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2
Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 21:46	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 16:34	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:31	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 13:08	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:26	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:39	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:11	A1B	TAL SEA

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3
Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 22:13	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 16:58	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:54	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 15:49	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:39	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:42	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:13	A1B	TAL SEA

Client Sample ID: TB120319
Lab Sample ID: 580-91195-4

Date Collected: 12/03/19 00:01
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 20:27	DCV	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91195-1	04Q19LCMW04DW	Water	12/03/19 11:00	12/04/19 13:05	
580-91195-2	04Q19LCMW04SW	Water	12/03/19 12:20	12/04/19 13:05	
580-91195-3	04Q19LCMW140W	Water	12/03/19 12:00	12/04/19 13:05	
580-91195-4	TB120319	Water	12/03/19 00:01	12/04/19 13:05	

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

53) 922-5047

Sampler: Matt Randall & Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
en			Job #:
mental			

Due Date Requested:

TAT Requested (days):

PO #: Purchase Order not required

WO #:

Scott.Braunsten@pbsusa.com

Project #: 58011152

SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate - 6850	8260C_TL Full List Explosives 8330	8330A Nitroaromatics and Nitramines SVOCs	Total RP Metals 6020/7470A VOCs 8260B		Total Number of containers	Special Instructions/Note:
Preservation Code:												
12/3/19	1100	G	W	Y	Y	X	X	X	X	X	20	
	1220	G		Y							9	
	1200	G		Y							9	
	-									X	3	

580-91195 Chain of Custody

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements: 4.1, 3.4

on
nable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological
I, IV, Other (specify) Data Package III

Date: Time: Method of Shipment:

	Date/Time: 12/3/19 1700	Company PBS	Received by:	Date/Time: 12/4/19 1230	Company M.E.
	Date/Time: 12/4/19 1305	Company M.E.	Received by:	Date/Time: 12/4/19 1305	Company TAPOR
	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.1, 3.4

Ver: 08/04/2016

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12/7/2020

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt Randall + Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				Other:
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate - 6850	8330 Explosives Full List	8330 Nitroaromatics and Nitramines	SVOCs	Total PP Metals 6020/7470A	VOCs 8260B	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X							X	
01Q19LCMW04DW	12/3/19	1100	G	W	Y	Y	X	X	X	X	X		20	
01Q19LCMW04SW		1220	G		Y								9	
01Q19LCMW14DW		1200	G		Y								9	
TB120319		–										X	3	

580-91195 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Data Package III	Special Instructions/QC Requirements: 4.1, 3.4
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/3/19 1700	PBS		12/4/19 1230	M.E.
2		12/4/19 1305	M.E.		12/4/19 1305	TAPOR
3		12/4/19 1700	TAPOR		12/5/19 0930	TASea

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.1, 3.4 T=3.1/3.4

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72801.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91195-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/20/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B/8330_SPE_P_IWWT (MOD) Explosives, Standard List	6850/Filtration_14D Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19LCMW04DW (580-91195-1)	12/3/19	11:00 Pacific		Water			X	X	3	
04Q19LCMW04DW (580-91195-1MS)	12/3/19	11:00 Pacific	MS	Water			X		2	
04Q19LCMW04DW (580-91195-1MSD)	12/3/19	11:00 Pacific	MSD	Water			X		2	
04Q19LCMW04SW (580-91195-2)	12/3/19	12:20 Pacific		Water			X	X	3	
04Q19LCMW140W (580-91195-3)	12/3/19	12:00 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	12/4/19 1700	TAPOR		12/5/19 980	ESTA SEC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.: 619522	Cooler Temperature(s) °C and Other Remarks: 2.3 cor 3.1

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 1
Creator: Antonson, Angeline D

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 2
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/05/19 05:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619522
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	OBS 3.5 CORR 3.3C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 3
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/05/19 06:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619522
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	OBS 3.5 CORR 3.3C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento
Sample Receiving Notes

580-91195 Field Sheet

Tracking # : 1250 7882 7285

Job: ___

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other ___

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Notes: ___

Therm. ID: AK5 Corr. Factor: (+ / -) 0.2 °C

Ice ✓ Wet ✓ Gel ___ Other ___

Cooler Custody Seal: 619522

Cooler ID: —

Temp Observed: 3.5 °C Corrected: 3.3 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: SG Date: 12/5/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JG Date: 12/5/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WR1-K / W9-A

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91219-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
1/7/2020 4:00:42 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91219-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-91219-1

Comments
No additional comments.

Receipt
The samples were received on 12/5/2019 12:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.1º C, 1.4º C and 1.9º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The continuing calibration verification (CCV) associated with batch 580-318784 recovered above the upper control limit for 3,3'-Dichlorobenzidine, 4-Nitroaniline and Carbazole . The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW09SW (580-91219-1), 04Q19LCMW09DW (580-91219-2), 04Q19LCMW01SW (580-91219-3), 04Q19LCMW01DW (580-91219-4), 04Q19LCMW02SW (580-91219-5), 04Q19LCMW02DW (580-91219-6) and (CCVIS 580-318784/3).

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-318784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270D: (CCVIS 580-318784/3) recovers outside drift criteria for Pentachlorophenol. This compound has been demonstrated by the laboratory to exhibit poor and/or erratic performance; it is classified as a poor performing compound. Results for this analyte have been qualified and reported. Re-extraction of samples associated with 580-318500 present concurring results for this analyte; two sets of data are reported.

Method 8270D: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analyte: Carbazole. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analytes: 2,4-Dimethylphenol, 4-Nitroaniline and Hexachlorobenzene .

Method 8270D: (LCS 580-318500/2-A) and (LCSD 580-318500/3-A) recover outside control and precision limits for several analytes. Affected client samples were re-extracted outside of holding time with better LCS/LCSD results. For the affected analytes, two sets of data are reported.

Method 8270D: 04Q19LCMW09SW (580-91219-1), 04Q19LCMW09DW (580-91219-2), 04Q19LCMW01SW (580-91219-3), 04Q19LCMW01DW (580-91219-4), 04Q19LCMW02SW (580-91219-5), 04Q19LCMW02DW (580-91219-6), (LCS 580-319850/2-A) and (LCSD 580-319850/3-A) are associated with 580-319850 which was re-extracted outside of holding time due to quality control failures in the initial extraction. For well-performing analytes which failed recovery criteria in the LCS/LCSD of the initial extraction, two sets of data are reported.

Pentachlorophenol, a poor-performing compound, passed recovery but failed precision criteria in the LCS/LCSD of the re-extracted batch. Two sets of data for this poor-performing analyte are reported. For other poor performers which failed in the initial extraction, no noticeable improvement was found in the re-extraction batch. The in-hold set of data is reported for these compounds.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with

Job ID: 580-91219-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

8330B aqueous in preparation batch 320-344204.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

LCMS
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW09SW
Date Collected: 12/04/19 10:00
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 13:33	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 13:33	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 13:33	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 13:33	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 13:33	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 13:33	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 13:33	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 13:33	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 13:33	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 13:33	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 13:33	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 13:33	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:33	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 13:33	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 13:33	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 13:33	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:33	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 13:33	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:33	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 13:33	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 13:33	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 13:33	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 13:33	1
Benzene	ND		0.20		ug/L			12/09/19 13:33	1
Bromobenzene	ND		0.20		ug/L			12/09/19 13:33	1
Bromoform	ND		0.50		ug/L			12/09/19 13:33	1
Bromomethane	ND		0.50		ug/L			12/09/19 13:33	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 13:33	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 13:33	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 13:33	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 13:33	1
Chloroethane	ND		0.50		ug/L			12/09/19 13:33	1
Chloroform	ND		0.20		ug/L			12/09/19 13:33	1
Chloromethane	ND		0.50		ug/L			12/09/19 13:33	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:33	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:33	1
Dibromomethane	ND		0.20		ug/L			12/09/19 13:33	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 13:33	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 13:33	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 13:33	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 13:33	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 13:33	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 13:33	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 13:33	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 13:33	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 13:33	1
Naphthalene	ND		1.0		ug/L			12/09/19 13:33	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 13:33	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 13:33	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW09SW
Date Collected: 12/04/19 10:00
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 13:33	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 13:33	1
Styrene	ND		0.50		ug/L			12/09/19 13:33	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 13:33	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 13:33	1
Toluene	ND		0.20		ug/L			12/09/19 13:33	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:33	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:33	1
Trichloroethene	ND		0.20		ug/L			12/09/19 13:33	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 13:33	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/09/19 13:33*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/09/19 13:33*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 13:33*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 13:33*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*12/09/19 13:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 19:41	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 19:41	1
1,2-Dichlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 19:41	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 19:41	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4,6-Trichlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4-Dimethylphenol	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
2,6-Dinitrotoluene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Chlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Nitroaniline	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 13:04	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 13:04	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 13:04	1
4-Bromophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
4-Chloro-3-methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 13:04	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW09SW
Lab Sample ID: 580-91219-1
Date Collected: 12/04/19 10:00
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 13:04	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:04	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Bis(2-chloroethoxy)methane	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Bis(2-chloroethyl)ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 13:04	1
bis(chloroisopropyl) ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 13:04	1
Carbazole	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Chrysene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Dibenz(a,h)anthracene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
Diethyl phthalate	ND		11		ug/L		12/09/19 14:43	12/13/19 13:04	1
Dimethyl phthalate	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Hexachlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 19:41	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 19:41	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:04	1
Nitrobenzene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
N-Nitrosodi-n-propylamine	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:04	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 19:41	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:04	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 19:41	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 13:04	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:04	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:04	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*67*		*48 - 125*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
2,4,6-Tribromophenol (Surr)	*65*		*48 - 125*	*12/09/19 14:43*	*12/13/19 13:04*	*1*

Client Sample ID: 04Q19LCMW09SW
Lab Sample ID: 580-91219-1
Date Collected: 12/04/19 10:00
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*50 - 120*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
2-Fluorobiphenyl	*90*		*50 - 120*	*12/09/19 14:43*	*12/13/19 13:04*	*1*
2-Fluorophenol (Surr)	*78*		*36 - 120*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
2-Fluorophenol (Surr)	*55*		*36 - 120*	*12/09/19 14:43*	*12/13/19 13:04*	*1*
Nitrobenzene-d5 (Surr)	*77*		*46 - 129*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
Nitrobenzene-d5 (Surr)	*87*		*46 - 129*	*12/09/19 14:43*	*12/13/19 13:04*	*1*
Phenol-d5 (Surr)	*82*		*38 - 120*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
Phenol-d5 (Surr)	*57*		*38 - 120*	*12/09/19 14:43*	*12/13/19 13:04*	*1*
Terphenyl-d14 (Surr)	*95*		*61 - 126*	*12/30/19 13:18*	*01/03/20 19:41*	*1*
Terphenyl-d14 (Surr)	*101*		*61 - 126*	*12/09/19 14:43*	*12/13/19 13:04*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/26/19 20:17	1
2-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 20:17	1
3-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 20:17	1
4-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 20:17	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
HMX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
RDX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
Nitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
Tetryl	ND		0.10		ug/L		12/09/19 11:47	12/26/19 20:17	1
Nitroglycerin	ND		0.68		ug/L		12/09/19 11:47	12/26/19 20:17	1
PETN	ND		0.68		ug/L		12/09/19 11:47	12/26/19 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/09/19 11:47*	*12/26/19 20:17*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 15:20	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:07	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:07	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:07	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:07	1
Chromium	**0.00056**		0.00040		mg/L		12/09/19 15:04	12/10/19 14:07	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 14:07	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 14:07	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 14:07	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 14:07	1
Silver	**0.00054**		0.00040		mg/L		12/09/19 15:04	12/10/19 14:07	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:07	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW09SW
Lab Sample ID: 580-91219-1
Date Collected: 12/04/19 10:00
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 14:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:15	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW09DW
Date Collected: 12/04/19 10:50
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 14:00	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 14:00	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 14:00	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 14:00	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 14:00	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 14:00	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 14:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 14:00	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 14:00	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 14:00	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 14:00	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 14:00	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:00	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 14:00	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 14:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 14:00	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:00	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 14:00	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:00	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 14:00	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 14:00	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 14:00	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 14:00	1
Benzene	ND		0.20		ug/L			12/09/19 14:00	1
Bromobenzene	ND		0.20		ug/L			12/09/19 14:00	1
Bromoform	ND		0.50		ug/L			12/09/19 14:00	1
Bromomethane	ND		0.50		ug/L			12/09/19 14:00	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 14:00	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 14:00	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 14:00	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 14:00	1
Chloroethane	ND		0.50		ug/L			12/09/19 14:00	1
Chloroform	ND		0.20		ug/L			12/09/19 14:00	1
Chloromethane	ND		0.50		ug/L			12/09/19 14:00	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:00	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:00	1
Dibromomethane	ND		0.20		ug/L			12/09/19 14:00	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 14:00	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 14:00	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 14:00	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 14:00	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 14:00	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 14:00	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 14:00	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 14:00	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 14:00	1
Naphthalene	ND		1.0		ug/L			12/09/19 14:00	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 14:00	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 14:00	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW09DW
Date Collected: 12/04/19 10:50
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 14:00	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 14:00	1
Styrene	ND		0.50		ug/L			12/09/19 14:00	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 14:00	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 14:00	1
Toluene	ND		0.20		ug/L			12/09/19 14:00	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:00	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:00	1
Trichloroethene	ND		0.20		ug/L			12/09/19 14:00	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 14:00	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/09/19 14:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 14:00*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/09/19 14:00*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*12/09/19 14:00*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*12/09/19 14:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:05	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 20:05	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:05	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:05	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4-Dimethylphenol	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 13:28	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 13:28	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 13:28	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 13:28	1

Client Sample ID: 04Q19LCMW09DW
Lab Sample ID: 580-91219-2
Date Collected: 12/04/19 10:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 13:28	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:28	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 13:28	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 13:28	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 13:28	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:05	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:05	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:28	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 13:28	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 20:05	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:28	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 20:05	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 13:28	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 13:28	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:28	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*73*		*48 - 125*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
2,4,6-Tribromophenol (Surr)	*69*		*48 - 125*	*12/09/19 14:43*	*12/13/19 13:28*	*1*

Client Sample ID: 04Q19LCMW09DW
Lab Sample ID: 580-91219-2

Date Collected: 12/04/19 10:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*50 - 120*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
2-Fluorobiphenyl	*104*		*50 - 120*	*12/09/19 14:43*	*12/13/19 13:28*	*1*
2-Fluorophenol (Surr)	*86*		*36 - 120*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/09/19 14:43*	*12/13/19 13:28*	*1*
Nitrobenzene-d5 (Surr)	*90*		*46 - 129*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
Nitrobenzene-d5 (Surr)	*92*		*46 - 129*	*12/09/19 14:43*	*12/13/19 13:28*	*1*
Phenol-d5 (Surr)	*90*		*38 - 120*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
Phenol-d5 (Surr)	*88*		*38 - 120*	*12/09/19 14:43*	*12/13/19 13:28*	*1*
Terphenyl-d14 (Surr)	*101*		*61 - 126*	*12/30/19 13:18*	*01/03/20 20:05*	*1*
Terphenyl-d14 (Surr)	*108*		*61 - 126*	*12/09/19 14:43*	*12/13/19 13:28*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/26/19 21:11	1
2-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 21:11	1
3-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 21:11	1
4-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 21:11	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
HMX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
RDX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
Nitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
Tetryl	ND		0.10		ug/L		12/09/19 11:47	12/26/19 21:11	1
Nitroglycerin	ND		0.67		ug/L		12/09/19 11:47	12/26/19 21:11	1
PETN	ND		0.67		ug/L		12/09/19 11:47	12/26/19 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/09/19 11:47*	*12/26/19 21:11*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 15:33	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 13:38	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:38	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:38	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:38	1
Chromium	**0.00052**		0.00040		mg/L		12/09/19 15:04	12/10/19 13:38	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 13:38	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 13:38	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 13:38	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 13:38	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:38	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 13:38	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW09DW
Lab Sample ID: 580-91219-2
Date Collected: 12/04/19 10:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	0.0080		0.0070		mg/L		12/09/19 15:04	12/10/19 13:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:22	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW01SW
Date Collected: 12/04/19 11:50
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 14:26	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 14:26	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 14:26	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 14:26	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 14:26	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 14:26	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 14:26	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 14:26	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 14:26	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 14:26	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 14:26	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 14:26	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:26	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 14:26	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 14:26	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 14:26	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:26	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 14:26	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:26	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 14:26	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 14:26	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 14:26	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 14:26	1
Benzene	ND		0.20		ug/L			12/09/19 14:26	1
Bromobenzene	ND		0.20		ug/L			12/09/19 14:26	1
Bromoform	ND		0.50		ug/L			12/09/19 14:26	1
Bromomethane	ND		0.50		ug/L			12/09/19 14:26	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 14:26	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 14:26	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 14:26	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 14:26	1
Chloroethane	ND		0.50		ug/L			12/09/19 14:26	1
Chloroform	ND		0.20		ug/L			12/09/19 14:26	1
Chloromethane	ND		0.50		ug/L			12/09/19 14:26	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:26	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:26	1
Dibromomethane	ND		0.20		ug/L			12/09/19 14:26	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 14:26	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 14:26	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 14:26	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 14:26	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 14:26	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 14:26	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 14:26	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 14:26	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 14:26	1
Naphthalene	ND		1.0		ug/L			12/09/19 14:26	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 14:26	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 14:26	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW01SW
Lab Sample ID: 580-91219-3
Date Collected: 12/04/19 11:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 14:26	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 14:26	1
Styrene	ND		0.50		ug/L			12/09/19 14:26	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 14:26	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 14:26	1
Toluene	ND		0.20		ug/L			12/09/19 14:26	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:26	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:26	1
Trichloroethene	ND		0.20		ug/L			12/09/19 14:26	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 14:26	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/09/19 14:26*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/09/19 14:26*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/09/19 14:26*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 14:26*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/09/19 14:26*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:28	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 20:28	1
1,2-Dichlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:28	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:28	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
1-Methylnaphthalene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4,6-Trichlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4-Dimethylphenol	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,4-Dinitrotoluene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
2,6-Dinitrotoluene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Chloronaphthalene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Chlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Nitroaniline	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
2-Nitrophenol	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
3 & 4 Methylphenol	ND		0.76		ug/L		12/09/19 14:43	12/13/19 13:51	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 13:51	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
4,6-Dinitro-2-methylphenol	ND		9.5		ug/L		12/09/19 14:43	12/13/19 13:51	1
4-Bromophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
4-Chloro-3-methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
4-Chloroaniline	ND	*	9.5		ug/L		12/09/19 14:43	12/13/19 13:51	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW01SW
Date Collected: 12/04/19 11:50
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 13:51	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
Acenaphthylene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzo[a]anthracene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzo[a]pyrene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzo[b]fluoranthene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzo[g,h,i]perylene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzo[k]fluoranthene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:51	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Bis(2-chloroethoxy)methane	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Bis(2-chloroethyl)ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 13:51	1
bis(chloroisopropyl) ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Butyl benzyl phthalate	ND		9.5		ug/L		12/09/19 14:43	12/13/19 13:51	1
Carbazole	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Chrysene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Dibenz(a,h)anthracene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
Diethyl phthalate	ND		11		ug/L		12/09/19 14:43	12/13/19 13:51	1
Dimethyl phthalate	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Di-n-octyl phthalate	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Hexachlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:28	1
Hexachlorobutadiene	ND	*	0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:28	1
Hexachloroethane	ND	*	0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Indeno[1,2,3-cd]pyrene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 13:51	1
Nitrobenzene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
N-Nitrosodi-n-propylamine	ND		0.57		ug/L		12/09/19 14:43	12/13/19 13:51	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 20:28	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 13:51	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 20:28	1
Pentachlorophenol	ND	*	9.5		ug/L		12/09/19 14:43	12/13/19 13:51	1
Phenanthrene	ND		0.95		ug/L		12/09/19 14:43	12/13/19 13:51	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 13:51	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*73*		*48 - 125*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
2,4,6-Tribromophenol (Surr)	*78*		*48 - 125*	*12/09/19 14:43*	*12/13/19 13:51*	*1*

Client Sample ID: 04Q19LCMW01SW
Lab Sample ID: 580-91219-3

Date Collected: 12/04/19 11:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*50 - 120*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
2-Fluorobiphenyl	*105*		*50 - 120*	*12/09/19 14:43*	*12/13/19 13:51*	*1*
2-Fluorophenol (Surr)	*81*		*36 - 120*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
2-Fluorophenol (Surr)	*83*		*36 - 120*	*12/09/19 14:43*	*12/13/19 13:51*	*1*
Nitrobenzene-d5 (Surr)	*77*		*46 - 129*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
Nitrobenzene-d5 (Surr)	*90*		*46 - 129*	*12/09/19 14:43*	*12/13/19 13:51*	*1*
Phenol-d5 (Surr)	*83*		*38 - 120*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
Phenol-d5 (Surr)	*84*		*38 - 120*	*12/09/19 14:43*	*12/13/19 13:51*	*1*
Terphenyl-d14 (Surr)	*103*		*61 - 126*	*12/30/19 13:18*	*01/03/20 20:28*	*1*
Terphenyl-d14 (Surr)	*120*		*61 - 126*	*12/09/19 14:43*	*12/13/19 13:51*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/26/19 22:04	1
2-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 22:04	1
3-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 22:04	1
4-Nitrotoluene	ND		0.52		ug/L		12/09/19 11:47	12/26/19 22:04	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
HMX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
RDX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
Nitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
Tetryl	ND		0.10		ug/L		12/09/19 11:47	12/26/19 22:04	1
Nitroglycerin	ND		0.68		ug/L		12/09/19 11:47	12/26/19 22:04	1
PETN	ND		0.68		ug/L		12/09/19 11:47	12/26/19 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/09/19 11:47*	*12/26/19 22:04*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 15:46	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:10	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:10	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:10	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:10	1
Chromium	**0.00040**		0.00040		mg/L		12/09/19 15:04	12/10/19 14:10	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 14:10	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 14:10	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 14:10	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 14:10	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:10	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:10	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW01SW
Lab Sample ID: 580-91219-3
Date Collected: 12/04/19 11:50
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 14:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:24	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW01DW
Date Collected: 12/04/19 12:30
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 14:53	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 14:53	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 14:53	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 14:53	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 14:53	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 14:53	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 14:53	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 14:53	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 14:53	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 14:53	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 14:53	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 14:53	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:53	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 14:53	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 14:53	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 14:53	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:53	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 14:53	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 14:53	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 14:53	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 14:53	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 14:53	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 14:53	1
Benzene	ND		0.20		ug/L			12/09/19 14:53	1
Bromobenzene	ND		0.20		ug/L			12/09/19 14:53	1
Bromoform	ND		0.50		ug/L			12/09/19 14:53	1
Bromomethane	ND		0.50		ug/L			12/09/19 14:53	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 14:53	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 14:53	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 14:53	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 14:53	1
Chloroethane	ND		0.50		ug/L			12/09/19 14:53	1
Chloroform	ND		0.20		ug/L			12/09/19 14:53	1
Chloromethane	ND		0.50		ug/L			12/09/19 14:53	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:53	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:53	1
Dibromomethane	ND		0.20		ug/L			12/09/19 14:53	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 14:53	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 14:53	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 14:53	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 14:53	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 14:53	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 14:53	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 14:53	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 14:53	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 14:53	1
Naphthalene	ND		1.0		ug/L			12/09/19 14:53	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 14:53	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 14:53	1

Client Sample ID: 04Q19LCMW01DW
Lab Sample ID: 580-91219-4

Date Collected: 12/04/19 12:30
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 14:53	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 14:53	1
Styrene	ND		0.50		ug/L			12/09/19 14:53	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 14:53	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 14:53	1
Toluene	ND		0.20		ug/L			12/09/19 14:53	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 14:53	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 14:53	1
Trichloroethene	ND		0.20		ug/L			12/09/19 14:53	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 14:53	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*12/09/19 14:53*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/09/19 14:53*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/09/19 14:53*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/09/19 14:53*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/09/19 14:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:52	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 20:52	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:52	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 20:52	1
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
1-Methylnaphthalene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,4-Dinitrotoluene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Chloronaphthalene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
2-Nitrophenol	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 14:14	1
3,3'-Dichlorobenzidine	ND		15		ug/L		12/09/19 14:43	12/13/19 14:14	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
4,6-Dinitro-2-methylphenol	ND		9.7		ug/L		12/09/19 14:43	12/13/19 14:14	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
4-Chloroaniline	ND	*	9.7		ug/L		12/09/19 14:43	12/13/19 14:14	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW01DW
Date Collected: 12/04/19 12:30
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
4-Nitrophenol	ND		15		ug/L		12/09/19 14:43	12/13/19 14:14	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
Acenaphthylene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Anthracene	ND		15		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzo[a]anthracene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzo[a]pyrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzo[b]fluoranthene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzo[g,h,i]perylene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzo[k]fluoranthene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Bis(2-ethylhexyl) phthalate	ND		15		ug/L		12/09/19 14:43	12/13/19 14:14	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Butyl benzyl phthalate	ND		9.7		ug/L		12/09/19 14:43	12/13/19 14:14	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 14:14	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Di-n-octyl phthalate	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:52	1
Hexachlorobutadiene	ND	*	0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 20:52	1
Hexachloroethane	ND	*	0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Indeno[1,2,3-cd]pyrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:14	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:14	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 20:52	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 20:52	1
Pentachlorophenol	ND	*	9.7		ug/L		12/09/19 14:43	12/13/19 14:14	1
Phenanthrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:14	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:14	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*48 - 125*	*12/09/19 14:43*	*12/13/19 14:14*	*1*

Client Sample ID: 04Q19LCMW01DW
Lab Sample ID: 580-91219-4

Date Collected: 12/04/19 12:30
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*106*		*50 - 120*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
2-Fluorobiphenyl	*90*		*50 - 120*	*12/09/19 14:43*	*12/13/19 14:14*	*1*
2-Fluorophenol (Surr)	*88*		*36 - 120*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
2-Fluorophenol (Surr)	*64*		*36 - 120*	*12/09/19 14:43*	*12/13/19 14:14*	*1*
Nitrobenzene-d5 (Surr)	*99*		*46 - 129*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
Nitrobenzene-d5 (Surr)	*81*		*46 - 129*	*12/09/19 14:43*	*12/13/19 14:14*	*1*
Phenol-d5 (Surr)	*91*		*38 - 120*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
Phenol-d5 (Surr)	*64*		*38 - 120*	*12/09/19 14:43*	*12/13/19 14:14*	*1*
Terphenyl-d14 (Surr)	*109*		*61 - 126*	*12/30/19 13:18*	*01/03/20 20:52*	*1*
Terphenyl-d14 (Surr)	*106*		*61 - 126*	*12/09/19 14:43*	*12/13/19 14:14*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/27/19 00:45	1
2-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 00:45	1
3-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 00:45	1
4-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 00:45	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
HMX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
RDX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
Nitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
Tetryl	ND		0.11		ug/L		12/09/19 11:47	12/27/19 00:45	1
Nitroglycerin	ND		0.69		ug/L		12/09/19 11:47	12/27/19 00:45	1
PETN	ND		0.69		ug/L		12/09/19 11:47	12/27/19 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*81*		*79 - 111*	*12/09/19 11:47*	*12/27/19 00:45*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 16:00	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:12	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:12	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:12	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:12	1
Chromium	**0.00044**		0.00040		mg/L		12/09/19 15:04	12/10/19 14:12	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 14:12	1
Lead	**0.020**		0.00080		mg/L		12/09/19 15:04	12/10/19 14:12	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 14:12	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 14:12	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:12	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:12	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW01DW
Lab Sample ID: 580-91219-4
Date Collected: 12/04/19 12:30
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 14:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:27	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW02SW
Date Collected: 12/04/19 13:40
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 15:19	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 15:19	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 15:19	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 15:19	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 15:19	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 15:19	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 15:19	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 15:19	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 15:19	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 15:19	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 15:19	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 15:19	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:19	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 15:19	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 15:19	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 15:19	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:19	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 15:19	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:19	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 15:19	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 15:19	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 15:19	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 15:19	1
Benzene	ND		0.20		ug/L			12/09/19 15:19	1
Bromobenzene	ND		0.20		ug/L			12/09/19 15:19	1
Bromoform	ND		0.50		ug/L			12/09/19 15:19	1
Bromomethane	ND		0.50		ug/L			12/09/19 15:19	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 15:19	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 15:19	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 15:19	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 15:19	1
Chloroethane	ND		0.50		ug/L			12/09/19 15:19	1
Chloroform	ND		0.20		ug/L			12/09/19 15:19	1
Chloromethane	ND		0.50		ug/L			12/09/19 15:19	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 15:19	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 15:19	1
Dibromomethane	ND		0.20		ug/L			12/09/19 15:19	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 15:19	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 15:19	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 15:19	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 15:19	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 15:19	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 15:19	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 15:19	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 15:19	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 15:19	1
Naphthalene	ND		1.0		ug/L			12/09/19 15:19	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 15:19	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 15:19	1

Client Sample ID: 04Q19LCMW02SW
Lab Sample ID: 580-91219-5
Date Collected: 12/04/19 13:40
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 15:19	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 15:19	1
Styrene	ND		0.50		ug/L			12/09/19 15:19	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 15:19	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 15:19	1
Toluene	ND		0.20		ug/L			12/09/19 15:19	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 15:19	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 15:19	1
Trichloroethene	ND		0.20		ug/L			12/09/19 15:19	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 15:19	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*12/09/19 15:19*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 15:19*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/09/19 15:19*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/09/19 15:19*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/09/19 15:19*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 21:15	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 21:15	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
1,3-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 21:15	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
1,4-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 21:15	1
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
1-Methylnaphthalene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,4-Dinitrotoluene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Chloronaphthalene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
2-Nitrophenol	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 14:37	1
3,3'-Dichlorobenzidine	ND		15		ug/L		12/09/19 14:43	12/13/19 14:37	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
4,6-Dinitro-2-methylphenol	ND		9.7		ug/L		12/09/19 14:43	12/13/19 14:37	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
4-Chloroaniline	ND	*	9.7		ug/L		12/09/19 14:43	12/13/19 14:37	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW02SW
Date Collected: 12/04/19 13:40
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
4-Nitrophenol	ND		15		ug/L		12/09/19 14:43	12/13/19 14:37	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
Acenaphthylene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Anthracene	ND		15		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzo[a]anthracene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzo[a]pyrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzo[b]fluoranthene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzo[g,h,i]perylene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzo[k]fluoranthene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Bis(2-ethylhexyl) phthalate	ND		15		ug/L		12/09/19 14:43	12/13/19 14:37	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Butyl benzyl phthalate	ND		9.7		ug/L		12/09/19 14:43	12/13/19 14:37	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 14:37	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Di-n-octyl phthalate	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
Hexachlorobutadiene	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 21:15	1
Hexachlorobutadiene	ND	*	0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Hexachloroethane	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 21:15	1
Hexachloroethane	ND	*	0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Indeno[1,2,3-cd]pyrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 14:37	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 14:37	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 21:15	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Pentachlorophenol	ND	H *	9.6		ug/L		12/30/19 13:18	01/03/20 21:15	1
Pentachlorophenol	ND	*	9.7		ug/L		12/09/19 14:43	12/13/19 14:37	1
Phenanthrene	ND		0.97		ug/L		12/09/19 14:43	12/13/19 14:37	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 14:37	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*	*12/09/19 14:43*	*12/13/19 14:37*	*1*

Client Sample ID: 04Q19LCMW02SW
Lab Sample ID: 580-91219-5

Date Collected: 12/04/19 13:40
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*50 - 120*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
2-Fluorobiphenyl	*103*		*50 - 120*	*12/09/19 14:43*	*12/13/19 14:37*	*1*
2-Fluorophenol (Surr)	*89*		*36 - 120*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/09/19 14:43*	*12/13/19 14:37*	*1*
Nitrobenzene-d5 (Surr)	*96*		*46 - 129*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
Nitrobenzene-d5 (Surr)	*83*		*46 - 129*	*12/09/19 14:43*	*12/13/19 14:37*	*1*
Phenol-d5 (Surr)	*93*		*38 - 120*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
Phenol-d5 (Surr)	*86*		*38 - 120*	*12/09/19 14:43*	*12/13/19 14:37*	*1*
Terphenyl-d14 (Surr)	*107*		*61 - 126*	*12/30/19 13:18*	*01/03/20 21:15*	*1*
Terphenyl-d14 (Surr)	*115*		*61 - 126*	*12/09/19 14:43*	*12/13/19 14:37*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/27/19 01:39	1
2-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 01:39	1
3-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 01:39	1
4-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 01:39	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
HMX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
RDX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
Nitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
Tetryl	ND		0.11		ug/L		12/09/19 11:47	12/27/19 01:39	1
Nitroglycerin	ND		0.69		ug/L		12/09/19 11:47	12/27/19 01:39	1
PETN	ND		0.69		ug/L		12/09/19 11:47	12/27/19 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/09/19 11:47*	*12/27/19 01:39*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 16:13	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:15	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:15	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:15	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:15	1
Chromium	**0.00042**		0.00040		mg/L		12/09/19 15:04	12/10/19 14:15	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 14:15	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 14:15	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 14:15	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 14:15	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:15	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:15	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW02SW
Lab Sample ID: 580-91219-5
Date Collected: 12/04/19 13:40
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 14:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:29	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: 04Q19LCMW02DW
Date Collected: 12/04/19 14:10
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 15:46	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 15:46	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 15:46	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 15:46	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 15:46	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 15:46	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 15:46	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 15:46	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 15:46	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 15:46	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 15:46	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 15:46	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:46	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 15:46	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 15:46	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 15:46	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:46	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 15:46	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 15:46	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 15:46	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 15:46	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 15:46	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 15:46	1
Benzene	ND		0.20		ug/L			12/09/19 15:46	1
Bromobenzene	ND		0.20		ug/L			12/09/19 15:46	1
Bromoform	ND		0.50		ug/L			12/09/19 15:46	1
Bromomethane	ND		0.50		ug/L			12/09/19 15:46	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 15:46	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 15:46	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 15:46	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 15:46	1
Chloroethane	ND		0.50		ug/L			12/09/19 15:46	1
Chloroform	ND		0.20		ug/L			12/09/19 15:46	1
Chloromethane	ND		0.50		ug/L			12/09/19 15:46	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 15:46	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 15:46	1
Dibromomethane	ND		0.20		ug/L			12/09/19 15:46	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 15:46	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 15:46	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 15:46	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 15:46	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 15:46	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 15:46	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 15:46	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 15:46	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 15:46	1
Naphthalene	ND		1.0		ug/L			12/09/19 15:46	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 15:46	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 15:46	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW02DW
Lab Sample ID: 580-91219-6
Date Collected: 12/04/19 14:10
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 15:46	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 15:46	1
Styrene	ND		0.50		ug/L			12/09/19 15:46	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 15:46	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 15:46	1
Toluene	ND		0.20		ug/L			12/09/19 15:46	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 15:46	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 15:46	1
Trichloroethene	ND		0.20		ug/L			12/09/19 15:46	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 15:46	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*12/09/19 15:46*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 15:46*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/09/19 15:46*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 15:46*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/09/19 15:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 21:39	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 21:39	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 21:39	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 21:39	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4-Dimethylphenol	ND	*	3.8		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 15:01	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 15:01	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 15:01	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 15:01	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW02DW
Lab Sample ID: 580-91219-6
Date Collected: 12/04/19 14:10
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 15:01	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:01	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 15:01	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 15:01	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 15:01	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 21:39	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 21:39	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:01	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 15:01	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 21:39	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:01	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 21:39	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 15:01	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:01	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:01	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*48 - 125*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
2,4,6-Tribromophenol (Surr)	*60*		*48 - 125*	*12/09/19 14:43*	*12/13/19 15:01*	*1*

Client Sample ID: 04Q19LCMW02DW
Lab Sample ID: 580-91219-6

Date Collected: 12/04/19 14:10
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*98*		*50 - 120*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
2-Fluorobiphenyl	*88*		*50 - 120*	*12/09/19 14:43*	*12/13/19 15:01*	*1*
2-Fluorophenol (Surr)	*78*		*36 - 120*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
2-Fluorophenol (Surr)	*65*		*36 - 120*	*12/09/19 14:43*	*12/13/19 15:01*	*1*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
Nitrobenzene-d5 (Surr)	*77*		*46 - 129*	*12/09/19 14:43*	*12/13/19 15:01*	*1*
Phenol-d5 (Surr)	*81*		*38 - 120*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
Phenol-d5 (Surr)	*73*		*38 - 120*	*12/09/19 14:43*	*12/13/19 15:01*	*1*
Terphenyl-d14 (Surr)	*104*		*61 - 126*	*12/30/19 13:18*	*01/03/20 21:39*	*1*
Terphenyl-d14 (Surr)	*98*		*61 - 126*	*12/09/19 14:43*	*12/13/19 15:01*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/09/19 11:47	12/27/19 02:32	1
2-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 02:32	1
3-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 02:32	1
4-Nitrotoluene	ND		0.53		ug/L		12/09/19 11:47	12/27/19 02:32	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
HMX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
RDX	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
Nitrobenzene	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
Tetryl	ND		0.11		ug/L		12/09/19 11:47	12/27/19 02:32	1
Nitroglycerin	ND		0.69		ug/L		12/09/19 11:47	12/27/19 02:32	1
PETN	ND		0.69		ug/L		12/09/19 11:47	12/27/19 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/09/19 11:47*	*12/27/19 02:32*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 16:27	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:17	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:17	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:17	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:17	1
Chromium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:17	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 14:17	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 14:17	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 14:17	1
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 14:17	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 14:17	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 14:17	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW02DW
Lab Sample ID: 580-91219-6
Date Collected: 12/04/19 14:10
Matrix: Water
Date Received: 12/05/19 12:40

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 14:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:31	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91219-1

Client Sample ID: TB120419
Date Collected: 12/04/19 00:01
Date Received: 12/05/19 12:40

Lab Sample ID: 580-91219-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 12:40	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 12:40	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 12:40	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 12:40	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 12:40	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 12:40	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 12:40	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 12:40	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 12:40	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 12:40	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 12:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 12:40	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:40	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 12:40	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 12:40	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 12:40	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:40	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 12:40	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:40	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 12:40	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 12:40	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 12:40	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 12:40	1
Benzene	ND		0.20		ug/L			12/09/19 12:40	1
Bromobenzene	ND		0.20		ug/L			12/09/19 12:40	1
Bromoform	ND		0.50		ug/L			12/09/19 12:40	1
Bromomethane	ND		0.50		ug/L			12/09/19 12:40	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 12:40	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 12:40	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 12:40	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 12:40	1
Chloroethane	ND		0.50		ug/L			12/09/19 12:40	1
Chloroform	ND		0.20		ug/L			12/09/19 12:40	1
Chloromethane	ND		0.50		ug/L			12/09/19 12:40	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:40	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:40	1
Dibromomethane	ND		0.20		ug/L			12/09/19 12:40	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 12:40	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 12:40	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 12:40	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 12:40	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 12:40	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 12:40	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 12:40	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 12:40	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 12:40	1
Naphthalene	ND		1.0		ug/L			12/09/19 12:40	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 12:40	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 12:40	1

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: TB120419
Lab Sample ID: 580-91219-7
Date Collected: 12/04/19 00:01
Matrix: Water
Date Received: 12/05/19 12:40

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 12:40	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 12:40	1
Styrene	ND		0.50		ug/L			12/09/19 12:40	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 12:40	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 12:40	1
Toluene	ND		0.20		ug/L			12/09/19 12:40	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:40	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:40	1
Trichloroethene	ND		0.20		ug/L			12/09/19 12:40	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 12:40	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/09/19 12:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 12:40*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*12/09/19 12:40*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/09/19 12:40*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*12/09/19 12:40*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 12:14	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 12:14	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 12:14	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 12:14	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 12:14	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 12:14	1
Benzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromoform	ND		0.50		ug/L			12/09/19 12:14	1
Bromomethane	ND		0.50		ug/L			12/09/19 12:14	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chloroethane	ND		0.50		ug/L			12/09/19 12:14	1
Chloroform	ND		0.20		ug/L			12/09/19 12:14	1
Chloromethane	ND		0.50		ug/L			12/09/19 12:14	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Dibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 12:14	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 12:14	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 12:14	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 12:14	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 12:14	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 12:14	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
Naphthalene	ND		1.0		ug/L			12/09/19 12:14	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
o-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Styrene	ND		0.50		ug/L			12/09/19 12:14	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 12:14	1
Toluene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Trichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 12:14	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 12:14*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.48		ug/L		110	79 - 127
1,1,1-Trichloroethane	5.00	4.99		ug/L		100	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	4.96		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.02		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	4.85		ug/L		97	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.28		ug/L		106	75 - 137
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	5.04		ug/L		101	79 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.83		ug/L		97	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.74		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130
1,3,5-Trimethylbenzene	5.00	5.12		ug/L		102	80 - 139
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	80 - 130
1,3-Dichloropropane	5.00	5.00		ug/L		100	80 - 130
1,4-Dichlorobenzene	5.00	4.76		ug/L		95	80 - 129
2,2-Dichloropropane	5.00	4.78		ug/L		96	58 - 150
2-Chlorotoluene	5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.06		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.02		ug/L		100	73 - 133
Bromobenzene	5.00	4.71		ug/L		94	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.35		ug/L		107	68 - 120
Carbon tetrachloride	5.00	4.91		ug/L		98	71 - 132
Chlorobenzene	5.00	4.80		ug/L		96	80 - 123
Chlorobromomethane	5.00	5.00		ug/L		100	79 - 131
Chlorodibromomethane	5.00	4.60		ug/L		92	76 - 131
Chloroethane	5.00	5.23		ug/L		105	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.57		ug/L		91	32 - 143
cis-1,2-Dichloroethene	5.00	5.07		ug/L		101	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.92		ug/L		98	65 - 141
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131
Dichlorodifluoromethane	5.00	4.61		ug/L		92	20 - 137
Ethylbenzene	5.00	5.15		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.97		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	4.86		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.08		ug/L		102	75 - 137
Methyl tert-butyl ether	5.00	5.13		ug/L		103	60 - 150
Methylene Chloride	5.00	5.09		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.37		ug/L		107	78 - 130
Naphthalene	5.00	4.94		ug/L		99	64 - 132
n-Butylbenzene	5.00	5.01		ug/L		100	73 - 135
N-Propylbenzene	5.00	5.27		ug/L		105	77 - 142
o-Xylene	5.00	5.01		ug/L		100	80 - 139
sec-Butylbenzene	5.00	4.97		ug/L		99	78 - 140
Styrene	5.00	4.72		ug/L		94	74 - 136
tert-Butylbenzene	5.00	4.52		ug/L		90	77 - 140
Tetrachloroethene	5.00	5.06		ug/L		101	75 - 131
Toluene	5.00	4.77		ug/L		95	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	71 - 128
Trichloroethene	5.00	4.85		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	4.78		ug/L		96	60 - 132
Vinyl chloride	5.00	5.09		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.41		ug/L		108	79 - 127	1	20
1,1,1-Trichloroethane			5.00	4.90		ug/L		98	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	4.90		ug/L		98	69 - 139	1	22
1,1,2-Trichloroethane			5.00	5.08		ug/L		102	80 - 127	3	19
1,1-Dichloroethane			5.00	4.93		ug/L		99	74 - 135	2	20
1,1-Dichloroethene			5.00	4.80		ug/L		96	71 - 126	1	17
1,1-Dichloropropene			5.00	4.90		ug/L		98	72 - 132	1	13
1,2,3-Trichlorobenzene			5.00	5.11		ug/L		102	75 - 137	3	20
1,2,3-Trichloropropane			5.00	4.95		ug/L		99	80 - 127	1	20
1,2,4-Trichlorobenzene			5.00	4.89		ug/L		98	79 - 130	3	20
1,2,4-Trimethylbenzene			5.00	5.00		ug/L		100	78 - 136	4	20
1,2-Dibromo-3-Chloropropane			5.00	4.89		ug/L		98	69 - 130	1	26
1,2-Dichlorobenzene			5.00	4.88		ug/L		98	80 - 129	3	14
1,2-Dichloroethane			5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane			5.00	4.85		ug/L		97	80 - 130	0	14
1,3,5-Trimethylbenzene			5.00	4.90		ug/L		98	80 - 139	4	20
1,3-Dichlorobenzene			5.00	4.81		ug/L		96	80 - 130	4	12
1,3-Dichloropropane			5.00	5.09		ug/L		102	80 - 130	2	19
1,4-Dichlorobenzene			5.00	4.60		ug/L		92	80 - 129	4	11
2,2-Dichloropropane			5.00	4.61		ug/L		92	58 - 150	4	28
2-Chlorotoluene			5.00	4.85		ug/L		97	80 - 136	3	20
4-Chlorotoluene			5.00	4.91		ug/L		98	80 - 130	3	20
4-Isopropyltoluene			5.00	4.74		ug/L		95	78 - 132	4	14
Benzene			5.00	4.99		ug/L		100	73 - 133	1	20
Bromobenzene			5.00	4.65		ug/L		93	80 - 130	1	20
Bromoform			5.00	4.67		ug/L		93	69 - 137	1	20
Bromomethane			5.00	5.15		ug/L		103	68 - 120	4	18
Carbon tetrachloride			5.00	4.82		ug/L		96	71 - 132	2	15
Chlorobenzene			5.00	4.77		ug/L		95	80 - 123	1	12
Chlorobromomethane			5.00	4.99		ug/L		100	79 - 131	0	20
Chlorodibromomethane			5.00	4.62		ug/L		92	76 - 131	1	20
Chloroethane			5.00	5.10		ug/L		102	49 - 135	2	27
Chloroform			5.00	5.01		ug/L		100	80 - 130	1	20
Chloromethane			5.00	4.35		ug/L		87	32 - 143	5	23
cis-1,2-Dichloroethene			5.00	4.99		ug/L		100	72 - 130	2	20
cis-1,3-Dichloropropene			5.00	5.16		ug/L		103	66 - 141	1	22
Dibromomethane			5.00	5.04		ug/L		101	65 - 141	2	20
Dichlorobromomethane			5.00	4.46		ug/L		89	74 - 131	0	20
Dichlorodifluoromethane			5.00	4.39		ug/L		88	20 - 137	5	22
Ethylbenzene			5.00	5.12		ug/L		102	80 - 130	1	20
Ethylene Dibromide			5.00	5.07		ug/L		101	80 - 126	2	20
Hexachlorobutadiene			5.00	4.64		ug/L		93	72 - 138	5	20
Isopropylbenzene			5.00	5.01		ug/L		100	75 - 137	1	20
Methyl tert-butyl ether			5.00	5.19		ug/L		104	60 - 150	1	25
Methylene Chloride			5.00	5.06		ug/L		101	75 - 134	1	18
m-Xylene & p-Xylene			5.00	5.35		ug/L		107	78 - 130	0	20
Naphthalene			5.00	4.85		ug/L		97	64 - 132	2	20
n-Butylbenzene			5.00	4.82		ug/L		96	73 - 135	4	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.05		ug/L		101	77 - 142	4	20
o-Xylene			5.00	4.93		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	4.77		ug/L		95	78 - 140	4	20
Styrene			5.00	4.67		ug/L		93	74 - 136	1	20
tert-Butylbenzene			5.00	4.36		ug/L		87	77 - 140	4	20
Tetrachloroethene			5.00	4.98		ug/L		100	75 - 131	2	20
Toluene			5.00	4.76		ug/L		95	80 - 126	0	20
trans-1,2-Dichloroethene			5.00	4.80		ug/L		96	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.67		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.87		ug/L		97	72 - 136	0	14
Trichlorofluoromethane			5.00	4.65		ug/L		93	60 - 132	3	20
Vinyl chloride			5.00	4.88		ug/L		98	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,3-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,4-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1-Methylnaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,5-Trichlorophenol	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,6-Trichlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dichlorophenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dimethylphenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrophenol	ND		10		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrotoluene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,6-Dinitrotoluene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chloronaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylnaphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitroaniline	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitrophenol	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
3 & 4 Methylphenol	ND		0.40		ug/L		12/09/19 14:43	12/13/19 11:08	1
3,3'-Dichlorobenzidine	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
3-Nitroaniline	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
4,6-Dinitro-2-methylphenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloro-3-methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloroaniline	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chlorophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitroaniline	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitrophenol	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Anthracene	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]anthracene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[b]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[g,h,i]perylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[k]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzoic acid	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzyl alcohol	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethoxy)methane	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethyl)ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-ethylhexyl) phthalate	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
bis(chloroisopropyl) ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Butyl benzyl phthalate	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Carbazole	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Chrysene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenz(a,h)anthracene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenzofuran	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Diethyl phthalate	ND		6.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dimethyl phthalate	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-butyl phthalate	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-octyl phthalate	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluoranthene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluorene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobutadiene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorocyclopentadiene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachloroethane	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Indeno[1,2,3-cd]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Isophorone	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Naphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodi-n-propylamine	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodiphenylamine	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pentachlorophenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenanthrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pyrene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/09/19 14:43*	*12/13/19 11:08*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		50 - 120	12/09/19 14:43	12/13/19 11:08	1
2-Fluorophenol (Surr)	81		36 - 120	12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene-d5 (Surr)	82		46 - 129	12/09/19 14:43	12/13/19 11:08	1
Phenol-d5 (Surr)	88		38 - 120	12/09/19 14:43	12/13/19 11:08	1
Terphenyl-d14 (Surr)	112		61 - 126	12/09/19 14:43	12/13/19 11:08	1

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.00	0.369	*	ug/L		37	46 - 120
1,2-Dichlorobenzene	1.00	0.383	*	ug/L		38	44 - 120
1,3-Dichlorobenzene	1.00	0.283	*	ug/L		28	36 - 120
1,4-Dichlorobenzene	1.00	0.314	*	ug/L		31	40 - 120
1-Methylnaphthalene	1.00	0.668		ug/L		67	59 - 120
2,4,5-Trichlorophenol	1.00	0.946		ug/L		95	56 - 122
2,4,6-Trichlorophenol	1.00	0.636		ug/L		64	50 - 126
2,4-Dichlorophenol	1.00	0.699	J	ug/L		70	54 - 120
2,4-Dimethylphenol	1.00	ND		ug/L		23	20 - 120
2,4-Dinitrophenol	2.00	ND	*	ug/L		0	20 - 150
2,4-Dinitrotoluene	1.00	0.770		ug/L		77	44 - 142
2,6-Dinitrotoluene	1.00	0.814		ug/L		81	54 - 137
2-Chloronaphthalene	1.00	0.645		ug/L		64	45 - 120
2-Chlorophenol	1.00	0.811		ug/L		81	54 - 120
2-Methylnaphthalene	1.00	0.622		ug/L		62	53 - 120
2-Methylphenol	1.00	0.662		ug/L		66	43 - 120
2-Nitroaniline	1.00	0.667		ug/L		67	50 - 137
2-Nitrophenol	1.00	0.801		ug/L		80	41 - 127
3 & 4 Methylphenol	1.00	0.632		ug/L		63	43 - 120
3,3'-Dichlorobenzidine	2.00	ND		ug/L		39	20 - 150
3-Nitroaniline	1.00	0.661	J	ug/L		66	34 - 120
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		34	20 - 150
4-Bromophenyl phenyl ether	1.00	0.651		ug/L		65	62 - 120
4-Chloro-3-methylphenol	1.00	0.593		ug/L		59	47 - 126
4-Chloroaniline	1.00	ND	*	ug/L		15	20 - 120
4-Chlorophenyl phenyl ether	1.00	0.690		ug/L		69	53 - 125
4-Nitroaniline	1.00	0.734	J	ug/L		73	51 - 120
4-Nitrophenol	2.00	1.84	J	ug/L		92	33 - 150
Acenaphthene	1.00	0.711		ug/L		71	56 - 120
Acenaphthylene	1.00	0.771		ug/L		77	50 - 120
Anthracene	1.00	0.615	J	ug/L		62	44 - 120
Benzo[a]anthracene	1.00	0.827		ug/L		83	65 - 124
Benzo[a]pyrene	1.00	0.494	J	ug/L		49	41 - 120
Benzo[b]fluoranthene	1.00	0.744		ug/L		74	62 - 131
Benzo[g,h,i]perylene	1.00	0.799		ug/L		80	65 - 125
Benzo[k]fluoranthene	1.00	0.716		ug/L		72	57 - 128
Benzoic acid	2.00	0.751	J	ug/L		38	20 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318500/2-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	1.00	0.565	J	ug/L		56	20 - 150
Bis(2-chloroethoxy)methane	1.00	0.819		ug/L		82	53 - 120
Bis(2-chloroethyl)ether	1.00	0.829		ug/L		83	47 - 120
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		119	20 - 150
bis(chloroisopropyl) ether	1.00	0.793		ug/L		79	32 - 142
Butyl benzyl phthalate	1.00	1.15	J	ug/L		115	55 - 150
Carbazole	1.00	1.48	*	ug/L		148	67 - 135
Chrysene	1.00	0.914		ug/L		91	57 - 126
Dibenz(a,h)anthracene	1.00	0.796		ug/L		80	62 - 131
Dibenzofuran	1.00	0.754		ug/L		75	60 - 120
Diethyl phthalate	1.00	0.889	J	ug/L		89	55 - 135
Dimethyl phthalate	1.00	0.852		ug/L		85	64 - 128
Di-n-butyl phthalate	1.00	0.979	J	ug/L		98	57 - 136
Di-n-octyl phthalate	1.00	0.812		ug/L		81	51 - 150
Fluoranthene	1.00	0.842	J	ug/L		84	64 - 128
Fluorene	1.00	0.780	J	ug/L		78	64 - 120
Hexachlorobenzene	1.00	0.586		ug/L		59	50 - 120
Hexachlorobutadiene	1.00	0.0554	J *	ug/L		6	21 - 120
Hexachlorocyclopentadiene	1.00	0.0493	J *	ug/L		5	20 - 120
Hexachloroethane	1.00	0.128	J *	ug/L		13	30 - 120
Indeno[1,2,3-cd]pyrene	1.00	0.755		ug/L		75	55 - 148
Isophorone	1.00	0.876		ug/L		88	56 - 125
Naphthalene	1.00	0.727		ug/L		73	63 - 120
Nitrobenzene	1.00	0.832		ug/L		83	45 - 139
N-Nitrosodi-n-propylamine	1.00	0.766		ug/L		77	46 - 120
N-Nitrosodiphenylamine	1.00	0.423	J	ug/L		42	33 - 120
Pentachlorophenol	2.00	ND	*	ug/L		13	20 - 135
Phenanthrene	1.00	0.719		ug/L		72	63 - 120
Phenol	1.00	0.727	J	ug/L		73	41 - 120
Pyrene	1.00	0.856	J	ug/L		86	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol (Surr)	*62*		*36 - 120*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*
Phenol-d5 (Surr)	*78*		*38 - 120*
Terphenyl-d14 (Surr)	*86*		*61 - 126*

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1.00	0.458		ug/L		46	46 - 120	21	35
1,2-Dichlorobenzene	1.00	0.421	*	ug/L		42	44 - 120	9	35
1,3-Dichlorobenzene	1.00	0.324	*	ug/L		32	36 - 120	13	35
1,4-Dichlorobenzene	1.00	0.363	*	ug/L		36	40 - 120	15	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	1.00	0.743		ug/L		74	59 - 120	11	25
2,4,5-Trichlorophenol	1.00	0.831		ug/L		83	56 - 122	13	35
2,4,6-Trichlorophenol	1.00	0.675		ug/L		68	50 - 126	6	20
2,4-Dichlorophenol	1.00	0.791	J	ug/L		79	54 - 120	12	35
2,4-Dimethylphenol	1.00	0.505	J *	ug/L		51	20 - 120	76	35
2,4-Dinitrophenol	2.00	ND	*	ug/L		20	20 - 150	200	35
2,4-Dinitrotoluene	1.00	0.810		ug/L		81	44 - 142	5	36
2,6-Dinitrotoluene	1.00	0.831		ug/L		83	54 - 137	2	33
2-Chloronaphthalene	1.00	0.661		ug/L		66	45 - 120	3	35
2-Chlorophenol	1.00	0.830		ug/L		83	54 - 120	2	35
2-Methylnaphthalene	1.00	0.688		ug/L		69	53 - 120	10	29
2-Methylphenol	1.00	0.722		ug/L		72	43 - 120	9	35
2-Nitroaniline	1.00	0.762		ug/L		76	50 - 137	13	35
2-Nitrophenol	1.00	0.791		ug/L		79	41 - 127	1	35
3 & 4 Methylphenol	1.00	0.699		ug/L		70	43 - 120	10	35
3,3'-Dichlorobenzidine	2.00	ND		ug/L		30	20 - 150	26	35
3-Nitroaniline	1.00	0.608	J	ug/L		61	34 - 120	8	35
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		42	20 - 150	20	35
4-Bromophenyl phenyl ether	1.00	0.735		ug/L		74	62 - 120	12	20
4-Chloro-3-methylphenol	1.00	0.709		ug/L		71	47 - 126	18	35
4-Chloroaniline	1.00	ND	*	ug/L		5	20 - 120	103	35
4-Chlorophenyl phenyl ether	1.00	0.698		ug/L		70	53 - 125	1	27
4-Nitroaniline	1.00	1.09	*	ug/L		109	51 - 120	39	35
4-Nitrophenol	2.00	1.63	J	ug/L		81	33 - 150	12	35
Acenaphthene	1.00	0.723		ug/L		72	56 - 120	2	35
Acenaphthylene	1.00	0.724		ug/L		72	50 - 120	6	35
Anthracene	1.00	0.678	J	ug/L		68	44 - 120	10	26
Benzo[a]anthracene	1.00	0.843		ug/L		84	65 - 124	2	27
Benzo[a]pyrene	1.00	0.635		ug/L		63	41 - 120	25	29
Benzo[b]fluoranthene	1.00	0.830		ug/L		83	62 - 131	11	27
Benzo[g,h,i]perylene	1.00	0.856		ug/L		86	65 - 125	7	25
Benzo[k]fluoranthene	1.00	0.744		ug/L		74	57 - 128	4	26
Benzoic acid	2.00	0.872	J	ug/L		44	20 - 120	15	35
Benzyl alcohol	1.00	0.671	J	ug/L		67	20 - 150	17	35
Bis(2-chloroethoxy)methane	1.00	0.802		ug/L		80	53 - 120	2	27
Bis(2-chloroethyl)ether	1.00	0.817		ug/L		82	47 - 120	1	35
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		102	20 - 150	16	35
bis(chloroisopropyl) ether	1.00	0.758		ug/L		76	32 - 142	4	33
Butyl benzyl phthalate	1.00	1.08	J	ug/L		108	55 - 150	6	35
Carbazole	1.00	1.58	*	ug/L		158	67 - 135	7	20
Chrysene	1.00	0.856		ug/L		86	57 - 126	7	26
Dibenz(a,h)anthracene	1.00	0.902		ug/L		90	62 - 131	12	28
Dibenzofuran	1.00	0.758		ug/L		76	60 - 120	0	35
Diethyl phthalate	1.00	0.892	J	ug/L		89	55 - 135	0	35
Dimethyl phthalate	1.00	0.888		ug/L		89	64 - 128	4	24
Di-n-butyl phthalate	1.00	1.08	J	ug/L		108	57 - 136	10	20
Di-n-octyl phthalate	1.00	0.886		ug/L		89	51 - 150	9	26
Fluoranthene	1.00	0.910	J	ug/L		91	64 - 128	8	20
Fluorene	1.00	0.793	J	ug/L		79	64 - 120	2	28

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			1.00	0.783	*	ug/L		78	50 - 120	29	26
Hexachlorobutadiene			1.00	0.0996	J *	ug/L		10	21 - 120	57	35
Hexachlorocyclopentadiene			1.00	ND	*	ug/L		3	20 - 120	55	35
Hexachloroethane			1.00	0.156	J *	ug/L		16	30 - 120	20	35
Indeno[1,2,3-cd]pyrene			1.00	0.771		ug/L		77	55 - 148	2	20
Isophorone			1.00	0.847		ug/L		85	56 - 125	3	20
Naphthalene			1.00	0.769		ug/L		77	63 - 120	6	34
Nitrobenzene			1.00	0.817		ug/L		82	45 - 139	2	33
N-Nitrosodi-n-propylamine			1.00	0.766		ug/L		77	46 - 120	0	28
N-Nitrosodiphenylamine			1.00	0.325	J *	ug/L		32	33 - 120	26	35
Pentachlorophenol			2.00	ND	*	ug/L		38	20 - 135	97	35
Phenanthrene			1.00	0.791		ug/L		79	63 - 120	10	20
Phenol			1.00	0.807	J	ug/L		81	41 - 120	10	35
Pyrene			1.00	0.921	J	ug/L		92	64 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*71*		*50 - 120*
2-Fluorophenol (Surr)	*73*		*36 - 120*
Nitrobenzene-d5 (Surr)	*86*		*46 - 129*
Phenol-d5 (Surr)	*83*		*38 - 120*
Terphenyl-d14 (Surr)	*94*		*61 - 126*

Lab Sample ID: MB 580-319850/1-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,2-Dichlorobenzene	ND		0.60		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,3-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,4-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
Anthracene	ND		15		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachlorobutadiene	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachloroethane	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Pentachlorophenol	ND		10		ug/L		12/30/19 13:18	01/03/20 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*48 - 125*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorobiphenyl	*94*		*50 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Nitrobenzene-d5 (Surr)	*67*		*46 - 129*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Phenol-d5 (Surr)	*87*		*38 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Terphenyl-d14 (Surr)	*94*		*61 - 126*	*12/30/19 13:18*	*01/03/20 15:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-319850/2-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,4-Trichlorobenzene			2.00	1.69		ug/L		85	46 - 120		
1,2-Dichlorobenzene			2.00	1.80		ug/L		90	44 - 120		
1,3-Dichlorobenzene			2.00	1.76		ug/L		88	36 - 120		
1,4-Dichlorobenzene			2.00	1.78		ug/L		89	40 - 120		
Hexachlorobutadiene			2.00	1.63		ug/L		82	21 - 120		
Hexachloroethane			2.00	1.74		ug/L		87	30 - 120		
Pentachlorophenol			4.00	ND		ug/L		30	20 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*48 - 125*
2-Fluorobiphenyl	*92*		*50 - 120*
2-Fluorophenol (Surr)	*89*		*36 - 120*
Nitrobenzene-d5 (Surr)	*94*		*46 - 129*
Phenol-d5 (Surr)	*90*		*38 - 120*
Terphenyl-d14 (Surr)	*91*		*61 - 126*

Lab Sample ID: LCSD 580-319850/3-A
Matrix: Water
Analysis Batch: 319972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319850

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			2.00	1.81		ug/L		90	46 - 120	7	35
1,2-Dichlorobenzene			2.00	1.84		ug/L		92	44 - 120	2	35
1,3-Dichlorobenzene			2.00	1.82		ug/L		91	36 - 120	4	35
1,4-Dichlorobenzene			2.00	1.84		ug/L		92	40 - 120	3	35
Hexachlorobutadiene			2.00	1.85		ug/L		92	21 - 120	12	35
Hexachloroethane			2.00	1.87		ug/L		94	30 - 120	7	35
Pentachlorophenol			4.00	ND	*	ug/L		44	20 - 135	37	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*48 - 125*
2-Fluorobiphenyl	*89*		*50 - 120*
2-Fluorophenol (Surr)	*87*		*36 - 120*
Nitrobenzene-d5 (Surr)	*92*		*46 - 129*
Phenol-d5 (Surr)	*95*		*38 - 120*
Terphenyl-d14 (Surr)	*100*		*61 - 126*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-344204/1-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: MB 320-344204/1-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/09/19 11:47	12/26/19 16:43	1
2-Nitrotoluene	ND		0.50		ug/L		12/09/19 11:47	12/26/19 16:43	1
3-Nitrotoluene	ND		0.50		ug/L		12/09/19 11:47	12/26/19 16:43	1
4-Nitrotoluene	ND		0.50		ug/L		12/09/19 11:47	12/26/19 16:43	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
HMX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
RDX	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
Nitrobenzene	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
Tetryl	ND		0.10		ug/L		12/09/19 11:47	12/26/19 16:43	1
Nitroglycerin	ND		0.65		ug/L		12/09/19 11:47	12/26/19 16:43	1
PETN	ND		0.65		ug/L		12/09/19 11:47	12/26/19 16:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/09/19 11:47*	*12/26/19 16:43*	*1*

Lab Sample ID: LCS 320-344204/2-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.949		ug/L		95	74 - 120
1,3-Dinitrobenzene	1.00	0.976		ug/L		98	72 - 123
2,4,6-Trinitrotoluene	1.00	0.840		ug/L		84	69 - 111
2,4-Dinitrotoluene	1.00	0.931		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.921		ug/L		92	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.03		ug/L		103	77 - 123
2-Nitrotoluene	1.00	0.882		ug/L		88	64 - 120
3-Nitrotoluene	1.00	0.929		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.898		ug/L		90	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.906		ug/L		91	68 - 113
HMX	1.00	1.04		ug/L		104	67 - 115
RDX	1.00	1.06		ug/L		106	68 - 122
Nitrobenzene	1.00	0.974		ug/L		97	69 - 119
Tetryl	1.00	0.843		ug/L		84	66 - 105
Nitroglycerin	5.00	4.55		ug/L		91	85 - 115
PETN	5.00	4.57		ug/L		91	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*86*		*79 - 111*

Lab Sample ID: LCSD 320-344204/3-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 344204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	1.00	0.997		ug/L		100	74 - 120	5	29
1,3-Dinitrobenzene	1.00	1.00		ug/L		100	72 - 123	3	29

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCSD 320-344204/3-A
Matrix: Water
Analysis Batch: 347605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 344204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trinitrotoluene	1.00	0.888		ug/L		89	69 - 111	6	28
2,4-Dinitrotoluene	1.00	0.968		ug/L		97	70 - 119	4	30
2,6-Dinitrotoluene	1.00	0.951		ug/L		95	71 - 119	3	29
2-Amino-4,6-dinitrotoluene	1.00	1.11		ug/L		111	77 - 123	7	27
2-Nitrotoluene	1.00	0.877		ug/L		88	64 - 120	1	36
3-Nitrotoluene	1.00	0.912		ug/L		91	67 - 114	2	31
4-Nitrotoluene	1.00	0.911		ug/L		91	67 - 115	1	32
4-Amino-2,6-dinitrotoluene	1.00	0.967		ug/L		97	68 - 113	6	30
HMX	1.00	1.08		ug/L		108	67 - 115	4	32
RDX	1.00	1.12		ug/L		112	68 - 122	6	32
Nitrobenzene	1.00	0.962		ug/L		96	69 - 119	1	31
Tetryl	1.00	0.883		ug/L		88	66 - 105	5	26
Nitroglycerin	5.00	4.74		ug/L		95	85 - 115	4	15
PETN	5.00	4.65		ug/L		93	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-318503/10-A
Matrix: Water
Analysis Batch: 318613

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 13:35	1
Antimony	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:35	1
Beryllium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:35	1
Cadmium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:35	1
Chromium	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:35	1
Copper	ND		0.0020		mg/L		12/09/19 15:04	12/10/19 13:35	1
Lead	ND		0.00080		mg/L		12/09/19 15:04	12/10/19 13:35	1
Nickel	ND		0.0030		mg/L		12/09/19 15:04	12/10/19 13:35	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-318503/10-A
Matrix: Water
Analysis Batch: 318613

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0080		mg/L		12/09/19 15:04	12/10/19 13:35	1
Silver	ND		0.00040		mg/L		12/09/19 15:04	12/10/19 13:35	1
Thallium	ND		0.0010		mg/L		12/09/19 15:04	12/10/19 13:35	1
Zinc	ND		0.0070		mg/L		12/09/19 15:04	12/10/19 13:35	1

Lab Sample ID: LCS 580-318503/11-A
Matrix: Water
Analysis Batch: 318613

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.01		mg/L		101	80 - 120
Antimony	1.00	1.01		mg/L		101	80 - 120
Beryllium	1.00	1.10		mg/L		110	80 - 120
Cadmium	1.00	0.986		mg/L		99	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Copper	1.00	1.06		mg/L		106	80 - 120
Lead	1.00	1.02		mg/L		102	80 - 120
Nickel	1.00	1.05		mg/L		105	80 - 120
Selenium	1.00	0.964		mg/L		96	80 - 120
Silver	1.00	1.01		mg/L		101	80 - 120
Thallium	1.00	1.06		mg/L		106	80 - 120
Zinc	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCSD 580-318503/12-A
Matrix: Water
Analysis Batch: 318613

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.04		mg/L		104	80 - 120	2	20
Antimony	1.00	1.02		mg/L		102	80 - 120	1	20
Beryllium	1.00	1.07		mg/L		107	80 - 120	2	20
Cadmium	1.00	1.02		mg/L		102	80 - 120	3	20
Chromium	1.00	1.06		mg/L		106	80 - 120	2	20
Copper	1.00	1.08		mg/L		108	80 - 120	2	20
Lead	1.00	1.03		mg/L		103	80 - 120	2	20
Nickel	1.00	1.07		mg/L		107	80 - 120	1	20
Selenium	1.00	1.02		mg/L		102	80 - 120	6	20
Silver	1.00	1.03		mg/L		103	80 - 120	2	20
Thallium	1.00	1.10		mg/L		110	80 - 120	4	20
Zinc	1.00	1.05		mg/L		105	80 - 120	2	20

Lab Sample ID: 580-91219-2 MS
Matrix: Water
Analysis Batch: 318613

Client Sample ID: 04Q19LCMW09DW
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	0.981		mg/L		98	80 - 120
Antimony	ND		1.00	1.01		mg/L		101	80 - 120
Beryllium	ND		1.00	1.01		mg/L		101	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-91219-2 MS
Matrix: Water
Analysis Batch: 318613

Client Sample ID: 04Q19LCMW09DW
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		1.00	0.929		mg/L		93	80 - 120
Chromium	0.00052		1.00	0.992		mg/L		99	80 - 120
Copper	ND		1.00	1.01		mg/L		101	80 - 120
Lead	ND		1.00	0.990		mg/L		99	80 - 120
Nickel	ND		1.00	1.00		mg/L		100	80 - 120
Selenium	ND		1.00	0.944		mg/L		94	80 - 120
Silver	ND		1.00	0.935		mg/L		93	80 - 120
Thallium	ND		1.00	1.03		mg/L		103	80 - 120
Zinc	0.0080		1.00	0.945		mg/L		94	80 - 120

Lab Sample ID: 580-91219-2 MSD
Matrix: Water
Analysis Batch: 318613

Client Sample ID: 04Q19LCMW09DW
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	0.966		mg/L		97	80 - 120	2	20
Antimony	ND		1.00	1.01		mg/L		101	80 - 120	0	20
Beryllium	ND		1.00	0.954		mg/L		95	80 - 120	5	20
Cadmium	ND		1.00	0.919		mg/L		92	80 - 120	1	20
Chromium	0.00052		1.00	0.971		mg/L		97	80 - 120	2	20
Copper	ND		1.00	0.990		mg/L		99	80 - 120	2	20
Lead	ND		1.00	0.963		mg/L		96	80 - 120	3	20
Nickel	ND		1.00	0.988		mg/L		99	80 - 120	2	20
Selenium	ND		1.00	0.939		mg/L		94	80 - 120	1	20
Silver	ND		1.00	0.943		mg/L		94	80 - 120	1	20
Thallium	ND		1.00	0.996		mg/L		100	80 - 120	3	20
Zinc	0.0080		1.00	0.942		mg/L		93	80 - 120	0	20

Lab Sample ID: 580-91219-2 DU
Matrix: Water
Analysis Batch: 318613

Client Sample ID: 04Q19LCMW09DW
Prep Type: Total Recoverable
Prep Batch: 318503

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/L		NC	20
Antimony	ND		ND		mg/L		NC	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.00052		0.000417	F5	mg/L		23	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Nickel	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Zinc	0.0080		ND		mg/L		NC	20

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-318467/17-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:18	12/09/19 13:55	1

Lab Sample ID: LCS 580-318467/18-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318467

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00200	0.00212		mg/L		106	80 - 120		

Lab Sample ID: LCSD 580-318467/19-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318467

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.00200	0.00210		mg/L		105	80 - 120	1	20

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW09SW
Lab Sample ID: 580-91219-1
Date Collected: 12/04/19 10:00
Matrix: Water
Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 13:33	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 13:04	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 19:41	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 20:17	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 15:20	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 14:07	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:15	A1B	TAL SEA

Client Sample ID: 04Q19LCMW09DW
Lab Sample ID: 580-91219-2
Date Collected: 12/04/19 10:50
Matrix: Water
Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 14:00	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 13:28	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 20:05	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 21:11	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 15:33	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 13:38	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:22	A1B	TAL SEA

Client Sample ID: 04Q19LCMW01SW
Lab Sample ID: 580-91219-3
Date Collected: 12/04/19 11:50
Matrix: Water
Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 14:26	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 13:51	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 20:28	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 22:04	AJC	TAL SAC

Client Sample ID: 04Q19LCMW01SW

Lab Sample ID: 580-91219-3

Date Collected: 12/04/19 11:50

Matrix: Water

Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 15:46	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 14:10	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:24	A1B	TAL SEA

Client Sample ID: 04Q19LCMW01DW

Lab Sample ID: 580-91219-4

Date Collected: 12/04/19 12:30

Matrix: Water

Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 14:53	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 14:14	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 20:52	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/27/19 00:45	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 16:00	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 14:12	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:27	A1B	TAL SEA

Client Sample ID: 04Q19LCMW02SW

Lab Sample ID: 580-91219-5

Date Collected: 12/04/19 13:40

Matrix: Water

Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 15:19	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 14:37	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 21:15	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/27/19 01:39	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 16:13	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 14:15	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:29	A1B	TAL SEA

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW02DW
Lab Sample ID: 580-91219-6
Date Collected: 12/04/19 14:10
Matrix: Water
Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 15:46	TL1	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 15:01	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 21:39	JCM	TAL SEA
Total/NA	Prep	8330-Prep			344204	12/09/19 11:47	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/27/19 02:32	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 16:27	JY1	TAL SAC
Total Recoverable	Prep	3005A			318503	12/09/19 15:04	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318613	12/10/19 14:17	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:31	A1B	TAL SEA

Client Sample ID: TB120419
Lab Sample ID: 580-91219-7
Date Collected: 12/04/19 00:01
Matrix: Water
Date Received: 12/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 12:40	TL1	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91219-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91219-1	04Q19LCMW09SW	Water	12/04/19 10:00	12/05/19 12:40	
580-91219-2	04Q19LCMW09DW	Water	12/04/19 10:50	12/05/19 12:40	
580-91219-3	04Q19LCMW01SW	Water	12/04/19 11:50	12/05/19 12:40	
580-91219-4	04Q19LCMW01DW	Water	12/04/19 12:30	12/05/19 12:40	
580-91219-5	04Q19LCMW02SW	Water	12/04/19 13:40	12/05/19 12:40	
580-91219-6	04Q19LCMW02DW	Water	12/04/19 14:10	12/05/19 12:40	
580-91219-7	TB120419	Water	12/04/19 00:01	12/05/19 12:40	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt Randall / Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Braunsten	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8260C_LL_SV	8330A Nitroaromatics and Nitramines	full list Explosives 8330	SVOCs	Total PP Metals	VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
04Q19LCMW09SW	12/4/19	1000	G	W	X		X			X	X	X	X	9	
04Q19LCMW09DW		1050													
04Q19LCMW01SW		1150													
04Q19LCMW01DW		1230													
04Q19LCMW02SW		1340													
04Q19LCMW02DW		1410													
TB120419	12/4/19	~~1520~~		W									X		

580-91219 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Sam Vega	12/4/19 1634	PBS			
2		12/5/19 1240	M.E.		12/5/19 1150	M.E.
3					12/5/19 1240	TARR

Custody Seals Intact: △ Yes △ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.1, 1.9, 1.4

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt Randall / Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8260C_LL_SC	8330A-Nitroaromatics-and-Nitramines	Full list explosives 8330	SVOCs	Total PP Metals	VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X								X	
04Q19LCMW09SW	12/4/19	1000	G	W	X	X				X	X	X	X	9	
04Q19LCMW09DW		1050													
04Q19LCMW01SW		1150													
04Q19LCMW01DW		1230													
04Q19LCMW02SW		1340													
04Q19LCMW02DW		1410													
TB120419	12/4/19	~~1620~~		W									X		

Therm. ID: IR6 Cor: 1.1 ° Unc: 0.6 °
Cooler Dsc: LB
Packing: Bub
Cust. Seal: Yes ✓ No
Blue Ice, Wet, Dry, None
FedEx: P.O
UPS:
Lab Cour:
Other:

580-91219 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Sam Vega	12/4/19 1634	PBS	Received by:	12/5/19 1150	M.E.
Relinquished by:	12/5/19 1240	M.E.	Received by:	12/5/19 1240	TAKR
Relinquished by:	12/5/19 1708	TAKR	Received by:	12/6/19 0920	TASES

Custody Seals Intact: ∆ Yes ∆ No
Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.1, 1.9, 1.4

IR6 = 1.1 / 0.6

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72849.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91219-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/23/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19LCMW09SW (580-91219-1)	12/4/19	10:00 Pacific		Water			X	X	3	
04Q19LCMW09DW (580-91219-2)	12/4/19	10:50 Pacific		Water			X	X	3	
04Q19LCMW01SW (580-91219-3)	12/4/19	11:50 Pacific		Water			X	X	3	
04Q19LCMW01DW (580-91219-4)	12/4/19	12:30 Pacific		Water			X	X	3	
04Q19LCMW02SW (580-91219-5)	12/4/19	13:40 Pacific		Water			X	X	3	
04Q19LCMW02DW (580-91219-6)	12/4/19	14:10 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/5/19 1700	TAOR		12/06/19 930	ETA - GOC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 619484	Cooler Temperature(s) °C and Other Remarks: 1.0°C

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91219-1

Login Number: 91219
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91219-1

Login Number: 91219
List Number: 2
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/06/19 01:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619484
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

580-91219 Field Sheet

Tracking # : 125078827377

Job:___

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:_____

Therm. ID: AK12 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 619484

Cooler ID: —

Temp Observed: 1.0 °C Corrected: 1.0 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: PK Date: 12/06/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JG Date: 12/6/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WR1-J

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91240-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
12/27/2019 11:08:29 AM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91240-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-91240-1

Comments
No additional comments.

Receipt
The samples were received on 12/6/2019 12:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330B aqueous in preparation batch 320-344664.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91240-1

Client Sample ID: 04Q19L4MW17W
Date Collected: 12/05/19 10:06
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91240-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 16:12	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 16:12	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 16:12	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 16:12	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 16:12	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 16:12	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 16:12	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 16:12	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 16:12	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 16:12	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 16:12	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 16:12	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:12	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 16:12	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 16:12	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 16:12	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:12	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 16:12	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:12	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 16:12	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 16:12	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 16:12	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 16:12	1
Benzene	ND		0.20		ug/L			12/09/19 16:12	1
Bromobenzene	ND		0.20		ug/L			12/09/19 16:12	1
Bromoform	ND		0.50		ug/L			12/09/19 16:12	1
Bromomethane	ND		0.50		ug/L			12/09/19 16:12	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 16:12	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 16:12	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 16:12	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 16:12	1
Chloroethane	ND		0.50		ug/L			12/09/19 16:12	1
Chloroform	ND		0.20		ug/L			12/09/19 16:12	1
Chloromethane	ND		0.50		ug/L			12/09/19 16:12	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 16:12	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 16:12	1
Dibromomethane	ND		0.20		ug/L			12/09/19 16:12	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 16:12	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 16:12	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 16:12	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 16:12	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 16:12	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 16:12	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 16:12	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 16:12	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 16:12	1
Naphthalene	ND		1.0		ug/L			12/09/19 16:12	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 16:12	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 16:12	1

Client Sample ID: 04Q19L4MW17W
Lab Sample ID: 580-91240-1
Date Collected: 12/05/19 10:06
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 16:12	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 16:12	1
Styrene	ND		0.50		ug/L			12/09/19 16:12	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 16:12	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 16:12	1
Toluene	ND		0.20		ug/L			12/09/19 16:12	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 16:12	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 16:12	1
Trichloroethene	ND		0.20		ug/L			12/09/19 16:12	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 16:12	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/09/19 16:12*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/09/19 16:12*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 16:12*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*12/09/19 16:12*	*1*
Trifluorotoluene (Surr)	*108*		*80 - 120*		*12/09/19 16:12*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/11/19 09:04	12/24/19 02:26	1
2-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 02:26	1
3-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 02:26	1
4-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 02:26	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 02:26	1
Nitroglycerin	ND		0.70		ug/L		12/11/19 09:04	12/24/19 02:26	1
PETN	ND		0.70		ug/L		12/11/19 09:04	12/24/19 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/11/19 09:04*	*12/24/19 02:26*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 16:40	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91240-1

Client Sample ID: 04Q19L4MW18W
Date Collected: 12/05/19 10:55
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91240-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 16:39	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 16:39	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 16:39	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 16:39	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 16:39	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 16:39	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 16:39	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 16:39	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 16:39	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 16:39	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 16:39	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 16:39	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:39	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 16:39	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 16:39	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 16:39	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:39	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 16:39	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 16:39	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 16:39	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 16:39	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 16:39	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 16:39	1
Benzene	ND		0.20		ug/L			12/09/19 16:39	1
Bromobenzene	ND		0.20		ug/L			12/09/19 16:39	1
Bromoform	ND		0.50		ug/L			12/09/19 16:39	1
Bromomethane	ND		0.50		ug/L			12/09/19 16:39	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 16:39	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 16:39	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 16:39	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 16:39	1
Chloroethane	ND		0.50		ug/L			12/09/19 16:39	1
Chloroform	ND		0.20		ug/L			12/09/19 16:39	1
Chloromethane	ND		0.50		ug/L			12/09/19 16:39	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 16:39	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 16:39	1
Dibromomethane	ND		0.20		ug/L			12/09/19 16:39	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 16:39	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 16:39	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 16:39	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 16:39	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 16:39	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 16:39	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 16:39	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 16:39	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 16:39	1
Naphthalene	ND		1.0		ug/L			12/09/19 16:39	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 16:39	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 16:39	1

Client Sample ID: 04Q19L4MW18W
Lab Sample ID: 580-91240-2

Date Collected: 12/05/19 10:55
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 16:39	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 16:39	1
Styrene	ND		0.50		ug/L			12/09/19 16:39	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 16:39	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 16:39	1
Toluene	ND		0.20		ug/L			12/09/19 16:39	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 16:39	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 16:39	1
Trichloroethene	ND		0.20		ug/L			12/09/19 16:39	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 16:39	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/09/19 16:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*12/09/19 16:39*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/09/19 16:39*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/09/19 16:39*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/09/19 16:39*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 03:20	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 03:20	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 03:20	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 03:20	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 03:20	1
Nitroglycerin	ND		0.70		ug/L		12/11/19 09:04	12/24/19 03:20	1
PETN	ND		0.70		ug/L		12/11/19 09:04	12/24/19 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/11/19 09:04*	*12/24/19 03:20*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 16:54	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91240-1

Client Sample ID: 04Q19L4MW07BW
Date Collected: 12/05/19 11:58
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91240-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 17:05	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 17:05	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 17:05	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 17:05	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 17:05	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 17:05	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 17:05	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 17:05	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 17:05	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 17:05	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 17:05	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 17:05	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:05	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 17:05	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 17:05	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 17:05	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:05	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 17:05	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:05	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 17:05	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 17:05	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 17:05	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 17:05	1
Benzene	ND		0.20		ug/L			12/09/19 17:05	1
Bromobenzene	ND		0.20		ug/L			12/09/19 17:05	1
Bromoform	ND		0.50		ug/L			12/09/19 17:05	1
Bromomethane	ND		0.50		ug/L			12/09/19 17:05	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 17:05	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 17:05	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 17:05	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 17:05	1
Chloroethane	ND		0.50		ug/L			12/09/19 17:05	1
Chloroform	ND		0.20		ug/L			12/09/19 17:05	1
Chloromethane	ND		0.50		ug/L			12/09/19 17:05	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:05	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:05	1
Dibromomethane	ND		0.20		ug/L			12/09/19 17:05	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 17:05	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 17:05	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 17:05	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 17:05	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 17:05	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 17:05	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 17:05	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 17:05	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 17:05	1
Naphthalene	ND		1.0		ug/L			12/09/19 17:05	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 17:05	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 17:05	1

Client Sample ID: 04Q19L4MW07BW
Lab Sample ID: 580-91240-3
Date Collected: 12/05/19 11:58
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 17:05	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 17:05	1
Styrene	ND		0.50		ug/L			12/09/19 17:05	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 17:05	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 17:05	1
Toluene	ND		0.20		ug/L			12/09/19 17:05	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:05	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:05	1
Trichloroethene	ND		0.20		ug/L			12/09/19 17:05	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 17:05	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/09/19 17:05*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 17:05*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/09/19 17:05*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 17:05*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/09/19 17:05*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 04:14	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 04:14	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 04:14	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 04:14	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 04:14	1
Nitroglycerin	ND		0.68		ug/L		12/11/19 09:04	12/24/19 04:14	1
PETN	ND		0.68		ug/L		12/11/19 09:04	12/24/19 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/11/19 09:04*	*12/24/19 04:14*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**1.9**		0.50		ug/L		12/09/19 19:27	12/10/19 17:07	1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 12:14	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 12:14	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 12:14	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 12:14	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 12:14	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 12:14	1
Benzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromoform	ND		0.50		ug/L			12/09/19 12:14	1
Bromomethane	ND		0.50		ug/L			12/09/19 12:14	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chloroethane	ND		0.50		ug/L			12/09/19 12:14	1
Chloroform	ND		0.20		ug/L			12/09/19 12:14	1
Chloromethane	ND		0.50		ug/L			12/09/19 12:14	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Dibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 12:14	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 12:14	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 12:14	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 12:14	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 12:14	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 12:14	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
Naphthalene	ND		1.0		ug/L			12/09/19 12:14	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
o-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Styrene	ND		0.50		ug/L			12/09/19 12:14	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 12:14	1
Toluene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Trichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 12:14	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 12:14*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.48		ug/L		110	79 - 127
1,1,1-Trichloroethane	5.00	4.99		ug/L		100	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	4.96		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.02		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	4.85		ug/L		97	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.28		ug/L		106	75 - 137
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	5.04		ug/L		101	79 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.83		ug/L		97	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.74		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130
1,3,5-Trimethylbenzene	5.00	5.12		ug/L		102	80 - 139
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	80 - 130
1,3-Dichloropropane	5.00	5.00		ug/L		100	80 - 130
1,4-Dichlorobenzene	5.00	4.76		ug/L		95	80 - 129
2,2-Dichloropropane	5.00	4.78		ug/L		96	58 - 150
2-Chlorotoluene	5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.06		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.02		ug/L		100	73 - 133
Bromobenzene	5.00	4.71		ug/L		94	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.35		ug/L		107	68 - 120
Carbon tetrachloride	5.00	4.91		ug/L		98	71 - 132
Chlorobenzene	5.00	4.80		ug/L		96	80 - 123
Chlorobromomethane	5.00	5.00		ug/L		100	79 - 131
Chlorodibromomethane	5.00	4.60		ug/L		92	76 - 131
Chloroethane	5.00	5.23		ug/L		105	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.57		ug/L		91	32 - 143
cis-1,2-Dichloroethene	5.00	5.07		ug/L		101	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.92		ug/L		98	65 - 141
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131
Dichlorodifluoromethane	5.00	4.61		ug/L		92	20 - 137
Ethylbenzene	5.00	5.15		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.97		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	4.86		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.08		ug/L		102	75 - 137
Methyl tert-butyl ether	5.00	5.13		ug/L		103	60 - 150
Methylene Chloride	5.00	5.09		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.37		ug/L		107	78 - 130
Naphthalene	5.00	4.94		ug/L		99	64 - 132
n-Butylbenzene	5.00	5.01		ug/L		100	73 - 135
N-Propylbenzene	5.00	5.27		ug/L		105	77 - 142
o-Xylene	5.00	5.01		ug/L		100	80 - 139
sec-Butylbenzene	5.00	4.97		ug/L		99	78 - 140
Styrene	5.00	4.72		ug/L		94	74 - 136
tert-Butylbenzene	5.00	4.52		ug/L		90	77 - 140
Tetrachloroethene	5.00	5.06		ug/L		101	75 - 131
Toluene	5.00	4.77		ug/L		95	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	71 - 128
Trichloroethene	5.00	4.85		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	4.78		ug/L		96	60 - 132
Vinyl chloride	5.00	5.09		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.41		ug/L		108	79 - 127	1	20
1,1,1-Trichloroethane	5.00	4.90		ug/L		98	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	4.90		ug/L		98	69 - 139	1	22
1,1,2-Trichloroethane	5.00	5.08		ug/L		102	80 - 127	3	19
1,1-Dichloroethane	5.00	4.93		ug/L		99	74 - 135	2	20
1,1-Dichloroethene	5.00	4.80		ug/L		96	71 - 126	1	17
1,1-Dichloropropene	5.00	4.90		ug/L		98	72 - 132	1	13
1,2,3-Trichlorobenzene	5.00	5.11		ug/L		102	75 - 137	3	20
1,2,3-Trichloropropane	5.00	4.95		ug/L		99	80 - 127	1	20
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	79 - 130	3	20
1,2,4-Trimethylbenzene	5.00	5.00		ug/L		100	78 - 136	4	20
1,2-Dibromo-3-Chloropropane	5.00	4.89		ug/L		98	69 - 130	1	26
1,2-Dichlorobenzene	5.00	4.88		ug/L		98	80 - 129	3	14
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130	0	14
1,3,5-Trimethylbenzene	5.00	4.90		ug/L		98	80 - 139	4	20
1,3-Dichlorobenzene	5.00	4.81		ug/L		96	80 - 130	4	12
1,3-Dichloropropane	5.00	5.09		ug/L		102	80 - 130	2	19
1,4-Dichlorobenzene	5.00	4.60		ug/L		92	80 - 129	4	11
2,2-Dichloropropane	5.00	4.61		ug/L		92	58 - 150	4	28
2-Chlorotoluene	5.00	4.85		ug/L		97	80 - 136	3	20
4-Chlorotoluene	5.00	4.91		ug/L		98	80 - 130	3	20
4-Isopropyltoluene	5.00	4.74		ug/L		95	78 - 132	4	14
Benzene	5.00	4.99		ug/L		100	73 - 133	1	20
Bromobenzene	5.00	4.65		ug/L		93	80 - 130	1	20
Bromoform	5.00	4.67		ug/L		93	69 - 137	1	20
Bromomethane	5.00	5.15		ug/L		103	68 - 120	4	18
Carbon tetrachloride	5.00	4.82		ug/L		96	71 - 132	2	15
Chlorobenzene	5.00	4.77		ug/L		95	80 - 123	1	12
Chlorobromomethane	5.00	4.99		ug/L		100	79 - 131	0	20
Chlorodibromomethane	5.00	4.62		ug/L		92	76 - 131	1	20
Chloroethane	5.00	5.10		ug/L		102	49 - 135	2	27
Chloroform	5.00	5.01		ug/L		100	80 - 130	1	20
Chloromethane	5.00	4.35		ug/L		87	32 - 143	5	23
cis-1,2-Dichloroethene	5.00	4.99		ug/L		100	72 - 130	2	20
cis-1,3-Dichloropropene	5.00	5.16		ug/L		103	66 - 141	1	22
Dibromomethane	5.00	5.04		ug/L		101	65 - 141	2	20
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131	0	20
Dichlorodifluoromethane	5.00	4.39		ug/L		88	20 - 137	5	22
Ethylbenzene	5.00	5.12		ug/L		102	80 - 130	1	20
Ethylene Dibromide	5.00	5.07		ug/L		101	80 - 126	2	20
Hexachlorobutadiene	5.00	4.64		ug/L		93	72 - 138	5	20
Isopropylbenzene	5.00	5.01		ug/L		100	75 - 137	1	20
Methyl tert-butyl ether	5.00	5.19		ug/L		104	60 - 150	1	25
Methylene Chloride	5.00	5.06		ug/L		101	75 - 134	1	18
m-Xylene & p-Xylene	5.00	5.35		ug/L		107	78 - 130	0	20
Naphthalene	5.00	4.85		ug/L		97	64 - 132	2	20
n-Butylbenzene	5.00	4.82		ug/L		96	73 - 135	4	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.05		ug/L		101	77 - 142	4	20
o-Xylene			5.00	4.93		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	4.77		ug/L		95	78 - 140	4	20
Styrene			5.00	4.67		ug/L		93	74 - 136	1	20
tert-Butylbenzene			5.00	4.36		ug/L		87	77 - 140	4	20
Tetrachloroethene			5.00	4.98		ug/L		100	75 - 131	2	20
Toluene			5.00	4.76		ug/L		95	80 - 126	0	20
trans-1,2-Dichloroethene			5.00	4.80		ug/L		96	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.67		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.87		ug/L		97	72 - 136	0	14
Trichlorofluoromethane			5.00	4.65		ug/L		93	60 - 132	3	20
Vinyl chloride			5.00	4.88		ug/L		98	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-344664/1-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
3-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
HMX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
RDX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Tetryl	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitroglycerin	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1
PETN	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/11/19 09:04*	*12/23/19 23:46*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-344664/2-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	0.927		ug/L		93	74 - 120		
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.826		ug/L		83	69 - 111		
2,4-Dinitrotoluene			1.00	0.923		ug/L		92	70 - 119		
2,6-Dinitrotoluene			1.00	0.908		ug/L		91	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.08		ug/L		108	77 - 123		
2-Nitrotoluene			1.00	0.885		ug/L		89	64 - 120		
3-Nitrotoluene			1.00	0.895		ug/L		89	67 - 114		
4-Nitrotoluene			1.00	0.903		ug/L		90	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	0.879		ug/L		88	68 - 113		
HMX			1.00	1.04		ug/L		104	67 - 115		
RDX			1.00	1.03		ug/L		103	68 - 122		
Nitrobenzene			1.00	0.962		ug/L		96	69 - 119		
Tetryl			1.00	0.931		ug/L		93	66 - 105		
Nitroglycerin			5.00	4.54		ug/L		91	85 - 115		
PETN			5.00	4.48		ug/L		90	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: LCSD 320-344664/3-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.925		ug/L		93	74 - 120	0	29
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.825		ug/L		83	69 - 111	0	28
2,4-Dinitrotoluene			1.00	0.926		ug/L		93	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.912		ug/L		91	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.05		ug/L		105	77 - 123	3	27
2-Nitrotoluene			1.00	0.873		ug/L		87	64 - 120	1	36
3-Nitrotoluene			1.00	0.903		ug/L		90	67 - 114	1	31
4-Nitrotoluene			1.00	0.917		ug/L		92	67 - 115	2	32
4-Amino-2,6-dinitrotoluene			1.00	0.890		ug/L		89	68 - 113	1	30
HMX			1.00	1.04		ug/L		104	67 - 115	1	32
RDX			1.00	1.03		ug/L		103	68 - 122	0	32
Nitrobenzene			1.00	0.964		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.955		ug/L		95	66 - 105	2	26
Nitroglycerin			5.00	4.49		ug/L		90	85 - 115	1	15
PETN			5.00	4.44		ug/L		89	84 - 117	1	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*83*		*79 - 111*

Client: PBS Engineering and Environmental
Job ID: 580-91240-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Matrix: Water
Analysis Batch: 344441

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91240-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW17W
Lab Sample ID: 580-91240-1
Date Collected: 12/05/19 10:06
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 16:12	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 02:26	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 16:40	JY1	TAL SAC

Client Sample ID: 04Q19L4MW18W
Lab Sample ID: 580-91240-2
Date Collected: 12/05/19 10:55
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 16:39	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 03:20	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 16:54	JY1	TAL SAC

Client Sample ID: 04Q19L4MW07BW
Lab Sample ID: 580-91240-3
Date Collected: 12/05/19 11:58
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 17:05	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 04:14	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 17:07	JY1	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91240-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91240-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91240-1	04Q19L4MW17W	Water	12/05/19 10:06	12/06/19 12:50	
580-91240-2	04Q19L4MW18W	Water	12/05/19 10:55	12/06/19 12:50	
580-91240-3	04Q19L4MW07BW	Water	12/05/19 11:58	12/06/19 12:50	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Matt Randall and Scott Brausten
Company: PBS Engineering and Environmental
Address: 4412 SW Corbett Ave
City: Portland
State, Zip: OR, 97239
Phone:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com
Project Name: Camp Bonneville
Site:

Sampler: Matt R. + Sam V.
Phone: 360-601-7712
Lab PM: Cruz, Sheri L
E-Mail: sheri.cruz@testamericainc.com
Carrier Tracking No(s):
COC No: 580-31510-10297.1
Page: Page 1 of 1
Job #:
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 58011152
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8260B_LL Full List Explosives 8330 VOCs	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
Preservation Code:											
04Q19L4MW17W	12/5/19	1006	G	W	Y	N	X	X	X	6	
04Q19L4MW18W	↓	1055	↓	↓	↓	↓	↓	↓	↓	↓	
04Q19L4MW07BW	↓	1158	↓	↓	↓	↓	↓	↓	↓	↓	

580-91240 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Matt Randall	12/5/19	PBS	Jessica Nye	12/6/19 1150	M.E.
Relinquished by: Jessica Nye	12/6/19 1250	M.E.		12/6/19 1250	TAPOR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.4

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. + Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental		Analysis Requested		Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			Preservation Codes:
City: Portland	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			Other:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	~~8260B~~ Full List Explosives 8330	~~8330A Nitroaromatics and Nitramines~~ VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code								
04Q19L4MW17W	12/5/19	1006	G	W	Y	N	X	X	X	6	
04Q19L4MW18W	↓	1055	↓	↓	↓	↓	↓	↓	↓	↓	
04Q19L4MW07BW	↓	1158	↓	↓	↓	↓	↓	↓	↓	↓	

580-91240 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	12/5/19	PBS	[signature]	12/6/19 1150	M.E.
2	[signature]	12/6/19 1250	M.E.	[signature]	12/6/19 1250	TAPOR
3	[signature]	12/6/19 1700	TAPOR	[signature]	12-7-19 0930	TASed

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.4 7=1.8

Ver: 08/04/2016

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72886.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91240-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/24/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19L4MW17W (580-91240-1)	12/5/19	10:06 Pacific		Water			X	X	3	
04Q19L4MW18W (580-91240-2)	12/5/19	10:55 Pacific		Water			X	X	3	
04Q19L4MW07BW (580-91240-3)	12/5/19	11:58 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	12/6/19 1200	TAL	Jim Gu	12/7/19 - 9:40	ETA-SAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.: 619528	Cooler Temperature(s) °C and Other Remarks: OBS 5.3 Corr 5.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91240-1

Login Number: 91240
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91240-1

Login Number: 91240
List Number: 2
Creator: Kintaudi, Pauline W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/09/19 02:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619528
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Ob: 5.3c Corr: 5.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento
Sample Receiving Notes

580-91240 Field Sheet

Job:

Tracking # : 1250-7882-7517

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:

Therm. ID: AK-11 Corr. Factor: (+/-) 0.4 °C

Ice ✓ Wet ✓ Gel Other

Cooler Custody Seal: 619528

Cooler ID: —

Temp Observed: 5.3 °C Corrected: 5.7 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: JG Date: 12/7/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☐	☑
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: PK Date: 12/09/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WRIJ

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91241-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
12/30/2019 2:11:07 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91241-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020

Report Number: 580-91241-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/06/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 3.3º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3), 04Q19L4MW02BW (580-91241-4) and TB120519 (580-91241-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCHLORATE
Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were analyzed for Perchlorate in accordance with 6850. The samples were prepared on 12/09/2019 and analyzed on 12/10/2019 and 12/15/2019.

Results for samples 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXPLOSIVES
Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 12/11/2019 and analyzed on 12/14/2019 and 12/24/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330B

Job ID: 580-91241-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

aqueous in preparation batch 320-344664.

Sample 04Q19L4MW02BW (580-91241-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91241-1

Client Sample ID: 04Q19L4MW01AW
Date Collected: 12/05/19 12:50
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91241-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 17:31	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 17:31	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 17:31	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 17:31	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 17:31	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 17:31	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 17:31	1
Benzene	ND		0.20		ug/L			12/09/19 17:31	1
Bromobenzene	ND		0.20		ug/L			12/09/19 17:31	1
Bromoform	ND		0.50		ug/L			12/09/19 17:31	1
Bromomethane	ND		0.50		ug/L			12/09/19 17:31	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 17:31	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 17:31	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Chloroethane	ND		0.50		ug/L			12/09/19 17:31	1
Chloroform	ND		0.20		ug/L			12/09/19 17:31	1
Chloromethane	ND		0.50		ug/L			12/09/19 17:31	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
Dibromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 17:31	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 17:31	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 17:31	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 17:31	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 17:31	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 17:31	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 17:31	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 17:31	1
Naphthalene	ND		1.0		ug/L			12/09/19 17:31	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 17:31	1

Client Sample ID: 04Q19L4MW01AW
Lab Sample ID: 580-91241-1

Date Collected: 12/05/19 12:50
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 17:31	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 17:31	1
Styrene	ND		0.50		ug/L			12/09/19 17:31	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 17:31	1
Toluene	ND		0.20		ug/L			12/09/19 17:31	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
Trichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 17:31	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*12/09/19 17:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 17:31*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/09/19 17:31*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/09/19 17:31*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/09/19 17:31*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 05:07	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Nitroglycerin	ND		0.69		ug/L		12/11/19 09:04	12/24/19 05:07	1
PETN	ND		0.69		ug/L		12/11/19 09:04	12/24/19 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/11/19 09:04*	*12/24/19 05:07*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**1.6**		0.50		ug/L		12/09/19 19:27	12/10/19 17:20	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91241-1

Client Sample ID: 04Q19L4MW01BW
Date Collected: 12/05/19 13:32
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91241-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 17:58	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 17:58	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 17:58	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 17:58	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 17:58	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 17:58	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 17:58	1
Benzene	ND		0.20		ug/L			12/09/19 17:58	1
Bromobenzene	ND		0.20		ug/L			12/09/19 17:58	1
Bromoform	ND		0.50		ug/L			12/09/19 17:58	1
Bromomethane	ND		0.50		ug/L			12/09/19 17:58	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 17:58	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 17:58	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Chloroethane	ND		0.50		ug/L			12/09/19 17:58	1
Chloroform	ND		0.20		ug/L			12/09/19 17:58	1
Chloromethane	ND		0.50		ug/L			12/09/19 17:58	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
Dibromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 17:58	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 17:58	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 17:58	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 17:58	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 17:58	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 17:58	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 17:58	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 17:58	1
Naphthalene	ND		1.0		ug/L			12/09/19 17:58	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 17:58	1

Client Sample ID: 04Q19L4MW01BW
Lab Sample ID: 580-91241-2
Date Collected: 12/05/19 13:32
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 17:58	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 17:58	1
Styrene	ND		0.50		ug/L			12/09/19 17:58	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 17:58	1
Toluene	ND		0.20		ug/L			12/09/19 17:58	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
Trichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 17:58	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/09/19 17:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/09/19 17:58*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/09/19 17:58*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 17:58*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/09/19 17:58*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 06:01	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Nitroglycerin	ND		0.69		ug/L		12/11/19 09:04	12/24/19 06:01	1
PETN	ND		0.69		ug/L		12/11/19 09:04	12/24/19 06:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/11/19 09:04*	*12/24/19 06:01*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/15/19 23:18	1

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3
Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 18:24	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 18:24	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 18:24	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 18:24	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 18:24	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 18:24	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 18:24	1
Benzene	ND		0.20		ug/L			12/09/19 18:24	1
Bromobenzene	ND		0.20		ug/L			12/09/19 18:24	1
Bromoform	ND		0.50		ug/L			12/09/19 18:24	1
Bromomethane	ND		0.50		ug/L			12/09/19 18:24	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 18:24	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 18:24	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Chloroethane	ND		0.50		ug/L			12/09/19 18:24	1
Chloroform	ND		0.20		ug/L			12/09/19 18:24	1
Chloromethane	ND		0.50		ug/L			12/09/19 18:24	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
Dibromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 18:24	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 18:24	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 18:24	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 18:24	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 18:24	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 18:24	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 18:24	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 18:24	1
Naphthalene	ND		1.0		ug/L			12/09/19 18:24	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 18:24	1

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3

Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 18:24	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 18:24	1
Styrene	ND		0.50		ug/L			12/09/19 18:24	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 18:24	1
Toluene	ND		0.20		ug/L			12/09/19 18:24	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
Trichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 18:24	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 18:24*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 18:24*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/09/19 18:24*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 18:24*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/09/19 18:24*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/11/19 09:04	12/24/19 06:55	1
2-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
3-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
4-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
HMX	**3.2**		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
RDX	**6.8**		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Nitroglycerin	ND		0.71		ug/L		12/11/19 09:04	12/24/19 06:55	1
PETN	ND		0.71		ug/L		12/11/19 09:04	12/24/19 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*106*		*79 - 111*	*12/11/19 09:04*	*12/14/19 11:20*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/11/19 09:04*	*12/24/19 06:55*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**220**		25		ug/L		12/09/19 19:27	12/15/19 23:31	50

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91241-1

Client Sample ID: 04Q19L4MW02BW
Date Collected: 12/05/19 15:05
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91241-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 18:51	1
1,1,1-Trichloroethane	**0.46**		0.20		ug/L			12/09/19 18:51	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloroethane	**1.9**		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloroethene	**0.34**		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 18:51	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 18:51	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 18:51	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 18:51	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 18:51	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 18:51	1
Benzene	ND		0.20		ug/L			12/09/19 18:51	1
Bromobenzene	ND		0.20		ug/L			12/09/19 18:51	1
Bromoform	ND		0.50		ug/L			12/09/19 18:51	1
Bromomethane	ND		0.50		ug/L			12/09/19 18:51	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 18:51	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 18:51	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Chloroethane	ND		0.50		ug/L			12/09/19 18:51	1
Chloroform	ND		0.20		ug/L			12/09/19 18:51	1
Chloromethane	ND		0.50		ug/L			12/09/19 18:51	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
Dibromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Dichlorodifluoromethane	**2.3**		0.40		ug/L			12/09/19 18:51	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 18:51	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 18:51	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 18:51	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 18:51	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 18:51	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 18:51	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 18:51	1
Naphthalene	ND		1.0		ug/L			12/09/19 18:51	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 18:51	1

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4
Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 18:51	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 18:51	1
Styrene	ND		0.50		ug/L			12/09/19 18:51	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 18:51	1
Toluene	ND		0.20		ug/L			12/09/19 18:51	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
Trichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 18:51	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 18:51*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 18:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/09/19 18:51*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/09/19 18:51*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/09/19 18:51*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,4,6-Trinitrotoluene	**0.18**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,4-Dinitrotoluene	**0.36**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/11/19 09:04	12/24/19 07:48	1
2-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
3-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
4-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
HMX	**6.7**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Nitroglycerin	ND		0.70		ug/L		12/11/19 09:04	12/24/19 07:48	1
PETN	ND		0.70		ug/L		12/11/19 09:04	12/24/19 07:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*115*	*X*	*79 - 111*	*12/11/19 09:04*	*12/14/19 12:27*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*12/11/19 09:04*	*12/24/19 07:48*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**36**		0.54		ug/L		12/11/19 09:04	12/24/19 08:42	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*104*		*79 - 111*	*12/11/19 09:04*	*12/24/19 08:20*	*5*
3,4-Dinitrotoluene	*90*		*79 - 111*	*12/11/19 09:04*	*12/24/19 08:42*	*5*

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4
Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	560		25		ug/L		12/09/19 19:27	12/15/19 23:44	50

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91241-1

Client Sample ID: TB120519
Date Collected: 12/05/19 00:01
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91241-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 13:07	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 13:07	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 13:07	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 13:07	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 13:07	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 13:07	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 13:07	1
Benzene	ND		0.20		ug/L			12/09/19 13:07	1
Bromobenzene	ND		0.20		ug/L			12/09/19 13:07	1
Bromoform	ND		0.50		ug/L			12/09/19 13:07	1
Bromomethane	ND		0.50		ug/L			12/09/19 13:07	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 13:07	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 13:07	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Chloroethane	ND		0.50		ug/L			12/09/19 13:07	1
Chloroform	ND		0.20		ug/L			12/09/19 13:07	1
Chloromethane	ND		0.50		ug/L			12/09/19 13:07	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
Dibromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 13:07	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 13:07	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 13:07	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 13:07	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 13:07	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 13:07	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 13:07	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 13:07	1
Naphthalene	ND		1.0		ug/L			12/09/19 13:07	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 13:07	1

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: TB120519
Lab Sample ID: 580-91241-5
Date Collected: 12/05/19 00:01
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 13:07	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 13:07	1
Styrene	ND		0.50		ug/L			12/09/19 13:07	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 13:07	1
Toluene	ND		0.20		ug/L			12/09/19 13:07	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
Trichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 13:07	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/09/19 13:07*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 13:07*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/09/19 13:07*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 13:07*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/09/19 13:07*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 12:14	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 12:14	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 12:14	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 12:14	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 12:14	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 12:14	1
Benzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromoform	ND		0.50		ug/L			12/09/19 12:14	1
Bromomethane	ND		0.50		ug/L			12/09/19 12:14	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chloroethane	ND		0.50		ug/L			12/09/19 12:14	1
Chloroform	ND		0.20		ug/L			12/09/19 12:14	1
Chloromethane	ND		0.50		ug/L			12/09/19 12:14	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Dibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 12:14	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 12:14	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 12:14	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 12:14	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 12:14	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 12:14	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
Naphthalene	ND		1.0		ug/L			12/09/19 12:14	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
o-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Styrene	ND		0.50		ug/L			12/09/19 12:14	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 12:14	1
Toluene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Trichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 12:14	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 12:14*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.48		ug/L		110	79 - 127
1,1,1-Trichloroethane	5.00	4.99		ug/L		100	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	4.96		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.02		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	4.85		ug/L		97	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.28		ug/L		106	75 - 137
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	5.04		ug/L		101	79 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.83		ug/L		97	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.74		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130
1,3,5-Trimethylbenzene	5.00	5.12		ug/L		102	80 - 139
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	80 - 130
1,3-Dichloropropane	5.00	5.00		ug/L		100	80 - 130
1,4-Dichlorobenzene	5.00	4.76		ug/L		95	80 - 129
2,2-Dichloropropane	5.00	4.78		ug/L		96	58 - 150
2-Chlorotoluene	5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.06		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.02		ug/L		100	73 - 133
Bromobenzene	5.00	4.71		ug/L		94	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.35		ug/L		107	68 - 120
Carbon tetrachloride	5.00	4.91		ug/L		98	71 - 132
Chlorobenzene	5.00	4.80		ug/L		96	80 - 123
Chlorobromomethane	5.00	5.00		ug/L		100	79 - 131
Chlorodibromomethane	5.00	4.60		ug/L		92	76 - 131
Chloroethane	5.00	5.23		ug/L		105	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.57		ug/L		91	32 - 143
cis-1,2-Dichloroethene	5.00	5.07		ug/L		101	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.92		ug/L		98	65 - 141
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131
Dichlorodifluoromethane	5.00	4.61		ug/L		92	20 - 137
Ethylbenzene	5.00	5.15		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.97		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	4.86		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.08		ug/L		102	75 - 137
Methyl tert-butyl ether	5.00	5.13		ug/L		103	60 - 150
Methylene Chloride	5.00	5.09		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.37		ug/L		107	78 - 130
Naphthalene	5.00	4.94		ug/L		99	64 - 132
n-Butylbenzene	5.00	5.01		ug/L		100	73 - 135
N-Propylbenzene	5.00	5.27		ug/L		105	77 - 142
o-Xylene	5.00	5.01		ug/L		100	80 - 139
sec-Butylbenzene	5.00	4.97		ug/L		99	78 - 140
Styrene	5.00	4.72		ug/L		94	74 - 136
tert-Butylbenzene	5.00	4.52		ug/L		90	77 - 140
Tetrachloroethene	5.00	5.06		ug/L		101	75 - 131
Toluene	5.00	4.77		ug/L		95	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	71 - 128
Trichloroethene	5.00	4.85		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	4.78		ug/L		96	60 - 132
Vinyl chloride	5.00	5.09		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.41		ug/L		108	79 - 127	1	20
1,1,1-Trichloroethane			5.00	4.90		ug/L		98	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	4.90		ug/L		98	69 - 139	1	22
1,1,2-Trichloroethane			5.00	5.08		ug/L		102	80 - 127	3	19
1,1-Dichloroethane			5.00	4.93		ug/L		99	74 - 135	2	20
1,1-Dichloroethene			5.00	4.80		ug/L		96	71 - 126	1	17
1,1-Dichloropropene			5.00	4.90		ug/L		98	72 - 132	1	13
1,2,3-Trichlorobenzene			5.00	5.11		ug/L		102	75 - 137	3	20
1,2,3-Trichloropropane			5.00	4.95		ug/L		99	80 - 127	1	20
1,2,4-Trichlorobenzene			5.00	4.89		ug/L		98	79 - 130	3	20
1,2,4-Trimethylbenzene			5.00	5.00		ug/L		100	78 - 136	4	20
1,2-Dibromo-3-Chloropropane			5.00	4.89		ug/L		98	69 - 130	1	26
1,2-Dichlorobenzene			5.00	4.88		ug/L		98	80 - 129	3	14
1,2-Dichloroethane			5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane			5.00	4.85		ug/L		97	80 - 130	0	14
1,3,5-Trimethylbenzene			5.00	4.90		ug/L		98	80 - 139	4	20
1,3-Dichlorobenzene			5.00	4.81		ug/L		96	80 - 130	4	12
1,3-Dichloropropane			5.00	5.09		ug/L		102	80 - 130	2	19
1,4-Dichlorobenzene			5.00	4.60		ug/L		92	80 - 129	4	11
2,2-Dichloropropane			5.00	4.61		ug/L		92	58 - 150	4	28
2-Chlorotoluene			5.00	4.85		ug/L		97	80 - 136	3	20
4-Chlorotoluene			5.00	4.91		ug/L		98	80 - 130	3	20
4-Isopropyltoluene			5.00	4.74		ug/L		95	78 - 132	4	14
Benzene			5.00	4.99		ug/L		100	73 - 133	1	20
Bromobenzene			5.00	4.65		ug/L		93	80 - 130	1	20
Bromoform			5.00	4.67		ug/L		93	69 - 137	1	20
Bromomethane			5.00	5.15		ug/L		103	68 - 120	4	18
Carbon tetrachloride			5.00	4.82		ug/L		96	71 - 132	2	15
Chlorobenzene			5.00	4.77		ug/L		95	80 - 123	1	12
Chlorobromomethane			5.00	4.99		ug/L		100	79 - 131	0	20
Chlorodibromomethane			5.00	4.62		ug/L		92	76 - 131	1	20
Chloroethane			5.00	5.10		ug/L		102	49 - 135	2	27
Chloroform			5.00	5.01		ug/L		100	80 - 130	1	20
Chloromethane			5.00	4.35		ug/L		87	32 - 143	5	23
cis-1,2-Dichloroethene			5.00	4.99		ug/L		100	72 - 130	2	20
cis-1,3-Dichloropropene			5.00	5.16		ug/L		103	66 - 141	1	22
Dibromomethane			5.00	5.04		ug/L		101	65 - 141	2	20
Dichlorobromomethane			5.00	4.46		ug/L		89	74 - 131	0	20
Dichlorodifluoromethane			5.00	4.39		ug/L		88	20 - 137	5	22
Ethylbenzene			5.00	5.12		ug/L		102	80 - 130	1	20
Ethylene Dibromide			5.00	5.07		ug/L		101	80 - 126	2	20
Hexachlorobutadiene			5.00	4.64		ug/L		93	72 - 138	5	20
Isopropylbenzene			5.00	5.01		ug/L		100	75 - 137	1	20
Methyl tert-butyl ether			5.00	5.19		ug/L		104	60 - 150	1	25
Methylene Chloride			5.00	5.06		ug/L		101	75 - 134	1	18
m-Xylene & p-Xylene			5.00	5.35		ug/L		107	78 - 130	0	20
Naphthalene			5.00	4.85		ug/L		97	64 - 132	2	20
n-Butylbenzene			5.00	4.82		ug/L		96	73 - 135	4	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.05		ug/L		101	77 - 142	4	20
o-Xylene			5.00	4.93		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	4.77		ug/L		95	78 - 140	4	20
Styrene			5.00	4.67		ug/L		93	74 - 136	1	20
tert-Butylbenzene			5.00	4.36		ug/L		87	77 - 140	4	20
Tetrachloroethene			5.00	4.98		ug/L		100	75 - 131	2	20
Toluene			5.00	4.76		ug/L		95	80 - 126	0	20
trans-1,2-Dichloroethene			5.00	4.80		ug/L		96	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.67		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.87		ug/L		97	72 - 136	0	14
Trichlorofluoromethane			5.00	4.65		ug/L		93	60 - 132	3	20
Vinyl chloride			5.00	4.88		ug/L		98	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-344664/1-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
3-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
HMX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
RDX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Tetryl	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitroglycerin	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1
PETN	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/11/19 09:04*	*12/23/19 23:46*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-344664/2-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	0.927		ug/L		93	74 - 120		
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.826		ug/L		83	69 - 111		
2,4-Dinitrotoluene			1.00	0.923		ug/L		92	70 - 119		
2,6-Dinitrotoluene			1.00	0.908		ug/L		91	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.08		ug/L		108	77 - 123		
2-Nitrotoluene			1.00	0.885		ug/L		89	64 - 120		
3-Nitrotoluene			1.00	0.895		ug/L		89	67 - 114		
4-Nitrotoluene			1.00	0.903		ug/L		90	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	0.879		ug/L		88	68 - 113		
HMX			1.00	1.04		ug/L		104	67 - 115		
RDX			1.00	1.03		ug/L		103	68 - 122		
Nitrobenzene			1.00	0.962		ug/L		96	69 - 119		
Tetryl			1.00	0.931		ug/L		93	66 - 105		
Nitroglycerin			5.00	4.54		ug/L		91	85 - 115		
PETN			5.00	4.48		ug/L		90	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: LCSD 320-344664/3-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.925		ug/L		93	74 - 120	0	29
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.825		ug/L		83	69 - 111	0	28
2,4-Dinitrotoluene			1.00	0.926		ug/L		93	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.912		ug/L		91	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.05		ug/L		105	77 - 123	3	27
2-Nitrotoluene			1.00	0.873		ug/L		87	64 - 120	1	36
3-Nitrotoluene			1.00	0.903		ug/L		90	67 - 114	1	31
4-Nitrotoluene			1.00	0.917		ug/L		92	67 - 115	2	32
4-Amino-2,6-dinitrotoluene			1.00	0.890		ug/L		89	68 - 113	1	30
HMX			1.00	1.04		ug/L		104	67 - 115	1	32
RDX			1.00	1.03		ug/L		103	68 - 122	0	32
Nitrobenzene			1.00	0.964		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.955		ug/L		95	66 - 105	2	26
Nitroglycerin			5.00	4.49		ug/L		90	85 - 115	1	15
PETN			5.00	4.44		ug/L		89	84 - 117	1	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*83*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 344441
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 344441
Prep Batch: 344342

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			5.00	5.60		ug/L		112	80 - 120		

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW01AW
Lab Sample ID: 580-91241-1
Date Collected: 12/05/19 12:50
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 17:31	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 05:07	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 17:20	JY1	TAL SAC

Client Sample ID: 04Q19L4MW01BW
Lab Sample ID: 580-91241-2
Date Collected: 12/05/19 13:32
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 17:58	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 06:01	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	345699	12/15/19 23:18	JY1	TAL SAC

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3
Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 18:24	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 06:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	345107	12/14/19 11:20	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		50	345699	12/15/19 23:31	JY1	TAL SAC

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4
Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 18:51	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 07:48	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B	DL	5	347379	12/24/19 08:42	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	345107	12/14/19 12:27	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B	DL	5	347504	12/24/19 08:20	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4
Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		50	345699	12/15/19 23:44	JY1	TAL SAC

Client Sample ID: TB120519
Lab Sample ID: 580-91241-5
Date Collected: 12/05/19 00:01
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 13:07	TL1	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91241-1	04Q19L4MW01AW	Water	12/05/19 12:50	12/06/19 12:50	
580-91241-2	04Q19L4MW01BW	Water	12/05/19 13:32	12/06/19 12:50	
580-91241-3	04Q19L4MW02AW	Water	12/05/19 14:07	12/06/19 12:50	
580-91241-4	04Q19L4MW02BW	Water	12/05/19 15:05	12/06/19 12:50	
580-91241-5	TB120519	Water	12/05/19 00:01	12/06/19 12:50	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Matt Randall and Scott Brausten
Company: PBS Engineering and Environmental
Address: 4412 SW Corbett Ave
City: Portland
State, Zip: OR, 97239
Phone:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com
Project Name: Camp Bonneville
Site:

Sampler: Matt R. & Sam V.
Phone: 360-601-7712
Lab PM: Cruz, Sheri L
E-Mail: sheri.cruz@testamericainc.com
Carrier Tracking No(s):
COC No: 580-31510-10297.1
Page: Page 1 of 1
Job #:

Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 58011152
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	~~8260B~~ Full list Explosives	~~8330A Nitroaromatics and Nitramines~~ VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
04Q19L4MW01AW	12/5/19	1250	G	W	Y	N	X	X	X	6	
04Q19L4MW01BW		1332									
04Q19L4MW02AW		1407									
04Q19L4MW02BW		1505									

580-91241 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Data Package III
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Matt Randall	12/5/19	PBS	Received by: Jessica Mar	12/6/19 1150	M.E.
Relinquished by: Jessica Mar	12/6/19 1250	M.E.	Received by:	12/6/19 1350	TAPOR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.3, 2.4

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. & Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental		Analysis Requested		Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			Preservation Codes:
City: Portland	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			Other:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	~~8330A~~	~~8330A Nitroaromatics and Nitramines~~	Full list Explosives VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
04Q19L4MW01AW	12/5/19	1250	G	W	Y	N	X	X	X		6	
04Q19L4MW01BW		1332										
04Q19L4MW02AW		1407										
04Q19L4MW02BW		1505										

580-91241 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Data Package III	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	12/5/19	PBS	[signature]	12/6/19 1150	M.E.
2	[signature]	12/6/19 1250	M.E.	[signature]	12/6/19 1250	TAOR
3	[signature]	12/6/19 1700	TAOR	[signature]	12/7/19 0930	TASea

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.3, 2.4 7=1.9

Ver: 08/04/2016

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72886.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91241-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/24/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605	PO #:			
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	WO #:			
Email:	Project #: 58013907			
Project Name: Camp Bonneville Groundwater 2019-2020	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19L4MW01AW (580-91241-1)	12/5/19	12:50 Pacific		Water			X	X	3	
04Q19L4MW01BW (580-91241-2)	12/5/19	13:32 Pacific		Water			X	X	3	
04Q19L4MW02AW (580-91241-3)	12/5/19	14:07 Pacific		Water			X	X	3	
04Q19L4MW02BW (580-91241-4)	12/5/19	15:05 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	12/6/19 1700	TAPOR		12/7/19 - 9:40	ETHSAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.: 619528	Cooler Temperature(s) °C and Other Remarks: OBS 5.3 Corr 5.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91241-1

Login Number: 91241
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91241-1

Login Number: 91241
List Number: 2
Creator: Kintaudi, Pauline W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/09/19 02:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619528
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Ob: 5.3c Corr: 5.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento Sample Receiving Notes

580-91241 Field Sheet

Tracking # : 1250-7882-7517

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other_____

Job:___

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:_____

Therm. ID: AK-11 Corr. Factor: (+/-) 0.4 °C

Ice ✓ Wet ✓ Gel ____ Other ____

Cooler Custody Seal: 619528

Cooler ID: —

Temp Observed: 5.3 °C Corrected: 5.7 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: JG Date: 12/7/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☐	☑
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: DK Date: 12/09/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WRIJ

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91312-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
1/21/2020 3:42:45 PM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91312-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-91312-1

Comments
No additional comments.

Receipt
The samples were received on 12/10/2019 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 3.3º C, 3.7º C and 4.2º C.

GC/MS VOA
Method 8260C: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-318735 was outside criteria for the following analyte(s): Chloroethane. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 8330B: The following sample was diluted to bring the concentration of target analytes within the calibration range: 04Q19L4MW08AW (580-91312-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS
Method 6850: Reanalysis of the following samples were performed outside of the analytical holding time due to scheduling constraints with the instrument required for the analysis: 04Q19L4MW03AW (580-91312-1), 04Q19L4MW08AW (580-91312-4), 04Q19L4MW08BW (580-91312-5), 04Q19L4MW145W (580-91312-6) and 04Q19L4MW09AW (580-91312-7). The initial analysis was performed within holding time.

Method 6850: Results for samples 04Q19L4MW03AW (580-91312-1), 04Q19L4MW08AW (580-91312-4), 04Q19L4MW08BW (580-91312-5), 04Q19L4MW145W (580-91312-6), 04Q19L4MW09AW (580-91312-7), (580-91312-C-1-B MS) and (580-91312-C-1-C MSD) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 6850: The concentration of Perchlorate associated with the following samples exceeded the instrument calibration range: 04Q19L4MW03AW (580-91312-1), 04Q19L4MW08AW (580-91312-4), 04Q19L4MW08BW (580-91312-5), 04Q19L4MW145W (580-91312-6), 04Q19L4MW09AW (580-91312-7), (580-91312-C-1-B MS) and (580-91312-C-1-C MSD). This analyte has been qualified; however, the peaks did not saturate the instrument detector. The original analysis have been reported due to the re-analysis being acquired outside of holding time. The samples were diluted within calibration range. Both sets of data have been reported.

Method 6850: Due to the high concentration of Perchlorate, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-349235 and analytical batch 320-351405 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 6850: Results for samples 04Q19L4MW03BW (580-91312-2), 04Q19L4MW05AW (580-91312-3), (580-91312-A-3-B MS) and (580-91312-A-3-C MSD) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 6850: Analysis of the following samples were performed outside of the analytical holding time due to scheduling constraints with the instrument required for the analysis: 04Q19L4MW03BW (580-91312-2) and 04Q19L4MW05AW (580-91312-3).

Method 6850: Internal standard (ISTD) response for Perchlorate for the following samples were outside acceptance criteria: 04Q19L4MW08BW (580-91312-5) and 04Q19L4MW09AW (580-91312-7). The samples were run at a dilution, and both sets of data are reported.

Job ID: 580-91312-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

LCMS

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW03AW
Date Collected: 12/06/19 10:05
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 16:36	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 16:36	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 16:36	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 16:36	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 16:36	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 16:36	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 16:36	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 16:36	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 16:36	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 16:36	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 16:36	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 16:36	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:36	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 16:36	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 16:36	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 16:36	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:36	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 16:36	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:36	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 16:36	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 16:36	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 16:36	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 16:36	1
Benzene	ND		0.20		ug/L			12/12/19 16:36	1
Bromobenzene	ND		0.20		ug/L			12/12/19 16:36	1
Bromoform	ND		0.50		ug/L			12/12/19 16:36	1
Bromomethane	ND		0.50		ug/L			12/12/19 16:36	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 16:36	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 16:36	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 16:36	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 16:36	1
Chloroethane	ND		0.50		ug/L			12/12/19 16:36	1
Chloroform	ND		0.20		ug/L			12/12/19 16:36	1
Chloromethane	ND		0.50		ug/L			12/12/19 16:36	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 16:36	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 16:36	1
Dibromomethane	ND		0.20		ug/L			12/12/19 16:36	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 16:36	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 16:36	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 16:36	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 16:36	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 16:36	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 16:36	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 16:36	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 16:36	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 16:36	1
Naphthalene	ND		1.0		ug/L			12/12/19 16:36	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 16:36	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 16:36	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW03AW

Date Collected: 12/06/19 10:05
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 16:36	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 16:36	1
Styrene	ND		0.50		ug/L			12/12/19 16:36	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 16:36	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 16:36	1
Toluene	ND		0.20		ug/L			12/12/19 16:36	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 16:36	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 16:36	1
Trichloroethene	ND		0.20		ug/L			12/12/19 16:36	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 16:36	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*12/12/19 16:36*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/12/19 16:36*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/12/19 16:36*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/12/19 16:36*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*12/12/19 16:36*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/12/19 09:18	12/28/19 13:08	1
2-Nitrotoluene	ND		0.55		ug/L		12/12/19 09:18	12/28/19 13:08	1
3-Nitrotoluene	ND		0.55		ug/L		12/12/19 09:18	12/28/19 13:08	1
4-Nitrotoluene	ND		0.55		ug/L		12/12/19 09:18	12/28/19 13:08	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
HMX	**0.37**		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
RDX	**5.1**		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 13:08	1
Nitroglycerin	ND		0.71		ug/L		12/12/19 09:18	12/28/19 13:08	1
PETN	ND		0.71		ug/L		12/12/19 09:18	12/28/19 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/12/19 09:18*	*12/27/19 20:54*	*1*
3,4-Dinitrotoluene	*81*		*79 - 111*	*12/12/19 09:18*	*12/28/19 13:08*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**34**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 13:35	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**33**	**H**	2.5		ug/L		12/27/19 19:04	01/15/20 20:07	5

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW03BW
Date Collected: 12/06/19 10:55
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 17:56	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 17:56	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 17:56	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 17:56	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 17:56	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 17:56	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 17:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 17:56	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 17:56	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 17:56	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 17:56	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 17:56	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 17:56	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 17:56	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 17:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 17:56	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 17:56	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 17:56	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 17:56	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 17:56	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 17:56	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 17:56	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 17:56	1
Benzene	ND		0.20		ug/L			12/12/19 17:56	1
Bromobenzene	ND		0.20		ug/L			12/12/19 17:56	1
Bromoform	ND		0.50		ug/L			12/12/19 17:56	1
Bromomethane	ND		0.50		ug/L			12/12/19 17:56	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 17:56	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 17:56	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 17:56	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 17:56	1
Chloroethane	ND		0.50		ug/L			12/12/19 17:56	1
Chloroform	ND		0.20		ug/L			12/12/19 17:56	1
Chloromethane	ND		0.50		ug/L			12/12/19 17:56	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 17:56	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 17:56	1
Dibromomethane	ND		0.20		ug/L			12/12/19 17:56	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 17:56	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 17:56	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 17:56	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 17:56	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 17:56	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 17:56	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 17:56	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 17:56	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 17:56	1
Naphthalene	ND		1.0		ug/L			12/12/19 17:56	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 17:56	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 17:56	1

Client Sample ID: 04Q19L4MW03BW
Lab Sample ID: 580-91312-2

Date Collected: 12/06/19 10:55
Matrix: Water
Date Received: 12/10/19 14:45

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 17:56	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 17:56	1
Styrene	ND		0.50		ug/L			12/12/19 17:56	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 17:56	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 17:56	1
Toluene	ND		0.20		ug/L			12/12/19 17:56	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 17:56	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 17:56	1
Trichloroethene	ND		0.20		ug/L			12/12/19 17:56	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 17:56	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*12/12/19 17:56*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*12/12/19 17:56*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/12/19 17:56*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/12/19 17:56*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/12/19 17:56*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/12/19 09:18	12/28/19 15:49	1
2-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 15:49	1
3-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 15:49	1
4-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 15:49	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
HMX	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
RDX	**4.6**		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 15:49	1
Nitroglycerin	ND		0.69		ug/L		12/12/19 09:18	12/28/19 15:49	1
PETN	ND		0.69		ug/L		12/12/19 09:18	12/28/19 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/12/19 09:18*	*12/28/19 00:14*	*1*
3,4-Dinitrotoluene	*81*		*79 - 111*	*12/12/19 09:18*	*12/28/19 15:49*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**24**	**H**	2.5		ug/L		01/06/20 15:06	01/17/20 12:58	5

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW05AW
Date Collected: 12/06/19 11:45
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 18:23	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 18:23	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 18:23	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 18:23	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 18:23	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 18:23	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 18:23	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 18:23	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 18:23	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 18:23	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 18:23	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 18:23	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:23	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 18:23	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 18:23	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 18:23	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:23	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 18:23	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:23	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 18:23	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 18:23	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 18:23	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 18:23	1
Benzene	ND		0.20		ug/L			12/12/19 18:23	1
Bromobenzene	ND		0.20		ug/L			12/12/19 18:23	1
Bromoform	ND		0.50		ug/L			12/12/19 18:23	1
Bromomethane	ND		0.50		ug/L			12/12/19 18:23	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 18:23	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 18:23	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 18:23	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 18:23	1
Chloroethane	ND		0.50		ug/L			12/12/19 18:23	1
Chloroform	ND		0.20		ug/L			12/12/19 18:23	1
Chloromethane	ND		0.50		ug/L			12/12/19 18:23	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 18:23	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 18:23	1
Dibromomethane	ND		0.20		ug/L			12/12/19 18:23	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 18:23	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 18:23	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 18:23	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 18:23	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 18:23	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 18:23	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 18:23	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 18:23	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 18:23	1
Naphthalene	ND		1.0		ug/L			12/12/19 18:23	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 18:23	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 18:23	1

Client Sample ID: 04Q19L4MW05AW
Lab Sample ID: 580-91312-3

Date Collected: 12/06/19 11:45
Matrix: Water
Date Received: 12/10/19 14:45

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 18:23	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 18:23	1
Styrene	ND		0.50		ug/L			12/12/19 18:23	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 18:23	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 18:23	1
Toluene	ND		0.20		ug/L			12/12/19 18:23	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 18:23	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 18:23	1
Trichloroethene	ND		0.20		ug/L			12/12/19 18:23	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 18:23	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*12/12/19 18:23*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*12/12/19 18:23*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/12/19 18:23*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/12/19 18:23*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/12/19 18:23*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/12/19 09:18	12/28/19 16:42	1
2-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 16:42	1
3-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 16:42	1
4-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 16:42	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
HMX	**0.13**		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
RDX	**3.1**		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 16:42	1
Nitroglycerin	ND		0.68		ug/L		12/12/19 09:18	12/28/19 16:42	1
PETN	ND		0.68		ug/L		12/12/19 09:18	12/28/19 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/12/19 09:18*	*12/28/19 01:21*	*1*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/12/19 09:18*	*12/28/19 16:42*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**24**	**H**	2.5		ug/L		01/06/20 15:06	01/17/20 13:11	5

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW08AW
Date Collected: 12/06/19 12:56
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 18:49	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 18:49	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 18:49	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 18:49	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 18:49	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 18:49	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 18:49	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 18:49	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 18:49	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 18:49	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 18:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 18:49	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:49	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 18:49	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 18:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 18:49	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:49	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 18:49	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 18:49	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 18:49	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 18:49	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 18:49	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 18:49	1
Benzene	ND		0.20		ug/L			12/12/19 18:49	1
Bromobenzene	ND		0.20		ug/L			12/12/19 18:49	1
Bromoform	ND		0.50		ug/L			12/12/19 18:49	1
Bromomethane	ND		0.50		ug/L			12/12/19 18:49	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 18:49	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 18:49	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 18:49	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 18:49	1
Chloroethane	ND		0.50		ug/L			12/12/19 18:49	1
Chloroform	ND		0.20		ug/L			12/12/19 18:49	1
Chloromethane	ND		0.50		ug/L			12/12/19 18:49	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 18:49	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 18:49	1
Dibromomethane	ND		0.20		ug/L			12/12/19 18:49	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 18:49	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 18:49	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 18:49	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 18:49	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 18:49	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 18:49	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 18:49	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 18:49	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 18:49	1
Naphthalene	ND		1.0		ug/L			12/12/19 18:49	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 18:49	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 18:49	1

Client Sample ID: 04Q19L4MW08AW
Lab Sample ID: 580-91312-4
Date Collected: 12/06/19 12:56
Matrix: Water
Date Received: 12/10/19 14:45

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 18:49	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 18:49	1
Styrene	ND		0.50		ug/L			12/12/19 18:49	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 18:49	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 18:49	1
Toluene	ND		0.20		ug/L			12/12/19 18:49	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 18:49	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 18:49	1
Trichloroethene	ND		0.20		ug/L			12/12/19 18:49	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 18:49	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/12/19 18:49*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*12/12/19 18:49*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/12/19 18:49*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/12/19 18:49*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/12/19 18:49*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
2,4,6-Trinitrotoluene	**0.11**		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/12/19 09:18	12/28/19 18:29	1
2-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 18:29	1
3-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 18:29	1
4-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 18:29	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
HMX	**1.5**		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 18:29	1
Nitroglycerin	ND		0.69		ug/L		12/12/19 09:18	12/28/19 18:29	1
PETN	ND		0.69		ug/L		12/12/19 09:18	12/28/19 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*12/12/19 09:18*	*12/28/19 02:28*	*1*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/12/19 09:18*	*12/28/19 18:29*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**30**		1.1		ug/L		12/12/19 09:18	12/30/19 00:30	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*100*		*79 - 111*	*12/12/19 09:18*	*12/29/19 22:19*	*10*
3,4-Dinitrotoluene	*81*		*79 - 111*	*12/12/19 09:18*	*12/30/19 00:30*	*10*

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW08AW
Lab Sample ID: 580-91312-4
Date Collected: 12/06/19 12:56
Matrix: Water
Date Received: 12/10/19 14:45

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	84	E	0.50		ug/L		12/27/19 19:04	01/03/20 14:15	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	80	H	5.0		ug/L		12/27/19 19:04	01/15/20 20:47	10

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW08BW
Date Collected: 12/06/19 13:55
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 19:16	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 19:16	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 19:16	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 19:16	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 19:16	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 19:16	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 19:16	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 19:16	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 19:16	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 19:16	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 19:16	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 19:16	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:16	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 19:16	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 19:16	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 19:16	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:16	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 19:16	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:16	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 19:16	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 19:16	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 19:16	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 19:16	1
Benzene	ND		0.20		ug/L			12/12/19 19:16	1
Bromobenzene	ND		0.20		ug/L			12/12/19 19:16	1
Bromoform	ND		0.50		ug/L			12/12/19 19:16	1
Bromomethane	ND		0.50		ug/L			12/12/19 19:16	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 19:16	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 19:16	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 19:16	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 19:16	1
Chloroethane	ND		0.50		ug/L			12/12/19 19:16	1
Chloroform	ND		0.20		ug/L			12/12/19 19:16	1
Chloromethane	ND		0.50		ug/L			12/12/19 19:16	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 19:16	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 19:16	1
Dibromomethane	ND		0.20		ug/L			12/12/19 19:16	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 19:16	1
Dichlorodifluoromethane	**0.62**		0.40		ug/L			12/12/19 19:16	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 19:16	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 19:16	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 19:16	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 19:16	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 19:16	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 19:16	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 19:16	1
Naphthalene	ND		1.0		ug/L			12/12/19 19:16	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 19:16	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 19:16	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW08BW
Date Collected: 12/06/19 13:55
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 19:16	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 19:16	1
Styrene	ND		0.50		ug/L			12/12/19 19:16	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 19:16	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 19:16	1
Toluene	ND		0.20		ug/L			12/12/19 19:16	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 19:16	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 19:16	1
Trichloroethene	ND		0.20		ug/L			12/12/19 19:16	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 19:16	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/12/19 19:16*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/12/19 19:16*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 120*		*12/12/19 19:16*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/12/19 19:16*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/12/19 19:16*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/12/19 09:18	12/28/19 19:23	1
2-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 19:23	1
3-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 19:23	1
4-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 19:23	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
HMX	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
RDX	**0.16**		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 19:23	1
Nitroglycerin	ND		0.69		ug/L		12/12/19 09:18	12/28/19 19:23	1
PETN	ND		0.69		ug/L		12/12/19 09:18	12/28/19 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/12/19 09:18*	*12/28/19 03:34*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/12/19 09:18*	*12/28/19 19:23*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**110**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 14:29	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**110**	**H**	10		ug/L		12/27/19 19:04	01/15/20 21:01	20

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW145W
Date Collected: 12/06/19 12:00
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 19:42	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 19:42	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 19:42	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 19:42	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 19:42	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 19:42	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 19:42	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 19:42	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 19:42	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 19:42	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 19:42	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 19:42	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:42	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 19:42	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 19:42	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 19:42	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:42	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 19:42	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 19:42	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 19:42	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 19:42	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 19:42	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 19:42	1
Benzene	ND		0.20		ug/L			12/12/19 19:42	1
Bromobenzene	ND		0.20		ug/L			12/12/19 19:42	1
Bromoform	ND		0.50		ug/L			12/12/19 19:42	1
Bromomethane	ND		0.50		ug/L			12/12/19 19:42	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 19:42	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 19:42	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 19:42	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 19:42	1
Chloroethane	ND		0.50		ug/L			12/12/19 19:42	1
Chloroform	ND		0.20		ug/L			12/12/19 19:42	1
Chloromethane	ND		0.50		ug/L			12/12/19 19:42	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 19:42	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 19:42	1
Dibromomethane	ND		0.20		ug/L			12/12/19 19:42	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 19:42	1
Dichlorodifluoromethane	**0.65**		0.40		ug/L			12/12/19 19:42	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 19:42	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 19:42	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 19:42	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 19:42	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 19:42	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 19:42	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 19:42	1
Naphthalene	ND		1.0		ug/L			12/12/19 19:42	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 19:42	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 19:42	1

Client Sample ID: 04Q19L4MW145W
Lab Sample ID: 580-91312-6

Date Collected: 12/06/19 12:00
Matrix: Water
Date Received: 12/10/19 14:45

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 19:42	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 19:42	1
Styrene	ND		0.50		ug/L			12/12/19 19:42	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 19:42	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 19:42	1
Toluene	ND		0.20		ug/L			12/12/19 19:42	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 19:42	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 19:42	1
Trichloroethene	ND		0.20		ug/L			12/12/19 19:42	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 19:42	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/12/19 19:42*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/12/19 19:42*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/12/19 19:42*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/12/19 19:42*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*12/12/19 19:42*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/12/19 09:18	12/28/19 20:17	1
2-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 20:17	1
3-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 20:17	1
4-Nitrotoluene	ND		0.53		ug/L		12/12/19 09:18	12/28/19 20:17	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
HMX	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
RDX	**0.15**		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 20:17	1
Nitroglycerin	ND		0.68		ug/L		12/12/19 09:18	12/28/19 20:17	1
PETN	ND		0.68		ug/L		12/12/19 09:18	12/28/19 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/12/19 09:18*	*12/28/19 04:41*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/12/19 09:18*	*12/28/19 20:17*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**110**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 14:42	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**110**	**H**	10		ug/L		12/27/19 19:04	01/15/20 21:14	20

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: 04Q19L4MW09AW
Date Collected: 12/06/19 14:49
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 20:08	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 20:08	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 20:08	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 20:08	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 20:08	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 20:08	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 20:08	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 20:08	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 20:08	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 20:08	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 20:08	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 20:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 20:08	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 20:08	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 20:08	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 20:08	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 20:08	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 20:08	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 20:08	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 20:08	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 20:08	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 20:08	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 20:08	1
Benzene	ND		0.20		ug/L			12/12/19 20:08	1
Bromobenzene	ND		0.20		ug/L			12/12/19 20:08	1
Bromoform	ND		0.50		ug/L			12/12/19 20:08	1
Bromomethane	ND		0.50		ug/L			12/12/19 20:08	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 20:08	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 20:08	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 20:08	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 20:08	1
Chloroethane	ND		0.50		ug/L			12/12/19 20:08	1
Chloroform	ND		0.20		ug/L			12/12/19 20:08	1
Chloromethane	ND		0.50		ug/L			12/12/19 20:08	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 20:08	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 20:08	1
Dibromomethane	ND		0.20		ug/L			12/12/19 20:08	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 20:08	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 20:08	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 20:08	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 20:08	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 20:08	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 20:08	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 20:08	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 20:08	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 20:08	1
Naphthalene	ND		1.0		ug/L			12/12/19 20:08	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 20:08	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 20:08	1

Client Sample ID: 04Q19L4MW09AW
Lab Sample ID: 580-91312-7
Date Collected: 12/06/19 14:49
Matrix: Water
Date Received: 12/10/19 14:45

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 20:08	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 20:08	1
Styrene	ND		0.50		ug/L			12/12/19 20:08	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 20:08	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 20:08	1
Toluene	ND		0.20		ug/L			12/12/19 20:08	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 20:08	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 20:08	1
Trichloroethene	ND		0.20		ug/L			12/12/19 20:08	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 20:08	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/12/19 20:08*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*12/12/19 20:08*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*12/12/19 20:08*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/12/19 20:08*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/12/19 20:08*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/12/19 09:18	12/28/19 21:10	1
2-Nitrotoluene	ND		0.54		ug/L		12/12/19 09:18	12/28/19 21:10	1
3-Nitrotoluene	ND		0.54		ug/L		12/12/19 09:18	12/28/19 21:10	1
4-Nitrotoluene	ND		0.54		ug/L		12/12/19 09:18	12/28/19 21:10	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
HMX	**1.6**		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
RDX	**7.1**		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
Nitrobenzene	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
Tetryl	ND		0.11		ug/L		12/12/19 09:18	12/28/19 21:10	1
Nitroglycerin	ND		0.70		ug/L		12/12/19 09:18	12/28/19 21:10	1
PETN	ND		0.70		ug/L		12/12/19 09:18	12/28/19 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*12/12/19 09:18*	*12/28/19 05:48*	*1*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/12/19 09:18*	*12/28/19 21:10*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**510**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 14:56	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**510**	**H**	25		ug/L		12/27/19 19:04	01/15/20 21:28	50

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: TB120619
Date Collected: 12/06/19 00:01
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 16:10	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 16:10	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 16:10	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 16:10	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 16:10	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 16:10	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 16:10	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 16:10	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 16:10	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 16:10	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 16:10	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 16:10	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:10	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 16:10	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 16:10	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 16:10	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:10	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 16:10	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 16:10	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 16:10	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 16:10	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 16:10	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 16:10	1
Benzene	ND		0.20		ug/L			12/12/19 16:10	1
Bromobenzene	ND		0.20		ug/L			12/12/19 16:10	1
Bromoform	ND		0.50		ug/L			12/12/19 16:10	1
Bromomethane	ND		0.50		ug/L			12/12/19 16:10	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 16:10	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 16:10	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 16:10	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 16:10	1
Chloroethane	ND		0.50		ug/L			12/12/19 16:10	1
Chloroform	ND		0.20		ug/L			12/12/19 16:10	1
Chloromethane	ND		0.50		ug/L			12/12/19 16:10	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 16:10	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 16:10	1
Dibromomethane	ND		0.20		ug/L			12/12/19 16:10	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 16:10	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 16:10	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 16:10	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 16:10	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 16:10	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 16:10	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 16:10	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 16:10	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 16:10	1
Naphthalene	ND		1.0		ug/L			12/12/19 16:10	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 16:10	1
N-Propylbenzene	ND		0.30		ug/L			12/12/19 16:10	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91312-1

Client Sample ID: TB120619
Date Collected: 12/06/19 00:01
Date Received: 12/10/19 14:45

Lab Sample ID: 580-91312-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/12/19 16:10	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 16:10	1
Styrene	ND		0.50		ug/L			12/12/19 16:10	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 16:10	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 16:10	1
Toluene	ND		0.20		ug/L			12/12/19 16:10	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 16:10	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 16:10	1
Trichloroethene	ND		0.20		ug/L			12/12/19 16:10	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 16:10	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*12/12/19 16:10*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*12/12/19 16:10*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/12/19 16:10*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/12/19 16:10*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*12/12/19 16:10*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318735/9
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/12/19 15:24	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/12/19 15:24	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/12/19 15:24	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/12/19 15:24	1
1,1-Dichloroethane	ND		0.20		ug/L			12/12/19 15:24	1
1,1-Dichloroethene	ND		0.20		ug/L			12/12/19 15:24	1
1,1-Dichloropropene	ND		0.20		ug/L			12/12/19 15:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/12/19 15:24	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/12/19 15:24	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/12/19 15:24	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/12/19 15:24	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/12/19 15:24	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/12/19 15:24	1
1,2-Dichloroethane	ND		0.20		ug/L			12/12/19 15:24	1
1,2-Dichloropropane	ND		0.20		ug/L			12/12/19 15:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/12/19 15:24	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/12/19 15:24	1
1,3-Dichloropropane	ND		0.20		ug/L			12/12/19 15:24	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/12/19 15:24	1
2,2-Dichloropropane	ND		0.50		ug/L			12/12/19 15:24	1
2-Chlorotoluene	ND		0.50		ug/L			12/12/19 15:24	1
4-Chlorotoluene	ND		0.30		ug/L			12/12/19 15:24	1
4-Isopropyltoluene	ND		0.30		ug/L			12/12/19 15:24	1
Benzene	ND		0.20		ug/L			12/12/19 15:24	1
Bromobenzene	ND		0.20		ug/L			12/12/19 15:24	1
Bromoform	ND		0.50		ug/L			12/12/19 15:24	1
Bromomethane	ND		0.50		ug/L			12/12/19 15:24	1
Carbon tetrachloride	ND		0.20		ug/L			12/12/19 15:24	1
Chlorobenzene	ND		0.20		ug/L			12/12/19 15:24	1
Chlorobromomethane	ND		0.20		ug/L			12/12/19 15:24	1
Chlorodibromomethane	ND		0.20		ug/L			12/12/19 15:24	1
Chloroethane	ND		0.50		ug/L			12/12/19 15:24	1
Chloroform	ND		0.20		ug/L			12/12/19 15:24	1
Chloromethane	ND		0.50		ug/L			12/12/19 15:24	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 15:24	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 15:24	1
Dibromomethane	ND		0.20		ug/L			12/12/19 15:24	1
Dichlorobromomethane	ND		0.20		ug/L			12/12/19 15:24	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/12/19 15:24	1
Ethylbenzene	ND		0.20		ug/L			12/12/19 15:24	1
Ethylene Dibromide	ND		0.10		ug/L			12/12/19 15:24	1
Hexachlorobutadiene	ND		0.50		ug/L			12/12/19 15:24	1
Isopropylbenzene	ND		1.0		ug/L			12/12/19 15:24	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/12/19 15:24	1
Methylene Chloride	ND		5.0		ug/L			12/12/19 15:24	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/12/19 15:24	1
Naphthalene	ND		1.0		ug/L			12/12/19 15:24	1
n-Butylbenzene	ND		0.50		ug/L			12/12/19 15:24	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318735/9
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/12/19 15:24	1
o-Xylene	ND		0.50		ug/L			12/12/19 15:24	1
sec-Butylbenzene	ND		1.0		ug/L			12/12/19 15:24	1
Styrene	ND		0.50		ug/L			12/12/19 15:24	1
tert-Butylbenzene	ND		0.50		ug/L			12/12/19 15:24	1
Tetrachloroethene	ND		0.50		ug/L			12/12/19 15:24	1
Toluene	ND		0.20		ug/L			12/12/19 15:24	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/12/19 15:24	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/12/19 15:24	1
Trichloroethene	ND		0.20		ug/L			12/12/19 15:24	1
Trichlorofluoromethane	ND		0.50		ug/L			12/12/19 15:24	1
Vinyl chloride	ND		0.020		ug/L			12/12/19 15:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*12/12/19 15:24*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/12/19 15:24*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*12/12/19 15:24*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/12/19 15:24*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/12/19 15:24*	*1*

Lab Sample ID: LCS 580-318735/6
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.35		ug/L		107	79 - 127
1,1,1-Trichloroethane	5.00	5.04		ug/L		101	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.82		ug/L		96	69 - 139
1,1,2-Trichloroethane	5.00	4.93		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.10		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	5.14		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.29		ug/L		106	75 - 137
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	5.18		ug/L		104	79 - 130
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.97		ug/L		99	69 - 130
1,2-Dichlorobenzene	5.00	4.97		ug/L		99	80 - 129
1,2-Dichloroethane	5.00	4.54		ug/L		91	74 - 130
1,2-Dichloropropane	5.00	4.75		ug/L		95	80 - 130
1,3,5-Trimethylbenzene	5.00	5.22		ug/L		104	80 - 139
1,3-Dichlorobenzene	5.00	4.95		ug/L		99	80 - 130
1,3-Dichloropropane	5.00	4.99		ug/L		100	80 - 130
1,4-Dichlorobenzene	5.00	4.67		ug/L		93	80 - 129
2,2-Dichloropropane	5.00	4.66		ug/L		93	58 - 150
2-Chlorotoluene	5.00	5.14		ug/L		103	80 - 136
4-Chlorotoluene	5.00	5.15		ug/L		103	80 - 130
4-Isopropyltoluene	5.00	5.04		ug/L		101	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318735/6
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.05		ug/L		101	73 - 133
Bromobenzene	5.00	4.90		ug/L		98	80 - 130
Bromoform	5.00	4.46		ug/L		89	69 - 137
Bromomethane	5.00	4.88		ug/L		98	68 - 120
Carbon tetrachloride	5.00	4.99		ug/L		100	71 - 132
Chlorobenzene	5.00	4.72		ug/L		94	80 - 123
Chlorobromomethane	5.00	5.09		ug/L		102	79 - 131
Chlorodibromomethane	5.00	4.52		ug/L		90	76 - 131
Chloroethane	5.00	4.76		ug/L		95	49 - 135
Chloroform	5.00	5.02		ug/L		100	80 - 130
Chloromethane	5.00	3.88		ug/L		78	32 - 143
cis-1,2-Dichloroethene	5.00	5.28		ug/L		106	72 - 130
cis-1,3-Dichloropropene	5.00	5.08		ug/L		102	66 - 141
Dibromomethane	5.00	5.04		ug/L		101	65 - 141
Dichlorobromomethane	5.00	4.33		ug/L		87	74 - 131
Dichlorodifluoromethane	5.00	4.08		ug/L		82	20 - 137
Ethylbenzene	5.00	5.14		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.97		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	4.86		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.21		ug/L		104	75 - 137
Methyl tert-butyl ether	5.00	5.44		ug/L		109	60 - 150
Methylene Chloride	5.00	5.11		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.49		ug/L		110	78 - 130
Naphthalene	5.00	5.12		ug/L		102	64 - 132
n-Butylbenzene	5.00	5.19		ug/L		104	73 - 135
N-Propylbenzene	5.00	5.37		ug/L		107	77 - 142
o-Xylene	5.00	5.02		ug/L		100	80 - 139
sec-Butylbenzene	5.00	5.11		ug/L		102	78 - 140
Styrene	5.00	4.69		ug/L		94	74 - 136
tert-Butylbenzene	5.00	4.71		ug/L		94	77 - 140
Tetrachloroethene	5.00	5.25		ug/L		105	75 - 131
Toluene	5.00	4.74		ug/L		95	80 - 126
trans-1,2-Dichloroethene	5.00	5.13		ug/L		103	63 - 133
trans-1,3-Dichloropropene	5.00	4.51		ug/L		90	71 - 128
Trichloroethene	5.00	5.04		ug/L		101	72 - 136
Trichlorofluoromethane	5.00	4.88		ug/L		98	60 - 132
Vinyl chloride	5.00	4.47		ug/L		89	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*99*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318735/7
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	5.13		ug/L		103	79 - 127	4	20
1,1,1-Trichloroethane			5.00	5.09		ug/L		102	74 - 128	1	14
1,1,2,2-Tetrachloroethane			5.00	4.87		ug/L		97	69 - 139	1	22
1,1,2-Trichloroethane			5.00	5.01		ug/L		100	80 - 127	2	19
1,1-Dichloroethane			5.00	5.12		ug/L		102	74 - 135	0	20
1,1-Dichloroethene			5.00	5.31		ug/L		106	71 - 126	1	17
1,1-Dichloropropene			5.00	5.16		ug/L		103	72 - 132	0	13
1,2,3-Trichlorobenzene			5.00	5.22		ug/L		104	75 - 137	1	20
1,2,3-Trichloropropane			5.00	5.04		ug/L		101	80 - 127	3	20
1,2,4-Trichlorobenzene			5.00	5.08		ug/L		102	79 - 130	2	20
1,2,4-Trimethylbenzene			5.00	5.06		ug/L		101	78 - 136	1	20
1,2-Dibromo-3-Chloropropane			5.00	4.96		ug/L		99	69 - 130	0	26
1,2-Dichlorobenzene			5.00	4.91		ug/L		98	80 - 129	1	14
1,2-Dichloroethane			5.00	4.58		ug/L		92	74 - 130	1	15
1,2-Dichloropropane			5.00	4.80		ug/L		96	80 - 130	1	14
1,3,5-Trimethylbenzene			5.00	5.12		ug/L		102	80 - 139	2	20
1,3-Dichlorobenzene			5.00	4.92		ug/L		98	80 - 130	1	12
1,3-Dichloropropane			5.00	5.03		ug/L		101	80 - 130	1	19
1,4-Dichlorobenzene			5.00	4.65		ug/L		93	80 - 129	1	11
2,2-Dichloropropane			5.00	4.58		ug/L		92	58 - 150	2	28
2-Chlorotoluene			5.00	5.14		ug/L		103	80 - 136	0	20
4-Chlorotoluene			5.00	5.13		ug/L		103	80 - 130	0	20
4-Isopropyltoluene			5.00	4.96		ug/L		99	78 - 132	2	14
Benzene			5.00	5.05		ug/L		101	73 - 133	0	20
Bromobenzene			5.00	4.95		ug/L		99	80 - 130	1	20
Bromoform			5.00	4.51		ug/L		90	69 - 137	1	20
Bromomethane			5.00	4.94		ug/L		99	68 - 120	1	18
Carbon tetrachloride			5.00	5.03		ug/L		101	71 - 132	1	15
Chlorobenzene			5.00	4.75		ug/L		95	80 - 123	1	12
Chlorobromomethane			5.00	5.14		ug/L		103	79 - 131	1	20
Chlorodibromomethane			5.00	4.53		ug/L		91	76 - 131	0	20
Chloroethane			5.00	4.79		ug/L		96	49 - 135	1	27
Chloroform			5.00	5.05		ug/L		101	80 - 130	1	20
Chloromethane			5.00	3.96		ug/L		79	32 - 143	2	23
cis-1,2-Dichloroethene			5.00	5.31		ug/L		106	72 - 130	1	20
cis-1,3-Dichloropropene			5.00	4.94		ug/L		99	66 - 141	3	22
Dibromomethane			5.00	5.10		ug/L		102	65 - 141	1	20
Dichlorobromomethane			5.00	4.34		ug/L		87	74 - 131	0	20
Dichlorodifluoromethane			5.00	4.08		ug/L		82	20 - 137	0	22
Ethylbenzene			5.00	5.11		ug/L		102	80 - 130	1	20
Ethylene Dibromide			5.00	5.08		ug/L		102	80 - 126	2	20
Hexachlorobutadiene			5.00	4.75		ug/L		95	72 - 138	2	20
Isopropylbenzene			5.00	5.07		ug/L		101	75 - 137	3	20
Methyl tert-butyl ether			5.00	5.60		ug/L		112	60 - 150	3	25
Methylene Chloride			5.00	5.18		ug/L		104	75 - 134	1	18
m-Xylene & p-Xylene			5.00	5.42		ug/L		108	78 - 130	1	20
Naphthalene			5.00	5.07		ug/L		101	64 - 132	1	20
n-Butylbenzene			5.00	5.08		ug/L		102	73 - 135	2	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318735/7
Matrix: Water
Analysis Batch: 318735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.35		ug/L		107	77 - 142	0	20
o-Xylene			5.00	4.90		ug/L		98	80 - 139	2	20
sec-Butylbenzene			5.00	5.03		ug/L		101	78 - 140	2	20
Styrene			5.00	4.67		ug/L		93	74 - 136	0	20
tert-Butylbenzene			5.00	4.55		ug/L		91	77 - 140	4	20
Tetrachloroethene			5.00	5.07		ug/L		101	75 - 131	3	20
Toluene			5.00	4.58		ug/L		92	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	5.15		ug/L		103	63 - 133	0	17
trans-1,3-Dichloropropene			5.00	4.47		ug/L		89	71 - 128	1	21
Trichloroethene			5.00	5.03		ug/L		101	72 - 136	0	14
Trichlorofluoromethane			5.00	4.94		ug/L		99	60 - 132	1	20
Vinyl chloride			5.00	4.58		ug/L		92	52 - 128	3	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*

Lab Sample ID: 580-91312-1 MS
Matrix: Water
Analysis Batch: 318735

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		5.00	5.12		ug/L		102	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.28		ug/L		106	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	4.61		ug/L		92	69 - 139
1,1,2-Trichloroethane	ND		5.00	4.89		ug/L		98	80 - 127
1,1-Dichloroethane	ND		5.00	5.13		ug/L		103	74 - 135
1,1-Dichloroethene	ND		5.00	5.51		ug/L		110	71 - 126
1,1-Dichloropropene	ND		5.00	5.51		ug/L		110	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	4.63		ug/L		93	75 - 137
1,2,3-Trichloropropane	ND		5.00	4.71		ug/L		94	80 - 127
1,2,4-Trichlorobenzene	ND		5.00	4.71		ug/L		94	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.14		ug/L		103	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.28		ug/L		86	69 - 130
1,2-Dichlorobenzene	ND		5.00	4.86		ug/L		97	80 - 129
1,2-Dichloroethane	ND		5.00	4.48		ug/L		90	74 - 130
1,2-Dichloropropane	ND		5.00	4.93		ug/L		99	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	5.40		ug/L		108	80 - 139
1,3-Dichlorobenzene	ND		5.00	5.08		ug/L		102	80 - 130
1,3-Dichloropropane	ND		5.00	4.99		ug/L		100	80 - 130
1,4-Dichlorobenzene	ND		5.00	4.82		ug/L		96	80 - 129
2,2-Dichloropropane	ND		5.00	4.78		ug/L		96	58 - 150
2-Chlorotoluene	ND		5.00	5.36		ug/L		107	80 - 136
4-Chlorotoluene	ND		5.00	5.41		ug/L		108	80 - 130
4-Isopropyltoluene	ND		5.00	5.31		ug/L		105	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91312-1 MS
Matrix: Water
Analysis Batch: 318735

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		5.00	5.18		ug/L		104	73 - 133
Bromobenzene	ND		5.00	5.02		ug/L		100	80 - 130
Bromoform	ND		5.00	4.30		ug/L		86	69 - 137
Bromomethane	ND		5.00	5.19		ug/L		104	68 - 120
Carbon tetrachloride	ND		5.00	5.32		ug/L		106	71 - 132
Chlorobenzene	ND		5.00	4.91		ug/L		98	80 - 123
Chlorobromomethane	ND		5.00	4.88		ug/L		98	79 - 131
Chlorodibromomethane	ND		5.00	4.41		ug/L		88	76 - 131
Chloroethane	ND		5.00	5.28		ug/L		106	49 - 135
Chloroform	ND		5.00	5.08		ug/L		102	80 - 130
Chloromethane	ND		5.00	4.43		ug/L		89	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.30		ug/L		106	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.84		ug/L		97	66 - 141
Dibromomethane	ND		5.00	4.88		ug/L		98	65 - 141
Dichlorobromomethane	ND		5.00	4.39		ug/L		88	74 - 131
Dichlorodifluoromethane	ND		5.00	4.57		ug/L		91	20 - 137
Ethylbenzene	ND		5.00	5.47		ug/L		109	80 - 130
Ethylene Dibromide	ND		5.00	4.88		ug/L		98	80 - 126
Hexachlorobutadiene	ND		5.00	4.91		ug/L		98	72 - 138
Isopropylbenzene	ND		5.00	5.37		ug/L		107	75 - 137
Methyl tert-butyl ether	ND		5.00	4.91		ug/L		98	60 - 150
Methylene Chloride	ND		5.00	5.04		ug/L		101	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.75		ug/L		115	78 - 130
Naphthalene	ND		5.00	4.39		ug/L		88	64 - 132
n-Butylbenzene	ND		5.00	5.44		ug/L		109	73 - 135
N-Propylbenzene	ND		5.00	5.79		ug/L		116	77 - 142
o-Xylene	ND		5.00	5.08		ug/L		102	80 - 139
sec-Butylbenzene	ND		5.00	5.40		ug/L		108	78 - 140
Styrene	ND		5.00	4.87		ug/L		97	74 - 136
tert-Butylbenzene	ND		5.00	4.89		ug/L		95	77 - 140
Tetrachloroethene	ND		5.00	5.44		ug/L		109	75 - 131
Toluene	ND		5.00	4.83		ug/L		97	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.23		ug/L		105	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.42		ug/L		88	71 - 128
Trichloroethene	ND		5.00	5.25		ug/L		105	72 - 136
Trichlorofluoromethane	ND		5.00	5.31		ug/L		106	60 - 132
Vinyl chloride	ND		5.00	5.11		ug/L		102	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*98*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91312-1 MSD
Matrix: Water
Analysis Batch: 318735

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		5.00	5.45		ug/L		109	79 - 127	6	20
1,1,1-Trichloroethane	ND		5.00	5.51		ug/L		110	74 - 128	4	14
1,1,2,2-Tetrachloroethane	ND		5.00	4.81		ug/L		96	69 - 139	4	22
1,1,2-Trichloroethane	ND		5.00	5.05		ug/L		101	80 - 127	3	19
1,1-Dichloroethane	ND		5.00	5.41		ug/L		108	74 - 135	5	20
1,1-Dichloroethene	ND		5.00	5.81		ug/L		116	71 - 126	5	17
1,1-Dichloropropene	ND		5.00	5.69		ug/L		114	72 - 132	3	13
1,2,3-Trichlorobenzene	ND		5.00	5.25		ug/L		105	75 - 137	12	20
1,2,3-Trichloropropane	ND		5.00	4.86		ug/L		97	80 - 127	3	20
1,2,4-Trichlorobenzene	ND		5.00	5.18		ug/L		104	79 - 130	9	20
1,2,4-Trimethylbenzene	ND		5.00	5.24		ug/L		105	78 - 136	2	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.81		ug/L		96	69 - 130	12	26
1,2-Dichlorobenzene	ND		5.00	5.03		ug/L		101	80 - 129	3	14
1,2-Dichloroethane	ND		5.00	4.71		ug/L		94	74 - 130	5	15
1,2-Dichloropropane	ND		5.00	5.02		ug/L		100	80 - 130	2	14
1,3,5-Trimethylbenzene	ND		5.00	5.40		ug/L		108	80 - 139	0	20
1,3-Dichlorobenzene	ND		5.00	5.11		ug/L		102	80 - 130	0	12
1,3-Dichloropropane	ND		5.00	5.18		ug/L		104	80 - 130	4	19
1,4-Dichlorobenzene	ND		5.00	4.80		ug/L		96	80 - 129	0	11
2,2-Dichloropropane	ND		5.00	5.09		ug/L		102	58 - 150	6	28
2-Chlorotoluene	ND		5.00	5.36		ug/L		107	80 - 136	0	20
4-Chlorotoluene	ND		5.00	5.38		ug/L		108	80 - 130	1	20
4-Isopropyltoluene	ND		5.00	5.31		ug/L		105	78 - 132	0	14
Benzene	ND		5.00	5.36		ug/L		107	73 - 133	3	20
Bromobenzene	ND		5.00	5.06		ug/L		101	80 - 130	1	20
Bromoform	ND		5.00	4.58		ug/L		92	69 - 137	6	20
Bromomethane	ND		5.00	5.31		ug/L		106	68 - 120	2	18
Carbon tetrachloride	ND		5.00	5.53		ug/L		111	71 - 132	4	15
Chlorobenzene	ND		5.00	5.01		ug/L		100	80 - 123	2	12
Chlorobromomethane	ND		5.00	5.24		ug/L		105	79 - 131	7	20
Chlorodibromomethane	ND		5.00	4.67		ug/L		93	76 - 131	6	20
Chloroethane	ND		5.00	5.25		ug/L		105	49 - 135	1	27
Chloroform	ND		5.00	5.32		ug/L		106	80 - 130	5	20
Chloromethane	ND		5.00	4.37		ug/L		87	32 - 143	1	23
cis-1,2-Dichloroethene	ND		5.00	5.59		ug/L		112	72 - 130	5	20
cis-1,3-Dichloropropene	ND		5.00	5.13		ug/L		103	66 - 141	6	22
Dibromomethane	ND		5.00	5.15		ug/L		103	65 - 141	5	20
Dichlorobromomethane	ND		5.00	4.50		ug/L		90	74 - 131	2	20
Dichlorodifluoromethane	ND		5.00	4.81		ug/L		96	20 - 137	5	22
Ethylbenzene	ND		5.00	5.53		ug/L		111	80 - 130	1	20
Ethylene Dibromide	ND		5.00	5.11		ug/L		102	80 - 126	5	20
Hexachlorobutadiene	ND		5.00	5.14		ug/L		103	72 - 138	5	20
Isopropylbenzene	ND		5.00	5.58		ug/L		112	75 - 137	4	20
Methyl tert-butyl ether	ND		5.00	5.45		ug/L		109	60 - 150	10	25
Methylene Chloride	ND		5.00	5.30		ug/L		106	75 - 134	5	18
m-Xylene & p-Xylene	ND		5.00	5.84		ug/L		117	78 - 130	2	20
Naphthalene	ND		5.00	4.95		ug/L		99	64 - 132	12	20
n-Butylbenzene	ND		5.00	5.50		ug/L		110	73 - 135	1	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91312-1 MSD
Matrix: Water
Analysis Batch: 318735

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene	ND		5.00	5.72		ug/L		114	77 - 142	1	20
o-Xylene	ND		5.00	5.28		ug/L		106	80 - 139	4	20
sec-Butylbenzene	ND		5.00	5.41		ug/L		108	78 - 140	0	20
Styrene	ND		5.00	5.00		ug/L		100	74 - 136	3	20
tert-Butylbenzene	ND		5.00	4.93		ug/L		96	77 - 140	1	20
Tetrachloroethene	ND		5.00	5.65		ug/L		113	75 - 131	4	20
Toluene	ND		5.00	4.98		ug/L		100	80 - 126	3	20
trans-1,2-Dichloroethene	ND		5.00	5.44		ug/L		109	63 - 133	4	17
trans-1,3-Dichloropropene	ND		5.00	4.62		ug/L		92	71 - 128	4	21
Trichloroethene	ND		5.00	5.45		ug/L		109	72 - 136	4	14
Trichlorofluoromethane	ND		5.00	5.57		ug/L		111	60 - 132	5	20
Vinyl chloride	ND		5.00	5.13		ug/L		103	52 - 128	0	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-344944/1-A
Matrix: Water
Analysis Batch: 348213

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/12/19 09:18	12/28/19 11:21	1
2-Nitrotoluene	ND		0.50		ug/L		12/12/19 09:18	12/28/19 11:21	1
3-Nitrotoluene	ND		0.50		ug/L		12/12/19 09:18	12/28/19 11:21	1
4-Nitrotoluene	ND		0.50		ug/L		12/12/19 09:18	12/28/19 11:21	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
HMX	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
RDX	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
Nitrobenzene	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
Tetryl	ND		0.10		ug/L		12/12/19 09:18	12/28/19 11:21	1
Nitroglycerin	ND		0.65		ug/L		12/12/19 09:18	12/28/19 11:21	1
PETN	ND		0.65		ug/L		12/12/19 09:18	12/28/19 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/12/19 09:18*	*12/28/19 11:21*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-344944/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 348213
Prep Batch: 344944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.989		ug/L		99	74 - 120
1,3-Dinitrobenzene	1.00	1.02		ug/L		102	72 - 123
2,4,6-Trinitrotoluene	1.00	0.866		ug/L		87	69 - 111
2,4-Dinitrotoluene	1.00	0.965		ug/L		96	70 - 119
2,6-Dinitrotoluene	1.00	0.956		ug/L		96	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.12		ug/L		112	77 - 123
2-Nitrotoluene	1.00	0.904		ug/L		90	64 - 120
3-Nitrotoluene	1.00	0.933		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.917		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.930		ug/L		93	68 - 113
HMX	1.00	1.06		ug/L		106	67 - 115
RDX	1.00	1.09		ug/L		109	68 - 122
Nitrobenzene	1.00	1.02		ug/L		102	69 - 119
Tetryl	1.00	0.855		ug/L		85	66 - 105
Nitroglycerin	5.00	4.63		ug/L		93	85 - 115
PETN	5.00	4.45		ug/L		89	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*86*		*79 - 111*

Lab Sample ID: 580-91312-1 MS
Client Sample ID: 04Q19L4MW03AW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 348213
Prep Batch: 344944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	ND		1.06	1.02		ug/L		96	74 - 120
1,3-Dinitrobenzene	ND		1.06	1.09		ug/L		102	72 - 123
2,4,6-Trinitrotoluene	ND		1.06	0.919		ug/L		87	69 - 111
2,4-Dinitrotoluene	ND		1.06	1.03		ug/L		77	70 - 119
2,6-Dinitrotoluene	ND		1.06	1.02		ug/L		96	71 - 119
2-Amino-4,6-dinitrotoluene	ND		1.06	1.17		ug/L		110	77 - 123
2-Nitrotoluene	ND		1.06	0.962		ug/L		91	64 - 120
3-Nitrotoluene	ND		1.06	0.989		ug/L		93	67 - 114
4-Nitrotoluene	ND		1.06	0.970		ug/L		91	67 - 115
4-Amino-2,6-dinitrotoluene	ND		1.06	0.999		ug/L		94	68 - 113
HMX	0.37		1.06	1.49		ug/L		106	67 - 115
RDX	5.1		1.06	6.27	4	ug/L		110	68 - 122
Nitrobenzene	ND		1.06	1.09		ug/L		102	69 - 119
Tetryl	ND		1.06	0.911		ug/L		86	66 - 105
Nitroglycerin	ND		5.31	4.85		ug/L		91	85 - 115
PETN	ND		5.31	4.64		ug/L		87	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*85*		*79 - 111*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: 580-91312-1 MSD
Client Sample ID: 04Q19L4MW03AW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 348213
Prep Batch: 344944

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.07	1.02		ug/L		95	74 - 120	0	29
1,3-Dinitrobenzene	ND		1.07	1.07		ug/L		101	72 - 123	1	29
2,4,6-Trinitrotoluene	ND		1.07	0.914		ug/L		86	69 - 111	1	28
2,4-Dinitrotoluene	ND		1.07	1.03		ug/L		77	70 - 119	0	30
2,6-Dinitrotoluene	ND		1.07	1.01		ug/L		95	71 - 119	1	29
2-Amino-4,6-dinitrotoluene	ND		1.07	1.13		ug/L		106	77 - 123	4	27
2-Nitrotoluene	ND		1.07	0.963		ug/L		90	64 - 120	0	36
3-Nitrotoluene	ND		1.07	0.984		ug/L		92	67 - 114	0	31
4-Nitrotoluene	ND		1.07	0.970		ug/L		91	67 - 115	0	32
4-Amino-2,6-dinitrotoluene	ND		1.07	0.977		ug/L		92	68 - 113	2	30
HMX	0.37		1.07	1.47		ug/L		104	67 - 115	1	32
RDX	5.1		1.07	6.19	4	ug/L		102	68 - 122	1	32
Nitrobenzene	ND		1.07	1.06		ug/L		100	69 - 119	2	31
Tetryl	ND		1.07	0.901		ug/L		85	66 - 105	1	26
Nitroglycerin	ND		5.33	4.76		ug/L		89	85 - 115	2	15
PETN	ND		5.33	4.75		ug/L		89	84 - 117	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*83*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-348268/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 349028
Prep Batch: 348268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/27/19 19:04	01/03/20 12:41	1

Lab Sample ID: LCS 320-348268/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 349028
Prep Batch: 348268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.04		ug/L		101	80 - 120

Lab Sample ID: 580-91312-1 MS
Client Sample ID: 04Q19L4MW03AW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 349028
Prep Batch: 348268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	34	E	5.00	39.7	E 4	ug/L		105	80 - 120

Lab Sample ID: 580-91312-1 MSD
Client Sample ID: 04Q19L4MW03AW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 349028
Prep Batch: 348268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	34	E	5.00	39.7	E 4	ug/L		106	80 - 120	0	15

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS (Continued)

Lab Sample ID: MB 320-349235/1-A
Matrix: Water
Analysis Batch: 351196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349235

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		01/06/20 15:06	01/15/20 23:56	1

Lab Sample ID: LCS 320-349235/2-A
Matrix: Water
Analysis Batch: 351196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349235

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			5.00	5.03		ug/L		101	80 - 120		

Lab Sample ID: 580-91312-3 MS
Matrix: Water
Analysis Batch: 351405

Client Sample ID: 04Q19L4MW05AW
Prep Type: Total/NA
Prep Batch: 349235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate	24	H	5.00	29.4	4	ug/L		107	80 - 120		

Lab Sample ID: 580-91312-3 MSD
Matrix: Water
Analysis Batch: 351405

Client Sample ID: 04Q19L4MW05AW
Prep Type: Total/NA
Prep Batch: 349235

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	24	H	5.00	29.3	4	ug/L		106	80 - 120	0	15

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Lab Sample ID: 580-91312-1 MS
Matrix: Water
Analysis Batch: 351196

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA
Prep Batch: 348268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate - DL	33	H	5.00	38.8	4	ug/L		111	80 - 120		

Lab Sample ID: 580-91312-1 MSD
Matrix: Water
Analysis Batch: 351196

Client Sample ID: 04Q19L4MW03AW
Prep Type: Total/NA
Prep Batch: 348268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate - DL	33	H	5.00	37.6	4	ug/L		86	80 - 120	3	15

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW03AW
Lab Sample ID: 580-91312-1
Date Collected: 12/06/19 10:05
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 16:36	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 13:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/27/19 20:54	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 13:35	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	5	351196	01/15/20 20:07	JY1	TAL SAC

Client Sample ID: 04Q19L4MW03BW
Lab Sample ID: 580-91312-2
Date Collected: 12/06/19 10:55
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 17:56	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 15:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 00:14	AJC	TAL SAC
Total/NA	Prep	Filtration			349235	01/06/20 15:06	DTH	TAL SAC
Total/NA	Analysis	6850		5	351405	01/17/20 12:58	JY1	TAL SAC

Client Sample ID: 04Q19L4MW05AW
Lab Sample ID: 580-91312-3
Date Collected: 12/06/19 11:45
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 18:23	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 16:42	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 01:21	AJC	TAL SAC
Total/NA	Prep	Filtration			349235	01/06/20 15:06	DTH	TAL SAC
Total/NA	Analysis	6850		5	351405	01/17/20 13:11	JY1	TAL SAC

Client Sample ID: 04Q19L4MW08AW
Lab Sample ID: 580-91312-4
Date Collected: 12/06/19 12:56
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 18:49	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 18:29	AJC	TAL SAC

Client Sample ID: 04Q19L4MW08AW
Lab Sample ID: 580-91312-4

Date Collected: 12/06/19 12:56
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep	DL		344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	10	348459	12/30/19 00:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 02:28	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	10	348463	12/29/19 22:19	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 14:15	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	10	351196	01/15/20 20:47	JY1	TAL SAC

Client Sample ID: 04Q19L4MW08BW
Lab Sample ID: 580-91312-5

Date Collected: 12/06/19 13:55
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 19:16	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 19:23	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 03:34	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 14:29	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	20	351196	01/15/20 21:01	JY1	TAL SAC

Client Sample ID: 04Q19L4MW145W
Lab Sample ID: 580-91312-6

Date Collected: 12/06/19 12:00
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 19:42	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 20:17	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 04:41	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 14:42	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	20	351196	01/15/20 21:14	JY1	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW09AW
Lab Sample ID: 580-91312-7
Date Collected: 12/06/19 14:49
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 20:08	T1W	TAL SEA
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348213	12/28/19 21:10	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344944	12/12/19 09:18	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 05:48	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 14:56	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	50	351196	01/15/20 21:28	JY1	TAL SAC

Client Sample ID: TB120619
Lab Sample ID: 580-91312-8
Date Collected: 12/06/19 00:01
Matrix: Water
Date Received: 12/10/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318735	12/12/19 16:10	T1W	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20 *
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20 *
Hawaii	State	<cert No.>	01-29-20 *
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20 *
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19 *
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91312-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91312-1	04Q19L4MW03AW	Water	12/06/19 10:05	12/10/19 14:45	
580-91312-2	04Q19L4MW03BW	Water	12/06/19 10:55	12/10/19 14:45	
580-91312-3	04Q19L4MW05AW	Water	12/06/19 11:45	12/10/19 14:45	
580-91312-4	04Q19L4MW08AW	Water	12/06/19 12:56	12/10/19 14:45	
580-91312-5	04Q19L4MW08BW	Water	12/06/19 13:55	12/10/19 14:45	
580-91312-6	04Q19L4MW145W	Water	12/06/19 12:00	12/10/19 14:45	
580-91312-7	04Q19L4MW09AW	Water	12/06/19 14:49	12/10/19 14:45	
580-91312-8	TB120619	Water	12/06/19 00:01	12/10/19 14:45	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. & Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:

Address: 4412 SW Corbett Ave	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Portland	TAT Requested (days):		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: OR, 97239	PO #: Purchase Order not required		
Phone:	WO #:		Other:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	Project #: 58011152		
Project Name: Camp Bonneville	SSOW#:		
Site:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8330 Full List Explosives	8330A Nitroaromatics and Nitramines	VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
04Q19L4MW03AW	12/6/19	1005	G	W	Y	Y	X	X	X			
04Q19L4MW03BW		1055				N						
04Q19L4MW05AW		1145										
04Q19L4MW08AW		1256										
04Q19L4MW08BW		1355										
04Q19L4MW14SW		1200										
04Q19L4MW09AW		1449										
TB120619		-	-	W	N							

580-91312 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/6/19	PBS		12/10/19 1230	M.E.
2		12/10/19 1320	M.E.		12/10/19 1320	TAPOR
3		12/10/19 1700	TAPOR		12/11/19 0930	TASEA

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.7, 4.2, 3.3

IR G = 1.7 1.7

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. & Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental		**Analysis Requested**		Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	~~8260C_L~~ Full List Explosives 8330	~~8330A Nitroaromatics and Nitramines~~ VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
04Q19L4MW03AW	12/6/19	1005	G	W	N	Y	X	X	X		
04Q19L4MW03BW	↓	1055	↓	↓	↓	N	↓	↓	↓		
04Q19L4MW05AW	↓	1145	↓	↓	↓	↓	↓	↓	↓		
04Q19L4MW08AW	↓	1256	↓	↓	↓	↓	↓	↓	↓		
04Q19L4MW08BW	↓	1355	↓	↓	↓	↓	↓	↓	↓		
04Q19L4MW14SW	↓	1200	↓	↓	↓	↓	↓	↓	↓		
04Q19L4MW09AW	↓	1449	↓	↓	↓	↓	↓	↓	↓		
TB120619	↓	-	-	W	N	↓			↓		

580-91312 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12/6/19	PBS	[signature]	12/10/19 1230	M.E.
[signature]	12/10/19 1320	M.E.	[signature]	12/10/19 1320	[illegible]
[signature]	12/10/19 1700	TAPOR	[signature]	12/11/19 0930	TASEA

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.7, 4.2, 3.3
IR G = 1.7 / ...

Ver: 08/04/2016

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72967.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91312-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/27/2019			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19L4MW03AW (580-91312-1)	12/6/19	10:05 Pacific		Water			X	X	3	
04Q19L4MW03AW (580-91312-1MS)	12/6/19	10:05 Pacific	MS	Water				X	2	
04Q19L4MW03AW (580-91312-1MSD)	12/6/19	10:05 Pacific	MSD	Water				X	2	
04Q19L4MW03BW (580-91312-2)	12/6/19	10:55 Pacific		Water			X	X	3	
04Q19L4MW05AW (580-91312-3)	12/6/19	11:45 Pacific		Water			X	X	3	
04Q19L4MW08AW (580-91312-4)	12/6/19	12:56 Pacific		Water			X	X	3	
04Q19L4MW08BW (580-91312-5)	12/6/19	13:55 Pacific		Water			X	X	3	
04Q19L4MW145W (580-91312-6)	12/6/19	12:00 Pacific		Water			X	X	3	
04Q19L4MW09AW (580-91312-7)	12/6/19	14:49 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/10/19 1700	DAPSA	Juan Guzman	12/11/19 - 9:30	ETA-SAC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91312-1

Login Number: 91312
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing TestAmerica

Sacramento Sample Receiving Notes

580-91312 Field Sheet

Tracking # : 1250-7882-7804

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: AK-11 Corr. Factor: (+/-) 0.4 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 619570

Cooler ID: 1 of 2

Temp Observed: 5.5 °C Corrected: 5.9 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: JG Date: ~~12/10/19~~ 12/11/19 ~~12/11/19~~

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JG Date: 12/11/19

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WI7-C & WRI-K

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

Place Field Sheet Label Here

Tracking # : 1256-7882-7815

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: AK-11 Corr. Factor: (+/-) 0.4 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 619554

Cooler ID: 2 of 2

Temp Observed: 5.0 °C Corrected: 5.4 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐

Initials: JG Date: 12/10/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JLT Date: 12/11/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

WI7-C & WR1-K

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ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-91438-1
Client Project/Site: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, Oregon 97239

Attn: Scott Braunsten

Authorized for release by:
1/20/2020 11:28:32 AM

Sheri Cruz, Project Manager I
(253)922-2310
sheri.cruz@testamericainc.com

Table of Contents

Job ID: 580-91438-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-91438-1

Comments
No additional comments.

Receipt
The samples were received on 12/13/2019 12:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.0º C and 4.1º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 580-318933 recovered above the upper control limit for N-Propylbenzene, m-Xylene & p-Xylene, 1,3,5-Trimethylbenzene, Naphthalene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, n-Butylbenzene, 1,1,1,2-Tetrachloroethane and 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19L4MW04AW (580-91438-1), 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10AW (580-91438-4), 04Q19L4MW10BW (580-91438-5), 04Q19L4MW11BW (580-91438-6), TB121219 (580-91438-7) and (CCVIS 580-318933/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 8330B: Surrogate recovery for the following sample was outside control limits: (MB 320-345977/1-A). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

Method 8330B: The laboratory control sample (LCS) for preparation batch 320-345977 and analytical batch 320-348459 recovered outside control limits for the following analyte: 2-Amino-4,6-dinitrotoluene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8330-Prep: The following samples were re-prepared outside of preparation holding time due to low recovery in original method blank for method 8330B aqueous in preparation batch 320-349194. 04Q19L4MW04AW (580-91438-1), 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10AW (580-91438-4), 04Q19L4MW10BW (580-91438-5) and 04Q19L4MW11BW (580-91438-6). Both sets are reported.

Method 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330B aqueous in preparation batch 320-349194 and 320-345977.

Method 8330B: Surrogate recovery for the following samples were outside control limits: 04Q19L4MW10BW (580-91438-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8330B: The following samples were diluted to bring the concentration of target analytes within the calibration range: 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10BW (580-91438-5) and 04Q19L4MW11BW (580-91438-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS
Method 6850: Reanalysis of the following samples were performed outside of the analytical holding time due to scheduling constraints with the instrument required for the analysis: 04Q19L4MW04AW (580-91438-1), 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10AW (580-91438-4), 04Q19L4MW10BW (580-91438-5), and 04Q19L4MW11BW (580-91438-6).

Method 6850: Results for samples 04Q19L4MW04AW (580-91438-1), 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10AW (580-91438-4), 04Q19L4MW10BW (580-91438-5), and 04Q19L4MW11BW (580-91438-6). were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Job ID: 580-91438-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Method 6850: The concentration of Perchlorate associated with the following samples exceeded the instrument calibration range: 04Q19L4MW04AW (580-91438-1), 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10AW (580-91438-4), 04Q19L4MW10BW (580-91438-5), and 04Q19L4MW11BW (580-91438-6). This analyte has been qualified; however, the peaks did not saturate the instrument detector. The original analysis have been reported due to the re-analysis being acquired outside of holding time. The samples were diluted within calibration range. Both sets of data have been reported.

Method 6850: Internal standard (ISTD) response for Perchlorate for the following samples were outside acceptance criteria: 04Q19L4MW09BW (580-91438-2), 04Q19L4MW150W (580-91438-3), 04Q19L4MW10BW (580-91438-5) and 04Q19L4MW11BW (580-91438-6). The samples were run at a dilution, and both sets of data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

LCMS

Qualifier	Qualifier Description
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW04AW
Date Collected: 12/12/19 09:41
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 15:11	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/16/19 15:11	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/16/19 15:11	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 15:11	1
1,1-Dichloroethane	ND		0.20		ug/L			12/16/19 15:11	1
1,1-Dichloroethene	ND		0.20		ug/L			12/16/19 15:11	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 15:11	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 15:11	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 15:11	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 15:11	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 15:11	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 15:11	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:11	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 15:11	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 15:11	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 15:11	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:11	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 15:11	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:11	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 15:11	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 15:11	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 15:11	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 15:11	1
Benzene	ND		0.20		ug/L			12/16/19 15:11	1
Bromobenzene	ND		0.20		ug/L			12/16/19 15:11	1
Bromoform	ND		0.50		ug/L			12/16/19 15:11	1
Bromomethane	ND		0.50		ug/L			12/16/19 15:11	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 15:11	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 15:11	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 15:11	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 15:11	1
Chloroethane	ND		0.50		ug/L			12/16/19 15:11	1
Chloroform	ND		0.20		ug/L			12/16/19 15:11	1
Chloromethane	ND		0.50		ug/L			12/16/19 15:11	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 15:11	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 15:11	1
Dibromomethane	ND		0.20		ug/L			12/16/19 15:11	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 15:11	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/16/19 15:11	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 15:11	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 15:11	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 15:11	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 15:11	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 15:11	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 15:11	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 15:11	1
Naphthalene	ND		1.0		ug/L			12/16/19 15:11	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 15:11	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 15:11	1

Client Sample ID: 04Q19L4MW04AW
Lab Sample ID: 580-91438-1
Date Collected: 12/12/19 09:41
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 15:11	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 15:11	1
Styrene	ND		0.50		ug/L			12/16/19 15:11	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 15:11	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 15:11	1
Toluene	ND		0.20		ug/L			12/16/19 15:11	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 15:11	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 15:11	1
Trichloroethene	ND		0.20		ug/L			12/16/19 15:11	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 15:11	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/16/19 15:11*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/16/19 15:11*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/16/19 15:11*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/16/19 15:11*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*12/16/19 15:11*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 04:58	1
2-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 04:58	1
3-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 04:58	1
4-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 04:58	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
HMX	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
RDX	**4.9**		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
Nitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
Tetryl	ND		0.11		ug/L		12/17/19 08:53	12/30/19 04:58	1
Nitroglycerin	ND		0.68		ug/L		12/17/19 08:53	12/30/19 04:58	1
PETN	ND		0.68		ug/L		12/17/19 08:53	12/30/19 04:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/17/19 08:53*	*12/28/19 15:48*	*1*
3,4-Dinitrotoluene	*79*		*79 - 111*	*12/17/19 08:53*	*12/30/19 04:58*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		01/06/20 13:35	01/10/20 15:21	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW04AW
Date Collected: 12/12/19 09:41
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-1
Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 15:21	1
3-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 15:21	1
4-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 15:21	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
HMX	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
RDX	**4.1**	**H**	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 15:21	1
Nitroglycerin	ND	H	0.70		ug/L		01/06/20 13:35	01/10/20 15:21	1
PETN	ND	H	0.70		ug/L		01/06/20 13:35	01/10/20 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*80*		*79 - 111*	*01/06/20 13:35*	*01/09/20 22:07*	*1*
3,4-Dinitrotoluene	*82*		*79 - 111*	*01/06/20 13:35*	*01/10/20 15:21*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**63**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 15:09	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**60**	**H**	5.0		ug/L		12/27/19 19:04	01/15/20 22:08	10

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW09BW
Lab Sample ID: 580-91438-2
Date Collected: 12/12/19 11:00
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 15:38	1
1,1,1-Trichloroethane	**5.8**		0.20		ug/L			12/16/19 15:38	1
1,1,2,2-Tetrachloroethane	**1.7**		0.20		ug/L			12/16/19 15:38	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 15:38	1
1,1-Dichloroethane	**9.7**		0.20		ug/L			12/16/19 15:38	1
1,1-Dichloroethene	**6.3**		0.20		ug/L			12/16/19 15:38	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 15:38	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 15:38	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 15:38	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 15:38	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 15:38	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 15:38	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:38	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 15:38	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 15:38	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 15:38	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:38	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 15:38	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 15:38	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 15:38	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 15:38	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 15:38	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 15:38	1
Benzene	ND		0.20		ug/L			12/16/19 15:38	1
Bromobenzene	ND		0.20		ug/L			12/16/19 15:38	1
Bromoform	ND		0.50		ug/L			12/16/19 15:38	1
Bromomethane	ND		0.50		ug/L			12/16/19 15:38	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 15:38	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 15:38	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 15:38	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 15:38	1
Chloroethane	ND		0.50		ug/L			12/16/19 15:38	1
Chloroform	ND		0.20		ug/L			12/16/19 15:38	1
Chloromethane	ND		0.50		ug/L			12/16/19 15:38	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 15:38	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 15:38	1
Dibromomethane	ND		0.20		ug/L			12/16/19 15:38	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 15:38	1
Dichlorodifluoromethane	**18**		0.40		ug/L			12/16/19 15:38	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 15:38	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 15:38	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 15:38	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 15:38	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 15:38	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 15:38	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 15:38	1
Naphthalene	ND		1.0		ug/L			12/16/19 15:38	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 15:38	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 15:38	1

Client Sample ID: 04Q19L4MW09BW
Lab Sample ID: 580-91438-2

Date Collected: 12/12/19 11:00
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 15:38	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 15:38	1
Styrene	ND		0.50		ug/L			12/16/19 15:38	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 15:38	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 15:38	1
Toluene	ND		0.20		ug/L			12/16/19 15:38	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 15:38	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 15:38	1
Trichloroethene	**0.47**		0.20		ug/L			12/16/19 15:38	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 15:38	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/16/19 15:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*12/16/19 15:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/16/19 15:38*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/16/19 15:38*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*12/16/19 15:38*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 05:51	1
2-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 05:51	1
3-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 05:51	1
4-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 05:51	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
HMX	**1.5**		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
Nitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
Tetryl	ND		0.11		ug/L		12/17/19 08:53	12/30/19 05:51	1
Nitroglycerin	ND		0.69		ug/L		12/17/19 08:53	12/30/19 05:51	1
PETN	ND		0.69		ug/L		12/17/19 08:53	12/30/19 05:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*12/17/19 08:53*	*12/28/19 16:54*	*1*
3,4-Dinitrotoluene	*81*		*79 - 111*	*12/17/19 08:53*	*12/30/19 05:51*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**23**		0.53		ug/L		12/17/19 08:53	12/31/19 02:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*91*		*79 - 111*	*12/17/19 08:53*	*12/30/19 23:21*	*5*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/17/19 08:53*	*12/31/19 02:24*	*5*

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW09BW
Date Collected: 12/12/19 11:00
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-2
Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		01/06/20 13:35	01/10/20 16:15	1
2-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 16:15	1
3-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 16:15	1
4-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 16:15	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
HMX	**1.7**	**H**	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 16:15	1
Nitroglycerin	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 16:15	1
PETN	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*83*		*79 - 111*	*01/06/20 13:35*	*01/09/20 23:14*	*1*
3,4-Dinitrotoluene	*86*		*79 - 111*	*01/06/20 13:35*	*01/10/20 16:15*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - REDL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**17**	**H**	0.53		ug/L		01/06/20 13:35	01/10/20 17:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*01/06/20 13:35*	*01/10/20 00:21*	*5*
3,4-Dinitrotoluene	*86*		*79 - 111*	*01/06/20 13:35*	*01/10/20 17:08*	*5*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**230**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 15:23	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**210**	**H**	25		ug/L		12/27/19 19:04	01/15/20 22:22	50

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW150W
Date Collected: 12/12/19 12:00
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 16:04	1
1,1,1-Trichloroethane	**5.9**		0.20		ug/L			12/16/19 16:04	1
1,1,2,2-Tetrachloroethane	**1.8**		0.20		ug/L			12/16/19 16:04	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 16:04	1
1,1-Dichloroethane	**9.6**		0.20		ug/L			12/16/19 16:04	1
1,1-Dichloroethene	**6.1**		0.20		ug/L			12/16/19 16:04	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 16:04	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 16:04	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 16:04	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 16:04	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 16:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 16:04	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:04	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 16:04	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 16:04	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 16:04	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:04	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 16:04	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:04	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 16:04	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 16:04	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 16:04	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 16:04	1
Benzene	ND		0.20		ug/L			12/16/19 16:04	1
Bromobenzene	ND		0.20		ug/L			12/16/19 16:04	1
Bromoform	ND		0.50		ug/L			12/16/19 16:04	1
Bromomethane	ND		0.50		ug/L			12/16/19 16:04	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 16:04	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 16:04	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 16:04	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 16:04	1
Chloroethane	ND		0.50		ug/L			12/16/19 16:04	1
Chloroform	ND		0.20		ug/L			12/16/19 16:04	1
Chloromethane	ND		0.50		ug/L			12/16/19 16:04	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:04	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:04	1
Dibromomethane	ND		0.20		ug/L			12/16/19 16:04	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 16:04	1
Dichlorodifluoromethane	**18**		0.40		ug/L			12/16/19 16:04	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 16:04	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 16:04	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 16:04	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 16:04	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 16:04	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 16:04	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 16:04	1
Naphthalene	ND		1.0		ug/L			12/16/19 16:04	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 16:04	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 16:04	1

Client Sample ID: 04Q19L4MW150W
Lab Sample ID: 580-91438-3

Date Collected: 12/12/19 12:00
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 16:04	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 16:04	1
Styrene	ND		0.50		ug/L			12/16/19 16:04	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 16:04	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 16:04	1
Toluene	ND		0.20		ug/L			12/16/19 16:04	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:04	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:04	1
Trichloroethene	**0.51**		0.20		ug/L			12/16/19 16:04	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 16:04	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/16/19 16:04*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/16/19 16:04*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/16/19 16:04*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/16/19 16:04*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/16/19 16:04*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 06:45	1
2-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 06:45	1
3-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 06:45	1
4-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 06:45	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
HMX	**1.7**		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
Nitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
Tetryl	ND		0.10		ug/L		12/17/19 08:53	12/30/19 06:45	1
Nitroglycerin	ND		0.68		ug/L		12/17/19 08:53	12/30/19 06:45	1
PETN	ND		0.68		ug/L		12/17/19 08:53	12/30/19 06:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*12/17/19 08:53*	*12/28/19 18:01*	*1*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/17/19 08:53*	*12/30/19 06:45*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**24**		0.52		ug/L		12/17/19 08:53	12/31/19 03:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*12/17/19 08:53*	*12/31/19 00:28*	*5*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/17/19 08:53*	*12/31/19 03:18*	*5*

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW150W
Date Collected: 12/12/19 12:00
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-3
Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		01/06/20 13:35	01/10/20 18:02	1
2-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 18:02	1
3-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 18:02	1
4-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 18:02	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
HMX	**1.7**	**H**	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 18:02	1
Nitroglycerin	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 18:02	1
PETN	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*82*		*79 - 111*	*01/06/20 13:35*	*01/10/20 01:27*	*1*
3,4-Dinitrotoluene	*85*		*79 - 111*	*01/06/20 13:35*	*01/10/20 18:02*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - REDL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**18**	**H**	0.53		ug/L		01/06/20 13:35	01/10/20 18:55	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*01/06/20 13:35*	*01/10/20 02:34*	*5*
3,4-Dinitrotoluene	*86*		*79 - 111*	*01/06/20 13:35*	*01/10/20 18:55*	*5*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**230**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 15:36	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**220**	**H**	25		ug/L		12/27/19 19:04	01/15/20 22:35	50

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10AW
Date Collected: 12/12/19 11:45
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 16:31	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/16/19 16:31	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/16/19 16:31	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 16:31	1
1,1-Dichloroethane	ND		0.20		ug/L			12/16/19 16:31	1
1,1-Dichloroethene	ND		0.20		ug/L			12/16/19 16:31	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 16:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 16:31	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 16:31	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 16:31	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 16:31	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 16:31	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:31	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 16:31	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 16:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 16:31	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:31	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 16:31	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:31	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 16:31	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 16:31	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 16:31	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 16:31	1
Benzene	ND		0.20		ug/L			12/16/19 16:31	1
Bromobenzene	ND		0.20		ug/L			12/16/19 16:31	1
Bromoform	ND		0.50		ug/L			12/16/19 16:31	1
Bromomethane	ND		0.50		ug/L			12/16/19 16:31	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 16:31	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 16:31	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 16:31	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 16:31	1
Chloroethane	ND		0.50		ug/L			12/16/19 16:31	1
Chloroform	ND		0.20		ug/L			12/16/19 16:31	1
Chloromethane	ND		0.50		ug/L			12/16/19 16:31	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:31	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:31	1
Dibromomethane	ND		0.20		ug/L			12/16/19 16:31	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 16:31	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/16/19 16:31	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 16:31	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 16:31	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 16:31	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 16:31	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 16:31	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 16:31	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 16:31	1
Naphthalene	ND		1.0		ug/L			12/16/19 16:31	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 16:31	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 16:31	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10AW
Date Collected: 12/12/19 11:45
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 16:31	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 16:31	1
Styrene	ND		0.50		ug/L			12/16/19 16:31	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 16:31	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 16:31	1
Toluene	ND		0.20		ug/L			12/16/19 16:31	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:31	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:31	1
Trichloroethene	ND		0.20		ug/L			12/16/19 16:31	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 16:31	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/16/19 16:31*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/16/19 16:31*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/16/19 16:31*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/16/19 16:31*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*12/16/19 16:31*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 09:25	1
2-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 09:25	1
3-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 09:25	1
4-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 09:25	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
HMX	**0.38**		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
RDX	**2.3**		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
Nitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
Tetryl	ND		0.11		ug/L		12/17/19 08:53	12/30/19 09:25	1
Nitroglycerin	ND		0.69		ug/L		12/17/19 08:53	12/30/19 09:25	1
PETN	ND		0.69		ug/L		12/17/19 08:53	12/30/19 09:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*12/17/19 08:53*	*12/28/19 19:08*	*1*
3,4-Dinitrotoluene	*83*		*79 - 111*	*12/17/19 08:53*	*12/30/19 09:25*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		01/06/20 13:35	01/10/20 19:49	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10AW
Date Collected: 12/12/19 11:45
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-4
Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 19:49	1
3-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 19:49	1
4-Nitrotoluene	ND	H	0.53		ug/L		01/06/20 13:35	01/10/20 19:49	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
HMX	**0.37**	**H**	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
RDX	**1.8**	**H**	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 19:49	1
Nitroglycerin	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 19:49	1
PETN	ND	H	0.69		ug/L		01/06/20 13:35	01/10/20 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*80*		*79 - 111*	*01/06/20 13:35*	*01/10/20 03:41*	*1*
3,4-Dinitrotoluene	*86*		*79 - 111*	*01/06/20 13:35*	*01/10/20 19:49*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**61**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 16:16	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**56**	**H**	5.0		ug/L		12/27/19 19:04	01/15/20 22:49	10

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10BW
Date Collected: 12/12/19 12:40
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 16:57	1
1,1,1-Trichloroethane	**7.1**		0.20		ug/L			12/16/19 16:57	1
1,1,2,2-Tetrachloroethane	**0.59**		0.20		ug/L			12/16/19 16:57	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 16:57	1
1,1-Dichloroethane	**9.1**		0.20		ug/L			12/16/19 16:57	1
1,1-Dichloroethene	**8.8**		0.20		ug/L			12/16/19 16:57	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 16:57	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 16:57	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 16:57	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 16:57	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 16:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 16:57	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:57	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 16:57	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 16:57	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 16:57	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:57	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 16:57	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 16:57	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 16:57	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 16:57	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 16:57	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 16:57	1
Benzene	ND		0.20		ug/L			12/16/19 16:57	1
Bromobenzene	ND		0.20		ug/L			12/16/19 16:57	1
Bromoform	ND		0.50		ug/L			12/16/19 16:57	1
Bromomethane	ND		0.50		ug/L			12/16/19 16:57	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 16:57	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 16:57	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 16:57	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 16:57	1
Chloroethane	ND		0.50		ug/L			12/16/19 16:57	1
Chloroform	ND		0.20		ug/L			12/16/19 16:57	1
Chloromethane	ND		0.50		ug/L			12/16/19 16:57	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:57	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:57	1
Dibromomethane	ND		0.20		ug/L			12/16/19 16:57	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 16:57	1
Dichlorodifluoromethane	**25**		0.40		ug/L			12/16/19 16:57	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 16:57	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 16:57	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 16:57	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 16:57	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 16:57	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 16:57	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 16:57	1
Naphthalene	ND		1.0		ug/L			12/16/19 16:57	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 16:57	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 16:57	1

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10BW
Date Collected: 12/12/19 12:40
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 16:57	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 16:57	1
Styrene	ND		0.50		ug/L			12/16/19 16:57	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 16:57	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 16:57	1
Toluene	ND		0.20		ug/L			12/16/19 16:57	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 16:57	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 16:57	1
Trichloroethene	**0.22**		0.20		ug/L			12/16/19 16:57	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 16:57	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*12/16/19 16:57*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/16/19 16:57*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/16/19 16:57*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/16/19 16:57*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/16/19 16:57*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 10:19	1
2-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 10:19	1
3-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 10:19	1
4-Nitrotoluene	ND		0.52		ug/L		12/17/19 08:53	12/30/19 10:19	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
HMX	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
Nitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
Tetryl	ND		0.10		ug/L		12/17/19 08:53	12/30/19 10:19	1
Nitroglycerin	ND		0.68		ug/L		12/17/19 08:53	12/30/19 10:19	1
PETN	ND		0.68		ug/L		12/17/19 08:53	12/30/19 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*12/17/19 08:53*	*12/28/19 21:21*	*1*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/17/19 08:53*	*12/30/19 10:19*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**13**		0.21		ug/L		12/17/19 08:53	12/31/19 04:12	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*224*	*X*	*79 - 111*	*12/17/19 08:53*	*12/31/19 01:35*	*5*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/17/19 08:53*	*12/31/19 04:12*	*2*

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW10BW

Date Collected: 12/12/19 12:40
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-5

Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
2-Amino-4,6-dinitrotoluene	ND	H	0.22		ug/L		01/06/20 13:35	01/10/20 20:43	1
2-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 20:43	1
3-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 20:43	1
4-Nitrotoluene	ND	H	0.54		ug/L		01/06/20 13:35	01/10/20 20:43	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
HMX	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 20:43	1
Nitroglycerin	ND	H	0.70		ug/L		01/06/20 13:35	01/10/20 20:43	1
PETN	ND	H	0.70		ug/L		01/06/20 13:35	01/10/20 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*80*		*79 - 111*	*01/06/20 13:35*	*01/10/20 04:48*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*01/06/20 13:35*	*01/10/20 20:43*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - REDL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**10**	**H**	0.22		ug/L		01/06/20 13:35	01/10/20 21:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*01/06/20 13:35*	*01/10/20 05:54*	*2*
3,4-Dinitrotoluene	*85*		*79 - 111*	*01/06/20 13:35*	*01/10/20 21:36*	*2*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**220**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 16:30	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**210**	**H**	25		ug/L		12/27/19 19:04	01/15/20 23:02	50

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW11BW
Lab Sample ID: 580-91438-6
Date Collected: 12/12/19 14:10
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 17:24	1
1,1,1-Trichloroethane	**4.5**		0.20		ug/L			12/16/19 17:24	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/16/19 17:24	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 17:24	1
1,1-Dichloroethane	**7.2**		0.20		ug/L			12/16/19 17:24	1
1,1-Dichloroethene	**4.5**		0.20		ug/L			12/16/19 17:24	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 17:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 17:24	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 17:24	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 17:24	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 17:24	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 17:24	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 17:24	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 17:24	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 17:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 17:24	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 17:24	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 17:24	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 17:24	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 17:24	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 17:24	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 17:24	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 17:24	1
Benzene	ND		0.20		ug/L			12/16/19 17:24	1
Bromobenzene	ND		0.20		ug/L			12/16/19 17:24	1
Bromoform	ND		0.50		ug/L			12/16/19 17:24	1
Bromomethane	ND		0.50		ug/L			12/16/19 17:24	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 17:24	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 17:24	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 17:24	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 17:24	1
Chloroethane	ND		0.50		ug/L			12/16/19 17:24	1
Chloroform	ND		0.20		ug/L			12/16/19 17:24	1
Chloromethane	ND		0.50		ug/L			12/16/19 17:24	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 17:24	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 17:24	1
Dibromomethane	ND		0.20		ug/L			12/16/19 17:24	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 17:24	1
Dichlorodifluoromethane	**14**		0.40		ug/L			12/16/19 17:24	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 17:24	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 17:24	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 17:24	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 17:24	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 17:24	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 17:24	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 17:24	1
Naphthalene	ND		1.0		ug/L			12/16/19 17:24	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 17:24	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 17:24	1

Client Sample ID: 04Q19L4MW11BW
Lab Sample ID: 580-91438-6
Date Collected: 12/12/19 14:10
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 17:24	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 17:24	1
Styrene	ND		0.50		ug/L			12/16/19 17:24	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 17:24	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 17:24	1
Toluene	ND		0.20		ug/L			12/16/19 17:24	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 17:24	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 17:24	1
Trichloroethene	ND		0.20		ug/L			12/16/19 17:24	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 17:24	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/16/19 17:24*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/16/19 17:24*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/16/19 17:24*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/16/19 17:24*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/16/19 17:24*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
2-Amino-4,6-dinitrotoluene	ND	*	0.21		ug/L		12/17/19 08:53	12/30/19 11:13	1
2-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 11:13	1
3-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 11:13	1
4-Nitrotoluene	ND		0.53		ug/L		12/17/19 08:53	12/30/19 11:13	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
HMX	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
Nitrobenzene	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
Tetryl	ND		0.11		ug/L		12/17/19 08:53	12/30/19 11:13	1
Nitroglycerin	ND		0.69		ug/L		12/17/19 08:53	12/30/19 11:13	1
PETN	ND		0.69		ug/L		12/17/19 08:53	12/30/19 11:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*12/17/19 08:53*	*12/28/19 22:28*	*1*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/17/19 08:53*	*12/30/19 11:13*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**53**		1.1		ug/L		12/17/19 08:53	12/31/19 05:05	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*100*		*79 - 111*	*12/17/19 08:53*	*12/31/19 02:41*	*10*
3,4-Dinitrotoluene	*88*		*79 - 111*	*12/17/19 08:53*	*12/31/19 05:05*	*10*

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW11BW

Date Collected: 12/12/19 14:10
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-6

Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
2-Amino-4,6-dinitrotoluene	ND	H	0.22		ug/L		01/06/20 13:35	01/10/20 22:30	1
2-Nitrotoluene	ND	H	0.55		ug/L		01/06/20 13:35	01/10/20 22:30	1
3-Nitrotoluene	ND	H	0.55		ug/L		01/06/20 13:35	01/10/20 22:30	1
4-Nitrotoluene	ND	H	0.55		ug/L		01/06/20 13:35	01/10/20 22:30	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
HMX	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
Nitrobenzene	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
Tetryl	ND	H	0.11		ug/L		01/06/20 13:35	01/10/20 22:30	1
Nitroglycerin	ND	H	0.71		ug/L		01/06/20 13:35	01/10/20 22:30	1
PETN	ND	H	0.71		ug/L		01/06/20 13:35	01/10/20 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*79*		*79 - 111*	*01/06/20 13:35*	*01/10/20 07:01*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*01/06/20 13:35*	*01/10/20 22:30*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - REDL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**39**	**H**	1.1		ug/L		01/06/20 13:35	01/10/20 23:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*01/06/20 13:35*	*01/10/20 08:08*	*10*
3,4-Dinitrotoluene	*87*		*79 - 111*	*01/06/20 13:35*	*01/10/20 23:24*	*10*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**580**	**E**	0.50		ug/L		12/27/19 19:04	01/03/20 16:43	1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**670**	**H**	50		ug/L		12/27/19 19:04	01/15/20 23:15	100

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: TB121219
Date Collected: 12/12/19 00:01
Date Received: 12/13/19 12:50

Lab Sample ID: 580-91438-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 13:25	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/16/19 13:25	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/16/19 13:25	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 13:25	1
1,1-Dichloroethane	ND		0.20		ug/L			12/16/19 13:25	1
1,1-Dichloroethene	ND		0.20		ug/L			12/16/19 13:25	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 13:25	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 13:25	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 13:25	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 13:25	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 13:25	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 13:25	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 13:25	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 13:25	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 13:25	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 13:25	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 13:25	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 13:25	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 13:25	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 13:25	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 13:25	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 13:25	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 13:25	1
Benzene	ND		0.20		ug/L			12/16/19 13:25	1
Bromobenzene	ND		0.20		ug/L			12/16/19 13:25	1
Bromoform	ND		0.50		ug/L			12/16/19 13:25	1
Bromomethane	ND		0.50		ug/L			12/16/19 13:25	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 13:25	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 13:25	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 13:25	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 13:25	1
Chloroethane	ND		0.50		ug/L			12/16/19 13:25	1
Chloroform	ND		0.20		ug/L			12/16/19 13:25	1
Chloromethane	ND		0.50		ug/L			12/16/19 13:25	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 13:25	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 13:25	1
Dibromomethane	ND		0.20		ug/L			12/16/19 13:25	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 13:25	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/16/19 13:25	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 13:25	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 13:25	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 13:25	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 13:25	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 13:25	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 13:25	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 13:25	1
Naphthalene	ND		1.0		ug/L			12/16/19 13:25	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 13:25	1
N-Propylbenzene	ND		0.30		ug/L			12/16/19 13:25	1

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: TB121219
Lab Sample ID: 580-91438-7
Date Collected: 12/12/19 00:01
Matrix: Water
Date Received: 12/13/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/16/19 13:25	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 13:25	1
Styrene	ND		0.50		ug/L			12/16/19 13:25	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 13:25	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 13:25	1
Toluene	ND		0.20		ug/L			12/16/19 13:25	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 13:25	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 13:25	1
Trichloroethene	ND		0.20		ug/L			12/16/19 13:25	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 13:25	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 13:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/16/19 13:25*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*12/16/19 13:25*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/16/19 13:25*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/16/19 13:25*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/16/19 13:25*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318933/9
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/16/19 12:32	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/16/19 12:32	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/16/19 12:32	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/16/19 12:32	1
1,1-Dichloroethane	ND		0.20		ug/L			12/16/19 12:32	1
1,1-Dichloroethene	ND		0.20		ug/L			12/16/19 12:32	1
1,1-Dichloropropene	ND		0.20		ug/L			12/16/19 12:32	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/16/19 12:32	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/16/19 12:32	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/16/19 12:32	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/16/19 12:32	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/16/19 12:32	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/16/19 12:32	1
1,2-Dichloroethane	ND		0.20		ug/L			12/16/19 12:32	1
1,2-Dichloropropane	ND		0.20		ug/L			12/16/19 12:32	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/16/19 12:32	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/16/19 12:32	1
1,3-Dichloropropane	ND		0.20		ug/L			12/16/19 12:32	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/16/19 12:32	1
2,2-Dichloropropane	ND		0.50		ug/L			12/16/19 12:32	1
2-Chlorotoluene	ND		0.50		ug/L			12/16/19 12:32	1
4-Chlorotoluene	ND		0.30		ug/L			12/16/19 12:32	1
4-Isopropyltoluene	ND		0.30		ug/L			12/16/19 12:32	1
Benzene	ND		0.20		ug/L			12/16/19 12:32	1
Bromobenzene	ND		0.20		ug/L			12/16/19 12:32	1
Bromoform	ND		0.50		ug/L			12/16/19 12:32	1
Bromomethane	ND		0.50		ug/L			12/16/19 12:32	1
Carbon tetrachloride	ND		0.20		ug/L			12/16/19 12:32	1
Chlorobenzene	ND		0.20		ug/L			12/16/19 12:32	1
Chlorobromomethane	ND		0.20		ug/L			12/16/19 12:32	1
Chlorodibromomethane	ND		0.20		ug/L			12/16/19 12:32	1
Chloroethane	ND		0.50		ug/L			12/16/19 12:32	1
Chloroform	ND		0.20		ug/L			12/16/19 12:32	1
Chloromethane	ND		0.50		ug/L			12/16/19 12:32	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 12:32	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 12:32	1
Dibromomethane	ND		0.20		ug/L			12/16/19 12:32	1
Dichlorobromomethane	ND		0.20		ug/L			12/16/19 12:32	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/16/19 12:32	1
Ethylbenzene	ND		0.20		ug/L			12/16/19 12:32	1
Ethylene Dibromide	ND		0.10		ug/L			12/16/19 12:32	1
Hexachlorobutadiene	ND		0.50		ug/L			12/16/19 12:32	1
Isopropylbenzene	ND		1.0		ug/L			12/16/19 12:32	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/16/19 12:32	1
Methylene Chloride	ND		5.0		ug/L			12/16/19 12:32	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/16/19 12:32	1
Naphthalene	ND		1.0		ug/L			12/16/19 12:32	1
n-Butylbenzene	ND		0.50		ug/L			12/16/19 12:32	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318933/9
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/16/19 12:32	1
o-Xylene	ND		0.50		ug/L			12/16/19 12:32	1
sec-Butylbenzene	ND		1.0		ug/L			12/16/19 12:32	1
Styrene	ND		0.50		ug/L			12/16/19 12:32	1
tert-Butylbenzene	ND		0.50		ug/L			12/16/19 12:32	1
Tetrachloroethene	ND		0.50		ug/L			12/16/19 12:32	1
Toluene	ND		0.20		ug/L			12/16/19 12:32	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/16/19 12:32	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/16/19 12:32	1
Trichloroethene	ND		0.20		ug/L			12/16/19 12:32	1
Trichlorofluoromethane	ND		0.50		ug/L			12/16/19 12:32	1
Vinyl chloride	ND		0.020		ug/L			12/16/19 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/16/19 12:32*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/16/19 12:32*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/16/19 12:32*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/16/19 12:32*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*12/16/19 12:32*	*1*

Lab Sample ID: LCS 580-318933/6
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.40		ug/L		108	79 - 127
1,1,1-Trichloroethane	5.00	5.15		ug/L		103	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.75		ug/L		95	69 - 139
1,1,2-Trichloroethane	5.00	4.86		ug/L		97	80 - 127
1,1-Dichloroethane	5.00	5.18		ug/L		104	74 - 135
1,1-Dichloroethene	5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	5.24		ug/L		105	72 - 132
1,2,3-Trichlorobenzene	5.00	5.16		ug/L		103	75 - 137
1,2,3-Trichloropropane	5.00	4.67		ug/L		93	80 - 127
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	79 - 130
1,2,4-Trimethylbenzene	5.00	5.08		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.92		ug/L		98	69 - 130
1,2-Dichlorobenzene	5.00	4.86		ug/L		97	80 - 129
1,2-Dichloroethane	5.00	4.63		ug/L		93	74 - 130
1,2-Dichloropropane	5.00	4.79		ug/L		96	80 - 130
1,3,5-Trimethylbenzene	5.00	5.21		ug/L		104	80 - 139
1,3-Dichlorobenzene	5.00	4.86		ug/L		97	80 - 130
1,3-Dichloropropane	5.00	4.90		ug/L		98	80 - 130
1,4-Dichlorobenzene	5.00	4.60		ug/L		92	80 - 129
2,2-Dichloropropane	5.00	4.87		ug/L		97	58 - 150
2-Chlorotoluene	5.00	5.07		ug/L		101	80 - 136
4-Chlorotoluene	5.00	5.06		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	5.02		ug/L		100	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318933/6
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.09		ug/L		102	73 - 133
Bromobenzene	5.00	4.78		ug/L		96	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.23		ug/L		105	68 - 120
Carbon tetrachloride	5.00	5.13		ug/L		103	71 - 132
Chlorobenzene	5.00	4.75		ug/L		95	80 - 123
Chlorobromomethane	5.00	5.03		ug/L		101	79 - 131
Chlorodibromomethane	5.00	4.62		ug/L		92	76 - 131
Chloroethane	5.00	5.15		ug/L		103	49 - 135
Chloroform	5.00	5.10		ug/L		102	80 - 130
Chloromethane	5.00	4.39		ug/L		88	32 - 143
cis-1,2-Dichloroethene	5.00	5.27		ug/L		105	72 - 130
cis-1,3-Dichloropropene	5.00	5.12		ug/L		102	66 - 141
Dibromomethane	5.00	4.94		ug/L		99	65 - 141
Dichlorobromomethane	5.00	4.43		ug/L		89	74 - 131
Dichlorodifluoromethane	5.00	4.10		ug/L		82	20 - 137
Ethylbenzene	5.00	5.26		ug/L		105	80 - 130
Ethylene Dibromide	5.00	4.92		ug/L		98	80 - 126
Hexachlorobutadiene	5.00	4.85		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.28		ug/L		106	75 - 137
Methyl tert-butyl ether	5.00	5.26		ug/L		105	60 - 150
Methylene Chloride	5.00	5.16		ug/L		103	75 - 134
m-Xylene & p-Xylene	5.00	5.56		ug/L		111	78 - 130
Naphthalene	5.00	5.00		ug/L		100	64 - 132
n-Butylbenzene	5.00	5.15		ug/L		103	73 - 135
N-Propylbenzene	5.00	5.39		ug/L		108	77 - 142
o-Xylene	5.00	5.09		ug/L		102	80 - 139
sec-Butylbenzene	5.00	5.06		ug/L		101	78 - 140
Styrene	5.00	4.79		ug/L		96	74 - 136
tert-Butylbenzene	5.00	4.66		ug/L		93	77 - 140
Tetrachloroethene	5.00	5.24		ug/L		105	75 - 131
Toluene	5.00	4.80		ug/L		96	80 - 126
trans-1,2-Dichloroethene	5.00	5.10		ug/L		102	63 - 133
trans-1,3-Dichloropropene	5.00	4.49		ug/L		90	71 - 128
Trichloroethene	5.00	5.11		ug/L		102	72 - 136
Trichlorofluoromethane	5.00	4.98		ug/L		100	60 - 132
Vinyl chloride	5.00	5.00		ug/L		100	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*98*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318933/7
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.20		ug/L		104	79 - 127	4	20
1,1,1-Trichloroethane	5.00	5.03		ug/L		101	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	4.82		ug/L		96	69 - 139	1	22
1,1,2-Trichloroethane	5.00	4.98		ug/L		100	80 - 127	2	19
1,1-Dichloroethane	5.00	5.05		ug/L		101	74 - 135	2	20
1,1-Dichloroethene	5.00	5.05		ug/L		101	71 - 126	4	17
1,1-Dichloropropene	5.00	5.17		ug/L		103	72 - 132	1	13
1,2,3-Trichlorobenzene	5.00	4.94		ug/L		99	75 - 137	5	20
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127	4	20
1,2,4-Trichlorobenzene	5.00	4.83		ug/L		97	79 - 130	4	20
1,2,4-Trimethylbenzene	5.00	5.01		ug/L		100	78 - 136	1	20
1,2-Dibromo-3-Chloropropane	5.00	4.90		ug/L		98	69 - 130	0	26
1,2-Dichlorobenzene	5.00	4.80		ug/L		96	80 - 129	1	14
1,2-Dichloroethane	5.00	4.62		ug/L		92	74 - 130	0	15
1,2-Dichloropropane	5.00	4.93		ug/L		99	80 - 130	3	14
1,3,5-Trimethylbenzene	5.00	5.07		ug/L		101	80 - 139	3	20
1,3-Dichlorobenzene	5.00	4.91		ug/L		98	80 - 130	1	12
1,3-Dichloropropane	5.00	5.10		ug/L		102	80 - 130	4	19
1,4-Dichlorobenzene	5.00	4.66		ug/L		93	80 - 129	1	11
2,2-Dichloropropane	5.00	4.60		ug/L		92	58 - 150	6	28
2-Chlorotoluene	5.00	5.05		ug/L		101	80 - 136	1	20
4-Chlorotoluene	5.00	5.14		ug/L		103	80 - 130	2	20
4-Isopropyltoluene	5.00	4.92		ug/L		98	78 - 132	2	14
Benzene	5.00	5.05		ug/L		101	73 - 133	1	20
Bromobenzene	5.00	4.86		ug/L		97	80 - 130	2	20
Bromoform	5.00	4.63		ug/L		93	69 - 137	0	20
Bromomethane	5.00	5.02		ug/L		100	68 - 120	4	18
Carbon tetrachloride	5.00	5.01		ug/L		100	71 - 132	2	15
Chlorobenzene	5.00	4.77		ug/L		95	80 - 123	0	12
Chlorobromomethane	5.00	4.93		ug/L		99	79 - 131	2	20
Chlorodibromomethane	5.00	4.67		ug/L		93	76 - 131	1	20
Chloroethane	5.00	4.91		ug/L		98	49 - 135	5	27
Chloroform	5.00	4.98		ug/L		100	80 - 130	2	20
Chloromethane	5.00	4.16		ug/L		83	32 - 143	5	23
cis-1,2-Dichloroethene	5.00	5.11		ug/L		102	72 - 130	3	20
cis-1,3-Dichloropropene	5.00	5.16		ug/L		103	66 - 141	1	22
Dibromomethane	5.00	5.03		ug/L		101	65 - 141	2	20
Dichlorobromomethane	5.00	4.52		ug/L		90	74 - 131	2	20
Dichlorodifluoromethane	5.00	4.13		ug/L		83	20 - 137	1	22
Ethylbenzene	5.00	5.21		ug/L		104	80 - 130	1	20
Ethylene Dibromide	5.00	5.06		ug/L		101	80 - 126	3	20
Hexachlorobutadiene	5.00	4.64		ug/L		93	72 - 138	4	20
Isopropylbenzene	5.00	5.09		ug/L		102	75 - 137	4	20
Methyl tert-butyl ether	5.00	5.30		ug/L		106	60 - 150	1	25
Methylene Chloride	5.00	5.00		ug/L		100	75 - 134	3	18
m-Xylene & p-Xylene	5.00	5.50		ug/L		110	78 - 130	1	20
Naphthalene	5.00	4.86		ug/L		97	64 - 132	3	20
n-Butylbenzene	5.00	5.00		ug/L		100	73 - 135	3	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318933/7
Matrix: Water
Analysis Batch: 318933

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.35		ug/L		107	77 - 142	1	20
o-Xylene			5.00	4.96		ug/L		99	80 - 139	3	20
sec-Butylbenzene			5.00	4.99		ug/L		100	78 - 140	1	20
Styrene			5.00	4.80		ug/L		96	74 - 136	0	20
tert-Butylbenzene			5.00	4.59		ug/L		92	77 - 140	2	20
Tetrachloroethene			5.00	5.06		ug/L		101	75 - 131	3	20
Toluene			5.00	4.69		ug/L		94	80 - 126	2	20
trans-1,2-Dichloroethene			5.00	4.89		ug/L		98	63 - 133	4	17
trans-1,3-Dichloropropene			5.00	4.69		ug/L		94	71 - 128	4	21
Trichloroethene			5.00	5.02		ug/L		100	72 - 136	2	14
Trichlorofluoromethane			5.00	4.82		ug/L		96	60 - 132	3	20
Vinyl chloride			5.00	4.75		ug/L		95	52 - 128	5	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-345977/1-A
Matrix: Water
Analysis Batch: 348459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 345977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/17/19 08:53	12/30/19 01:23	1
2-Nitrotoluene	ND		0.50		ug/L		12/17/19 08:53	12/30/19 01:23	1
3-Nitrotoluene	ND		0.50		ug/L		12/17/19 08:53	12/30/19 01:23	1
4-Nitrotoluene	ND		0.50		ug/L		12/17/19 08:53	12/30/19 01:23	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
HMX	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
RDX	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
Nitrobenzene	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
Tetryl	ND		0.10		ug/L		12/17/19 08:53	12/30/19 01:23	1
Nitroglycerin	ND		0.65		ug/L		12/17/19 08:53	12/30/19 01:23	1
PETN	ND		0.65		ug/L		12/17/19 08:53	12/30/19 01:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*64*	*X*	*79 - 111*	*12/17/19 08:53*	*12/30/19 01:23*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-345977/2-A
Matrix: Water
Analysis Batch: 348459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 345977

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	1.02		ug/L		102	74 - 120		
1,3-Dinitrobenzene			1.00	1.05		ug/L		105	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.897		ug/L		90	69 - 111		
2,4-Dinitrotoluene			1.00	1.01		ug/L		101	70 - 119		
2,6-Dinitrotoluene			1.00	1.00		ug/L		100	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.24	*	ug/L		124	77 - 123		
2-Nitrotoluene			1.00	0.907		ug/L		91	64 - 120		
3-Nitrotoluene			1.00	0.970		ug/L		97	67 - 114		
4-Nitrotoluene			1.00	0.976		ug/L		98	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.00		ug/L		100	68 - 113		
HMX			1.00	1.13		ug/L		113	67 - 115		
RDX			1.00	1.15		ug/L		115	68 - 122		
Nitrobenzene			1.00	1.04		ug/L		104	69 - 119		
Tetryl			1.00	0.854		ug/L		85	66 - 105		
Nitroglycerin			5.00	4.53		ug/L		91	85 - 115		
PETN			5.00	4.35		ug/L		87	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: LCSD 320-345977/3-A
Matrix: Water
Analysis Batch: 348459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 345977

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	1.02		ug/L		102	74 - 120	0	29
1,3-Dinitrobenzene			1.00	1.06		ug/L		106	72 - 123	1	29
2,4,6-Trinitrotoluene			1.00	0.909		ug/L		91	69 - 111	1	28
2,4-Dinitrotoluene			1.00	1.02		ug/L		102	70 - 119	1	30
2,6-Dinitrotoluene			1.00	1.01		ug/L		101	71 - 119	1	29
2-Amino-4,6-dinitrotoluene			1.00	1.14		ug/L		114	77 - 123	8	27
2-Nitrotoluene			1.00	0.954		ug/L		95	64 - 120	5	36
3-Nitrotoluene			1.00	0.983		ug/L		98	67 - 114	1	31
4-Nitrotoluene			1.00	0.999		ug/L		100	67 - 115	2	32
4-Amino-2,6-dinitrotoluene			1.00	0.992		ug/L		99	68 - 113	1	30
HMX			1.00	1.13		ug/L		113	67 - 115	0	32
RDX			1.00	1.15		ug/L		115	68 - 122	0	32
Nitrobenzene			1.00	1.06		ug/L		106	69 - 119	2	31
Tetryl			1.00	0.919		ug/L		92	66 - 105	7	26
Nitroglycerin			5.00	4.60		ug/L		92	85 - 115	2	15
PETN			5.00	4.42		ug/L		88	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*87*		*79 - 111*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: MB 320-349194/1-A
Matrix: Water
Analysis Batch: 349682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 349194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
1,3-Dinitrobenzene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
2,4-Dinitrotoluene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
2,6-Dinitrotoluene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		01/06/20 13:35	01/10/20 09:06	1
2-Nitrotoluene	ND		0.50		ug/L		01/06/20 13:35	01/10/20 09:06	1
3-Nitrotoluene	ND		0.50		ug/L		01/06/20 13:35	01/10/20 09:06	1
4-Nitrotoluene	ND		0.50		ug/L		01/06/20 13:35	01/10/20 09:06	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
HMX	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
RDX	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
Nitrobenzene	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
Tetryl	ND		0.10		ug/L		01/06/20 13:35	01/10/20 09:06	1
Nitroglycerin	ND		0.65		ug/L		01/06/20 13:35	01/10/20 09:06	1
PETN	ND		0.65		ug/L		01/06/20 13:35	01/10/20 09:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*01/06/20 13:35*	*01/10/20 09:06*	*1*

Lab Sample ID: LCS 320-349194/2-A
Matrix: Water
Analysis Batch: 349682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 349194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	1.02		ug/L		102	74 - 120
1,3-Dinitrobenzene	1.00	0.919		ug/L		92	72 - 123
2,4,6-Trinitrotoluene	1.00	0.895		ug/L		90	69 - 111
2,4-Dinitrotoluene	1.00	0.924		ug/L		92	70 - 119
2,6-Dinitrotoluene	1.00	0.935		ug/L		93	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.971		ug/L		97	77 - 123
2-Nitrotoluene	1.00	0.912		ug/L		91	64 - 120
3-Nitrotoluene	1.00	0.904		ug/L		90	67 - 114
4-Nitrotoluene	1.00	0.924		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.913		ug/L		91	68 - 113
HMX	1.00	1.08		ug/L		108	67 - 115
RDX	1.00	0.922		ug/L		92	68 - 122
Nitrobenzene	1.00	0.963		ug/L		96	69 - 119
Tetryl	1.00	0.899		ug/L		90	66 - 105
Nitroglycerin	5.00	4.67		ug/L		93	85 - 115
PETN	5.00	4.45		ug/L		89	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*87*		*79 - 111*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCSD 320-349194/3-A
Matrix: Water
Analysis Batch: 349682

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 349194

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	1.00		ug/L		100	74 - 120	1	29
1,3-Dinitrobenzene			1.00	0.931		ug/L		93	72 - 123	1	29
2,4,6-Trinitrotoluene			1.00	0.892		ug/L		89	69 - 111	0	28
2,4-Dinitrotoluene			1.00	0.923		ug/L		92	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.934		ug/L		93	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	0.979		ug/L		98	77 - 123	1	27
2-Nitrotoluene			1.00	0.907		ug/L		91	64 - 120	1	36
3-Nitrotoluene			1.00	0.916		ug/L		92	67 - 114	1	31
4-Nitrotoluene			1.00	0.926		ug/L		93	67 - 115	0	32
4-Amino-2,6-dinitrotoluene			1.00	0.917		ug/L		92	68 - 113	0	30
HMX			1.00	1.08		ug/L		108	67 - 115	0	32
RDX			1.00	0.911		ug/L		91	68 - 122	1	32
Nitrobenzene			1.00	0.976		ug/L		98	69 - 119	1	31
Tetryl			1.00	0.909		ug/L		91	66 - 105	1	26
Nitroglycerin			5.00	4.54		ug/L		91	85 - 115	3	15
PETN			5.00	4.34		ug/L		87	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*89*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-348268/1-A
Matrix: Water
Analysis Batch: 349028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/27/19 19:04	01/03/20 12:41	1

Lab Sample ID: LCS 320-348268/2-A
Matrix: Water
Analysis Batch: 349028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			5.00	5.04		ug/L		101	80 - 120		

Lab Chronicle

Client: PBS Engineering and Environmental
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-91438-1

Client Sample ID: 04Q19L4MW04AW

Lab Sample ID: 580-91438-1

Date Collected: 12/12/19 09:41

Matrix: Water

Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 15:11	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 04:58	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 15:21	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 15:48	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/09/20 22:07	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 15:09	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	10	351196	01/15/20 22:08	JY1	TAL SAC

Client Sample ID: 04Q19L4MW09BW

Lab Sample ID: 580-91438-2

Date Collected: 12/12/19 11:00

Matrix: Water

Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 15:38	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 05:51	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	5	348459	12/31/19 02:24	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 16:15	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	349682	01/10/20 17:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 16:54	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	5	348671	12/30/19 23:21	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/09/20 23:14	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	349965	01/10/20 00:21	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 15:23	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	50	351196	01/15/20 22:22	JY1	TAL SAC

Client Sample ID: 04Q19L4MW150W

Lab Sample ID: 580-91438-3

Date Collected: 12/12/19 12:00

Matrix: Water

Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 16:04	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 06:45	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	5	348459	12/31/19 03:18	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 18:02	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	349682	01/10/20 18:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 18:01	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	5	348671	12/31/19 00:28	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/10/20 01:27	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	349965	01/10/20 02:34	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 15:36	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	50	351196	01/15/20 22:35	JY1	TAL SAC

Client Sample ID: 04Q19L4MW10AW

Lab Sample ID: 580-91438-4

Date Collected: 12/12/19 11:45

Matrix: Water

Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 16:31	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 09:25	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 19:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 19:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/10/20 03:41	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 16:16	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	10	351196	01/15/20 22:49	JY1	TAL SAC

Client Sample ID: 04Q19L4MW10BW
Lab Sample ID: 580-91438-5

Date Collected: 12/12/19 12:40
Matrix: Water
Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 16:57	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 10:19	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	2	348459	12/31/19 04:12	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 20:43	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	2	349682	01/10/20 21:36	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 21:21	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	5	348671	12/31/19 01:35	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/10/20 04:48	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	2	349965	01/10/20 05:54	AJC	TAL SAC
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 16:30	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	50	351196	01/15/20 23:02	JY1	TAL SAC

Client Sample ID: 04Q19L4MW11BW
Lab Sample ID: 580-91438-6

Date Collected: 12/12/19 14:10
Matrix: Water
Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 17:24	DCV	TAL SEA
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348459	12/30/19 11:13	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	10	348459	12/31/19 05:05	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349682	01/10/20 22:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	10	349682	01/10/20 23:24	AJC	TAL SAC
Total/NA	Prep	8330-Prep			345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B		1	348248	12/28/19 22:28	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		345977	12/17/19 08:53	TCL	TAL SAC
Total/NA	Analysis	8330B	DL	10	348671	12/31/19 02:41	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	349965	01/10/20 07:01	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		349194	01/06/20 13:35	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	10	349965	01/10/20 08:08	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW11BW
Lab Sample ID: 580-91438-6
Date Collected: 12/12/19 14:10
Matrix: Water
Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850		1	349028	01/03/20 16:43	JRB	TAL SAC
Total/NA	Prep	Filtration	DL		348268	12/27/19 19:04	JER	TAL SAC
Total/NA	Analysis	6850	DL	100	351196	01/15/20 23:15	JY1	TAL SAC

Client Sample ID: TB121219
Lab Sample ID: 580-91438-7
Date Collected: 12/12/19 00:01
Matrix: Water
Date Received: 12/13/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318933	12/16/19 13:25	DCV	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20 *
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20 *
Hawaii	State	<cert No.>	01-29-20 *
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20 *
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20 *
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19 *
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91438-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91438-1	04Q19L4MW04AW	Water	12/12/19 09:41	12/13/19 12:50	
580-91438-2	04Q19L4MW09BW	Water	12/12/19 11:00	12/13/19 12:50	
580-91438-3	04Q19L4MW150W	Water	12/12/19 12:00	12/13/19 12:50	
580-91438-4	04Q19L4MW10AW	Water	12/12/19 11:45	12/13/19 12:50	
580-91438-5	04Q19L4MW10BW	Water	12/12/19 12:40	12/13/19 12:50	
580-91438-6	04Q19L4MW11BW	Water	12/12/19 14:10	12/13/19 12:50	
580-91438-7	TB121219	Water	12/12/19 00:01	12/13/19 12:50	

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information			
Client Contact: Matt Randall and Scott Brausten	Sampler: Matt R. + Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):
	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com	
Company: PBS Engineering and Environmental			COC No: 580-31510-10297.1
Address: 4412 SW Corbett Ave	Due Date Requested:		Page: Page 1 of 1
City: Portland	TAT Requested (days):		Job #:
State, Zip: OR, 97239			
Phone:	PO #: Purchase Order not required		
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:		
Project Name: Camp Bonneville	Project #: 58011152		
Site:	SSOW#:		

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8260C_LL (Full list Explosives 8330)	8330A Nitroaromatics and Nitramines (VOCs)	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
04Q19L4MW04AW	12/12/19	0941	G	W	N	N	X	X	X	6	
04Q19L4MW09BW	↓	1100	↓	↓	↓	↓	↓	↓	↓	↓	
04Q19L4MW15OW	↓	1200	↓	↓	↓	↓	↓	↓	↓	↓	
04Q19L4MW10AW	↓	1145	↓	↓	↓	↓	↓	↓	↓	↓	
04Q19L4MW10BW	↓	1240	↓	↓	↓	↓	↓	↓	↓		
04Q19L4MW11BW	↓	1410	↓	↓	↓	↓	↓	↓	↓		
TB121219	↓	~	↓	↓	N	N			X		

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

580-91438 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Special Instructions/QC Requirements: 2.0, 4.1

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Relinquished by: [signature]	Date/Time: 12/12/19 1600	Company: PBS	Received by: [signature]	Date/Time: 12/13/19 1205	Company: M.E.
Relinquished by: [signature]	Date/Time: 12/13/19 1250	Company: M.E.	Received by: [signature]	Date/Time: 12/13/19 1250	Company: TAPOR
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. + Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:
Address: 4412 SW Corbett Ave	Due Date Requested:			
City: Portland	TAT Requested (days):			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	8330 Full list Explosives	8330A Nitroaromatics and Nitramines	VOCs	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X					X	
04Q19L4MW04AW	12/12/19	0941	G	W	Y	N	X	X	X		6	
04Q19L4MW09BW		1100										
04Q19L4MW15OW		1200										
04Q19L4MW10AW		1145										
04Q19L4MW10BW		1240										
04Q19L4MW11BW		1410										
TB12/19		—			N	N				X		

580-91438 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: 20, 4.1

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/12/19 1600	PBS		12/13/19 1205	M.E.
2		12/13/19 1250	M.E.		12/13/19 1250	TAPOR
3		12/13/19 1700	TAPOR		12/14/19 1000	TAS

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 7=3.3

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-73044.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91438-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 1/2/2020			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19L4MW04AW (580-91438-1)	12/12/19	09:41 Pacific		Water			X	X	3	
04Q19L4MW09BW (580-91438-2)	12/12/19	11:00 Pacific		Water			X	X	3	
04Q19L4MW150W (580-91438-3)	12/12/19	12:00 Pacific		Water			X	X	3	
04Q19L4MW10AW (580-91438-4)	12/12/19	11:45 Pacific		Water			X	X	3	
04Q19L4MW10BW (580-91438-5)	12/12/19	12:40 Pacific		Water			X	X	3	
04Q19L4MW11BW (580-91438-6)	12/12/19	14:10 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/13/19 1700	TAPOR	Juan Guzman	12/14/19 9:00	ETA-SAC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.4°C

IR 12/14/19

Ver: 01/16/2019

1/20/2020

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91438-1

Login Number: 91438
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91438-1

Login Number: 91438
List Number: 2
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/14/19 11:31 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619579
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento
Sample Receiving Notes


580-91438 Field Sheet

Tracking # : 1250-7882-8086

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Job: _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes: _____

Therm. ID: Ak-12 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 619579

Cooler ID: —

Temp Observed: 5.6 °C Corrected: 5.6 °C

From: Temp Blank ☐ Sample ☑

During Initial Triage	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☐	☐	☐

Initials: JLT Date: 12/14/19

During Labeling	Yes	No	NA
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
NCM Filed	☐	☐	☑

Initials: JLT Date: 12/14/19

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W22-E / ~~W19-A~~ W9-A JLT 12/14/19

Appendix C

TestAmerica, Level III Data Package

(Electronic files provided on enclosed CD)

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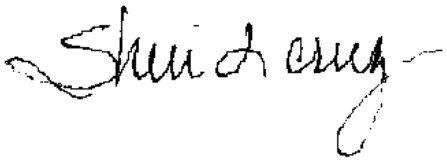
ANALYTICAL REPORT

Job Number: 580-91195-1

Job Description: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, OR 97239

Attention: Scott Braunsten



Approved for release.
Sheri L Cruz
Project Manager I
1/7/2020 3:04 PM

Sheri L Cruz, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
sheri.cruz@testamericainc.com
01/07/2020

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins TestAmerica, Seattle
5755 8th Street East, Tacoma, WA 98424
Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: PBS Engineering and Environmental

Project: Camp Bonneville Groundwater 2019-2020

Report Number: 580-91195-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/04/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 4.1º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3) and TB120319 (580-91195-4) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 12/05/2019 and 12/06/2019.

The continuing calibration verification (CCV) associated with batch 580-318341 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichlorobenzene, Naphthalene, cis-1,3-Dichloropropene, 1,2,4-Trichlorobenzene, N-Propylbenzene, n-Butylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, Ethylbenzene and m-Xylene & p-Xylene.The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04DW (580-91195-1[MS]), 04Q19LCMW04DW (580-91195-1[MSD]), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3), TB120319 (580-91195-4) and (CCVIS 580-318341/3).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/09/2019 and 12/30/2019 and analyzed on 01/03/2020 and 12/13/2019.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analyte: Carbazole. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-318500 and analytical batch 580-318784 recovered outside control limits for the following analytes: 2,4-Dimethylphenol, 4-Nitroaniline and Hexachlorobenzene .

4,6-Dinitro-2-methylphenol and Pentachlorophenol failed the recovery criteria low for the MS of sample 04Q19LCMW04DWMS (580-91195-1) in batch 580-318784. Carbazole failed the recovery criteria high.

The MSD of sample 04Q19LCMW04DWMSD (580-91195-1) in batch 580-318784, 4,6-Dinitro-2-methylphenol and Pentachlorophenol

failed the recovery criteria low. Carbazole failed the recovery criteria high. Also, 2,4-Dimethylphenol, 3,3'-Dichlorobenzidine and Carbazole exceeded the RPD limit.

The continuing calibration verification (CCV) associated with batch 580-318784 recovered above the upper control limit for 3,3'-Dichlorobenzidine, 4-Nitroaniline and Carbazole . The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3) and (CCVIS 580-318784/3).

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-318784 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2), 04Q19LCMW140W (580-91195-3), (LCS 580-319850/2-A) and (LCSD 580-319850/3-A) are associated with 580-319850 which was re-extracted outside of holding time due to quality control failures in the initial extraction. For well-performing analytes which failed recovery criteria in the LCS/LCSD of the initial extraction, two sets of data are reported.

Pentachlorophenol, a poor-performing compound, passed recovery but failed precision criteria in the LCS/LCSD of the re-extracted batch. Two sets of data for this poor-performing analyte are reported. For other poor performers which failed in the initial extraction, no noticeable improvement was found in the re-extraction batch. The in-hold set of data is reported for these compounds.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-318500 and analytical batch 580-318784 were outside control limits. The samples associated with this MS/MSD were non-detects for the affected analytes; therefore, the data have been reported.

The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 580-318500 and analytical batch 580-318784 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

(LCS 580-318500/2-A) and (LCSD 580-318500/3-A) recover outside control and precision limits for several analytes. Affected client samples were re-extracted outside of holding time with better LCS/LCSD results. For the affected analytes, two sets of data are reported.

Quality control samples 04Q19LCMW04DW (580-91195-1[MS]) and 04Q19LCMW04DW (580-91195-1[MSD]) recovered outside control limits, low-biased, for 4,6-Dinitro-2-methylphenol and Pentachlorophenol. Precision was also outside control limits for several analytes. Samples associated with this MS/MSD pair were re-extracted with concurring results. There was insufficient volume to re-extract this MS/MSD pair; this data is reported as is.

(CCVIS 580-318784/3) recovers outside drift criteria for Pentachlorophenol. This compound has been demonstrated by the laboratory to exhibit poor and/or erratic performance; it is classified as a poor performing compound. Results for this analyte have been qualified and reported. Re-extraction of samples associated with 580-318500 present concurring results for this analyte; two sets of data are reported.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Due to power issues samples only received 16 hours of extraction time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCHLORATE

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for Perchlorate in accordance with 6850. The samples were prepared on 12/09/2019 and analyzed on 12/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXPLOSIVES

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for explosives in accordance with 8330B. The samples were prepared on 12/06/2019 and analyzed on 12/26/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for metals (ICPMS) in accordance with 6020A. The samples were prepared on 12/06/2019 and analyzed on 12/09/2019.

Chromium exceeded the RPD limit for the duplicate of sample 04Q19LCMW04DWDU (580-91195-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples 04Q19LCMW04DW (580-91195-1), 04Q19LCMW04SW (580-91195-2) and 04Q19LCMW140W (580-91195-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW04DW — Lab Sample ID: 580-91195-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.00051		0.00040		mg/L	1		6020A	Total Recoverable

Client Sample ID: 04Q19LCMW04SW — Lab Sample ID: 580-91195-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.00057		0.00040		mg/L	1		6020A	Total Recoverable

Client Sample ID: 04Q19LCMW140W — Lab Sample ID: 580-91195-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.00061		0.00040		mg/L	1		6020A	Total Recoverable

Client Sample ID: TB120319 — Lab Sample ID: 580-91195-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/06/19 03:04	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
1,1-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/06/19 03:04	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/06/19 03:04	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,2-Dichloroethane	ND		0.20		ug/L			12/06/19 03:04	1
1,2-Dichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
1,3-Dichloropropane	ND		0.20		ug/L			12/06/19 03:04	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/06/19 03:04	1
2,2-Dichloropropane	ND		0.50		ug/L			12/06/19 03:04	1
2-Chlorotoluene	ND		0.50		ug/L			12/06/19 03:04	1
4-Chlorotoluene	ND		0.30		ug/L			12/06/19 03:04	1
4-Isopropyltoluene	ND		0.30		ug/L			12/06/19 03:04	1
Benzene	ND		0.20		ug/L			12/06/19 03:04	1
Bromobenzene	ND		0.20		ug/L			12/06/19 03:04	1
Bromoform	ND		0.50		ug/L			12/06/19 03:04	1
Bromomethane	ND		0.50		ug/L			12/06/19 03:04	1
Carbon tetrachloride	ND		0.20		ug/L			12/06/19 03:04	1
Chlorobenzene	ND		0.20		ug/L			12/06/19 03:04	1
Chlorobromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Chlorodibromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Chloroethane	ND		0.50		ug/L			12/06/19 03:04	1
Chloroform	ND		0.20		ug/L			12/06/19 03:04	1
Chloromethane	ND		0.50		ug/L			12/06/19 03:04	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
Dibromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Dichlorobromomethane	ND		0.20		ug/L			12/06/19 03:04	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/06/19 03:04	1
Ethylbenzene	ND		0.20		ug/L			12/06/19 03:04	1
Ethylene Dibromide	ND		0.10		ug/L			12/06/19 03:04	1
Hexachlorobutadiene	ND		0.50		ug/L			12/06/19 03:04	1
Isopropylbenzene	ND		1.0		ug/L			12/06/19 03:04	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/06/19 03:04	1
Methylene Chloride	ND		5.0		ug/L			12/06/19 03:04	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/06/19 03:04	1
Naphthalene	ND		1.0		ug/L			12/06/19 03:04	1
n-Butylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
N-Propylbenzene	ND		0.30		ug/L			12/06/19 03:04	1

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/06/19 03:04	1
sec-Butylbenzene	ND		1.0		ug/L			12/06/19 03:04	1
Styrene	ND		0.50		ug/L			12/06/19 03:04	1
tert-Butylbenzene	ND		0.50		ug/L			12/06/19 03:04	1
Tetrachloroethene	ND		0.50		ug/L			12/06/19 03:04	1
Toluene	ND		0.20		ug/L			12/06/19 03:04	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/06/19 03:04	1
Trichloroethene	ND		0.20		ug/L			12/06/19 03:04	1
Trichlorofluoromethane	ND		0.50		ug/L			12/06/19 03:04	1
Vinyl chloride	ND		0.020		ug/L			12/06/19 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/06/19 03:04*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/06/19 03:04*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/06/19 03:04*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/06/19 03:04*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/06/19 03:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,2,4-Trichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,2-Dichlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,3-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:07	1
1,4-Dichlorobenzene	ND	*	0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4,5-Trichlorophenol	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4,6-Trichlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dichlorophenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dimethylphenol	ND	F2 *	3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2,6-Dinitrotoluene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Chlorophenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Methylnaphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Nitroaniline	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 15:24	1
3,3'-Dichlorobenzidine	ND	F2	14		ug/L		12/09/19 14:43	12/13/19 15:24	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
4,6-Dinitro-2-methylphenol	ND	F1	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Bromophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Chloro-3-methylphenol	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
Acenaphthene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzoic acid	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-chloroethoxy)methane	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-chloroethyl)ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 15:24	1
bis(chloroisopropyl) ether	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
Carbazole	ND	* F2 F1	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Chrysene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dibenz(a,h)anthracene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dibenzofuran	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Diethyl phthalate	ND		11		ug/L		12/09/19 14:43	12/13/19 15:24	1
Dimethyl phthalate	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorobenzene	ND	*	0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:07	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:07	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Isophorone	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Naphthalene	ND		0.38		ug/L		12/09/19 14:43	12/13/19 15:24	1
Nitrobenzene	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
N-Nitrosodi-n-propylamine	ND		0.57		ug/L		12/09/19 14:43	12/13/19 15:24	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:07	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 15:24	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 18:07	1
Pentachlorophenol	ND	F1 *	9.6		ug/L		12/09/19 14:43	12/13/19 15:24	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 15:24	1
Phenol	ND		3.8		ug/L		12/09/19 14:43	12/13/19 15:24	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*67*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/09/19 14:43*	*12/13/19 15:24*	*1*

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2-Fluorobiphenyl	*84*		*50 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
2-Fluorophenol (Surr)	*73*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
2-Fluorophenol (Surr)	*74*		*36 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Nitrobenzene-d5 (Surr)	*83*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Nitrobenzene-d5 (Surr)	*83*		*46 - 129*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Phenol-d5 (Surr)	*75*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Phenol-d5 (Surr)	*81*		*38 - 120*	*12/09/19 14:43*	*12/13/19 15:24*	*1*
Terphenyl-d14 (Surr)	*99*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:07*	*1*
Terphenyl-d14 (Surr)	*113*		*61 - 126*	*12/09/19 14:43*	*12/13/19 15:24*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 09:34	1
2-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
3-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
4-Nitrotoluene	ND		0.52		ug/L		12/06/19 12:05	12/26/19 09:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 09:34	1
Nitroglycerin	ND		0.68		ug/L		12/06/19 12:05	12/26/19 09:34	1
PETN	ND		0.68		ug/L		12/06/19 12:05	12/26/19 09:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/06/19 12:05*	*12/26/19 09:34*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:13	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:06	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Chromium	**0.00051**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:06	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:06	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:06	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:06	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:06	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:06	1

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1

Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:02	1

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 21:46	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 21:46	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 21:46	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 21:46	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 21:46	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 21:46	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 21:46	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 21:46	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 21:46	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 21:46	1
Benzene	ND		0.20		ug/L			12/05/19 21:46	1
Bromobenzene	ND		0.20		ug/L			12/05/19 21:46	1
Bromoform	ND		0.50		ug/L			12/05/19 21:46	1
Bromomethane	ND		0.50		ug/L			12/05/19 21:46	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 21:46	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 21:46	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Chloroethane	ND		0.50		ug/L			12/05/19 21:46	1
Chloroform	ND		0.20		ug/L			12/05/19 21:46	1
Chloromethane	ND		0.50		ug/L			12/05/19 21:46	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
Dibromomethane	ND		0.20		ug/L			12/05/19 21:46	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 21:46	1

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 21:46	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 21:46	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 21:46	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 21:46	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 21:46	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 21:46	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 21:46	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 21:46	1
Naphthalene	ND		1.0		ug/L			12/05/19 21:46	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 21:46	1
o-Xylene	ND		0.50		ug/L			12/05/19 21:46	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 21:46	1
Styrene	ND		0.50		ug/L			12/05/19 21:46	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 21:46	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 21:46	1
Toluene	ND		0.20		ug/L			12/05/19 21:46	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 21:46	1
Trichloroethene	ND		0.20		ug/L			12/05/19 21:46	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 21:46	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/05/19 21:46*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/05/19 21:46*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/05/19 21:46*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 21:46*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/05/19 21:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,3-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1,4-Dichlorobenzene	ND	H	0.39		ug/L		12/30/19 13:18	01/03/20 18:31	1
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water

Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 16:34	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 16:34	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 16:34	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorobutadiene	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:31	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Hexachloroethane	ND	H	0.97		ug/L		12/30/19 13:18	01/03/20 18:31	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:34	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:34	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:31	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Pentachlorophenol	ND	H *	9.7		ug/L		12/30/19 13:18	01/03/20 18:31	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:34	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:34	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:34	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
2-Fluorobiphenyl	*92*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2-Fluorobiphenyl	*95*		*50 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
2-Fluorophenol (Surr)	*75*		*36 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Nitrobenzene-d5 (Surr)	*88*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Nitrobenzene-d5 (Surr)	*89*		*46 - 129*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Phenol-d5 (Surr)	*78*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Phenol-d5 (Surr)	*80*		*38 - 120*	*12/09/19 14:43*	*12/13/19 16:34*	*1*
Terphenyl-d14 (Surr)	*104*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:31*	*1*
Terphenyl-d14 (Surr)	*116*		*61 - 126*	*12/09/19 14:43*	*12/13/19 16:34*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 13:08	1
2-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
3-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
4-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 13:08	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
HMX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
RDX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Nitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Tetryl	ND		0.11		ug/L		12/06/19 12:05	12/26/19 13:08	1
Nitroglycerin	ND		0.69		ug/L		12/06/19 12:05	12/26/19 13:08	1
PETN	ND		0.69		ug/L		12/06/19 12:05	12/26/19 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/06/19 12:05*	*12/26/19 13:08*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:26	1

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2

Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:39	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Chromium	**0.00057**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:39	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:39	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:39	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:39	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:39	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:39	1
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:11	1

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 22:13	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 22:13	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 22:13	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 22:13	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 22:13	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 22:13	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 22:13	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 22:13	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 22:13	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 22:13	1
Benzene	ND		0.20		ug/L			12/05/19 22:13	1
Bromobenzene	ND		0.20		ug/L			12/05/19 22:13	1
Bromoform	ND		0.50		ug/L			12/05/19 22:13	1
Bromomethane	ND		0.50		ug/L			12/05/19 22:13	1

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 22:13	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 22:13	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Chloroethane	ND		0.50		ug/L			12/05/19 22:13	1
Chloroform	ND		0.20		ug/L			12/05/19 22:13	1
Chloromethane	ND		0.50		ug/L			12/05/19 22:13	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
Dibromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 22:13	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 22:13	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 22:13	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 22:13	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 22:13	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 22:13	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 22:13	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 22:13	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 22:13	1
Naphthalene	ND		1.0		ug/L			12/05/19 22:13	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 22:13	1
o-Xylene	ND		0.50		ug/L			12/05/19 22:13	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 22:13	1
Styrene	ND		0.50		ug/L			12/05/19 22:13	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 22:13	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 22:13	1
Toluene	ND		0.20		ug/L			12/05/19 22:13	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 22:13	1
Trichloroethene	ND		0.20		ug/L			12/05/19 22:13	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 22:13	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/05/19 22:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 22:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/05/19 22:13*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/05/19 22:13*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*12/05/19 22:13*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,2,4-Trichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,2-Dichlorobenzene	ND	H	0.58		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,2-Dichlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,3-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1
1,3-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1,4-Dichlorobenzene	ND	H	0.38		ug/L		12/30/19 13:18	01/03/20 18:54	1

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	*	0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
1-Methylnaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4,5-Trichlorophenol	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4,6-Trichlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dichlorophenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dimethylphenol	ND	*	3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dinitrophenol	ND	*	19		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,4-Dinitrotoluene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2,6-Dinitrotoluene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Chloronaphthalene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Chlorophenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Methylnaphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Nitroaniline	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
2-Nitrophenol	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
3 & 4 Methylphenol	ND		0.77		ug/L		12/09/19 14:43	12/13/19 16:58	1
3,3'-Dichlorobenzidine	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
3-Nitroaniline	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
4,6-Dinitro-2-methylphenol	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Bromophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Chloro-3-methylphenol	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Chloroaniline	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Chlorophenyl phenyl ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Nitroaniline	ND	*	1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
4-Nitrophenol	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
Acenaphthene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Acenaphthylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Anthracene	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[a]anthracene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[a]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[b]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[g,h,i]perylene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzo[k]fluoranthene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzoic acid	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Benzyl alcohol	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-chloroethoxy)methane	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-chloroethyl)ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Bis(2-ethylhexyl) phthalate	ND		14		ug/L		12/09/19 14:43	12/13/19 16:58	1
bis(chloroisopropyl) ether	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Butyl benzyl phthalate	ND		9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
Carbazole	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Chrysene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dibenz(a,h)anthracene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dibenzofuran	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Diethyl phthalate	ND		12		ug/L		12/09/19 14:43	12/13/19 16:58	1
Dimethyl phthalate	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Di-n-butyl phthalate	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Di-n-octyl phthalate	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Fluoranthene	ND		2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water

Date Received: 12/04/19 13:05

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorobenzene	ND	*	0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorobutadiene	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 18:54	1
Hexachlorobutadiene	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachlorocyclopentadiene	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Hexachloroethane	ND	H	0.96		ug/L		12/30/19 13:18	01/03/20 18:54	1
Hexachloroethane	ND	*	0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Isophorone	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Naphthalene	ND		0.39		ug/L		12/09/19 14:43	12/13/19 16:58	1
Nitrobenzene	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
N-Nitrosodi-n-propylamine	ND		0.58		ug/L		12/09/19 14:43	12/13/19 16:58	1
N-Nitrosodiphenylamine	ND	H *	2.9		ug/L		12/30/19 13:18	01/03/20 18:54	1
N-Nitrosodiphenylamine	ND	*	2.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Pentachlorophenol	ND	H *	9.6		ug/L		12/30/19 13:18	01/03/20 18:54	1
Pentachlorophenol	ND	*	9.6		ug/L		12/09/19 14:43	12/13/19 16:58	1
Phenanthrene	ND		0.96		ug/L		12/09/19 14:43	12/13/19 16:58	1
Phenol	ND		3.9		ug/L		12/09/19 14:43	12/13/19 16:58	1
Pyrene	ND		1.9		ug/L		12/09/19 14:43	12/13/19 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*48 - 125*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2,4,6-Tribromophenol (Surr)	*62*		*48 - 125*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
2-Fluorobiphenyl	*97*		*50 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2-Fluorobiphenyl	*97*		*50 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
2-Fluorophenol (Surr)	*84*		*36 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
2-Fluorophenol (Surr)	*75*		*36 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Nitrobenzene-d5 (Surr)	*85*		*46 - 129*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Nitrobenzene-d5 (Surr)	*85*		*46 - 129*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Phenol-d5 (Surr)	*84*		*38 - 120*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Phenol-d5 (Surr)	*80*		*38 - 120*	*12/09/19 14:43*	*12/13/19 16:58*	*1*
Terphenyl-d14 (Surr)	*109*		*61 - 126*	*12/30/19 13:18*	*01/03/20 18:54*	*1*
Terphenyl-d14 (Surr)	*123*		*61 - 126*	*12/09/19 14:43*	*12/13/19 16:58*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/06/19 12:05	12/26/19 15:49	1
2-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
3-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
4-Nitrotoluene	ND		0.53		ug/L		12/06/19 12:05	12/26/19 15:49	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
HMX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
RDX	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
Nitrobenzene	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1
Tetryl	ND		0.11		ug/L		12/06/19 12:05	12/26/19 15:49	1

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	ND		0.69		ug/L		12/06/19 12:05	12/26/19 15:49	1
PETN	ND		0.69		ug/L		12/06/19 12:05	12/26/19 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/06/19 12:05*	*12/26/19 15:49*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 14:39	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:42	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Chromium	**0.00061**		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:42	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:42	1
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:42	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:42	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:42	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:42	1
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:17	12/09/19 14:13	1

Client Sample ID: TB120319
Lab Sample ID: 580-91195-4

Date Collected: 12/03/19 00:01
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 20:27	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 20:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 20:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 20:27	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 20:27	1

Client Sample ID: TB120319
Date Collected: 12/03/19 00:01
Date Received: 12/04/19 13:05

Lab Sample ID: 580-91195-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 20:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:27	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 20:27	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 20:27	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 20:27	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 20:27	1
Benzene	ND		0.20		ug/L			12/05/19 20:27	1
Bromobenzene	ND		0.20		ug/L			12/05/19 20:27	1
Bromoform	ND		0.50		ug/L			12/05/19 20:27	1
Bromomethane	ND		0.50		ug/L			12/05/19 20:27	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 20:27	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 20:27	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Chloroethane	ND		0.50		ug/L			12/05/19 20:27	1
Chloroform	ND		0.20		ug/L			12/05/19 20:27	1
Chloromethane	ND		0.50		ug/L			12/05/19 20:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
Dibromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 20:27	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 20:27	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 20:27	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 20:27	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 20:27	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 20:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 20:27	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 20:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 20:27	1
Naphthalene	ND		1.0		ug/L			12/05/19 20:27	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 20:27	1
N-Propylbenzene	ND		0.30		ug/L			12/05/19 20:27	1
o-Xylene	ND		0.50		ug/L			12/05/19 20:27	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 20:27	1
Styrene	ND		0.50		ug/L			12/05/19 20:27	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 20:27	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 20:27	1
Toluene	ND		0.20		ug/L			12/05/19 20:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:27	1
Trichloroethene	ND		0.20		ug/L			12/05/19 20:27	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 20:27	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/05/19 20:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 20:27*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/05/19 20:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/05/19 20:27*	*1*

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: TB120319
Lab Sample ID: 580-91195-4
Date Collected: 12/03/19 00:01
Matrix: Water
Date Received: 12/04/19 13:05

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/05/19 20:27*	*1*

Default Detection Limits

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	0.30	0.027	ug/L
1,1,1-Trichloroethane	0.20	0.025	ug/L
1,1,2,2-Tetrachloroethane	0.20	0.056	ug/L
1,1,2-Trichloroethane	0.20	0.070	ug/L
1,1-Dichloroethane	0.20	0.025	ug/L
1,1-Dichloroethene	0.20	0.10	ug/L
1,1-Dichloropropene	0.20	0.036	ug/L
1,2,3-Trichlorobenzene	0.50	0.15	ug/L
1,2,3-Trichloropropane	0.20	0.050	ug/L
1,2,4-Trichlorobenzene	0.30	0.072	ug/L
1,2,4-Trimethylbenzene	0.30	0.072	ug/L
1,2-Dibromo-3-Chloropropane	2.0	0.44	ug/L
1,2-Dichlorobenzene	0.30	0.050	ug/L
1,2-Dichloroethane	0.20	0.043	ug/L
1,2-Dichloropropane	0.20	0.060	ug/L
1,3,5-Trimethylbenzene	0.50	0.15	ug/L
1,3-Dichlorobenzene	0.30	0.050	ug/L
1,3-Dichloropropane	0.20	0.056	ug/L
1,4-Dichlorobenzene	0.30	0.050	ug/L
2,2-Dichloropropane	0.50	0.060	ug/L
2-Chlorotoluene	0.50	0.12	ug/L
4-Chlorotoluene	0.30	0.050	ug/L
4-Isopropyltoluene	0.30	0.050	ug/L
Benzene	0.20	0.030	ug/L
Bromobenzene	0.20	0.035	ug/L
Bromoform	0.50	0.16	ug/L
Bromomethane	0.50	0.16	ug/L
Carbon tetrachloride	0.20	0.025	ug/L
Chlorobenzene	0.20	0.025	ug/L
Chlorobromomethane	0.20	0.025	ug/L
Chlorodibromomethane	0.20	0.055	ug/L
Chloroethane	0.50	0.096	ug/L
Chloroform	0.20	0.030	ug/L
Chloromethane	0.50	0.15	ug/L
cis-1,2-Dichloroethene	0.20	0.055	ug/L
cis-1,3-Dichloropropene	0.20	0.090	ug/L
Dibromomethane	0.20	0.062	ug/L
Dichlorobromomethane	0.20	0.060	ug/L
Dichlorodifluoromethane	0.40	0.13	ug/L
Ethylbenzene	0.20	0.030	ug/L
Ethylene Dibromide	0.10	0.025	ug/L
Hexachlorobutadiene	0.50	0.15	ug/L
Isopropylbenzene	1.0	0.19	ug/L
Methyl tert-butyl ether	0.30	0.070	ug/L
Methylene Chloride	5.0	0.74	ug/L
m-Xylene & p-Xylene	0.50	0.12	ug/L
Naphthalene	1.0	0.22	ug/L
n-Butylbenzene	0.50	0.080	ug/L
N-Propylbenzene	0.30	0.091	ug/L
o-Xylene	0.50	0.15	ug/L
sec-Butylbenzene	1.0	0.17	ug/L
Styrene	0.50	0.19	ug/L
tert-Butylbenzene	0.50	0.10	ug/L

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	RL	MDL	Units
Tetrachloroethene	0.50	0.084	ug/L
Toluene	0.20	0.050	ug/L
trans-1,2-Dichloroethene	0.20	0.089	ug/L
trans-1,3-Dichloropropene	0.20	0.092	ug/L
Trichloroethene	0.20	0.066	ug/L
Trichlorofluoromethane	0.50	0.11	ug/L
Vinyl chloride	0.020	0.013	ug/L

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3520C

Analyte	RL	MDL	Units
1,2,4-Trichlorobenzene	0.40	0.040	ug/L
1,2-Dichlorobenzene	0.60	0.10	ug/L
1,3-Dichlorobenzene	0.40	0.10	ug/L
1,4-Dichlorobenzene	0.40	0.060	ug/L
1-Methylnaphthalene	1.0	0.070	ug/L
2,4,5-Trichlorophenol	0.40	0.10	ug/L
2,4,6-Trichlorophenol	0.60	0.10	ug/L
2,4-Dichlorophenol	4.0	0.17	ug/L
2,4-Dimethylphenol	4.0	0.83	ug/L
2,4-Dinitrophenol	20	5.8	ug/L
2,4-Dinitrotoluene	1.0	0.14	ug/L
2,6-Dinitrotoluene	0.60	0.10	ug/L
2-Chloronaphthalene	1.0	0.13	ug/L
2-Chlorophenol	0.60	0.22	ug/L
2-Methylnaphthalene	0.40	0.060	ug/L
2-Methylphenol	0.60	0.10	ug/L
2-Nitroaniline	0.60	0.10	ug/L
2-Nitrophenol	1.0	0.14	ug/L
3 & 4 Methylphenol	0.80	0.18	ug/L
3,3'-Dichlorobenzidine	15	3.2	ug/L
3-Nitroaniline	3.0	0.16	ug/L
4,6-Dinitro-2-methylphenol	10	2.6	ug/L
4-Bromophenyl phenyl ether	0.60	0.10	ug/L
4-Chloro-3-methylphenol	0.60	0.10	ug/L
4-Chloroaniline	10	2.1	ug/L
4-Chlorophenyl phenyl ether	0.60	0.10	ug/L
4-Nitroaniline	2.0	0.13	ug/L
4-Nitrophenol	15	0.64	ug/L
Acenaphthene	0.40	0.080	ug/L
Acenaphthylene	1.0	0.10	ug/L
Anthracene	15	0.14	ug/L
Benzo[a]anthracene	1.0	0.090	ug/L
Benzo[a]pyrene	1.0	0.16	ug/L
Benzo[b]fluoranthene	1.0	0.13	ug/L
Benzo[g,h,i]perylene	1.0	0.10	ug/L
Benzo[k]fluoranthene	1.0	0.10	ug/L
Benzoic acid	4.0	0.85	ug/L
Benzyl alcohol	3.0	0.69	ug/L
Bis(2-chloroethoxy)methane	0.60	0.10	ug/L
Bis(2-chloroethyl)ether	0.60	0.10	ug/L
Bis(2-ethylhexyl) phthalate	15	6.3	ug/L

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Prep: 3520C

Analyte	RL	MDL	Units
bis(chloroisopropyl) ether	0.60	0.21	ug/L
Butyl benzyl phthalate	10	0.37	ug/L
Carbazole	0.60	0.10	ug/L
Chrysene	0.60	0.17	ug/L
Dibenz(a,h)anthracene	0.60	0.10	ug/L
Dibenzofuran	0.40	0.060	ug/L
Diethyl phthalate	12	0.72	ug/L
Dimethyl phthalate	0.60	0.10	ug/L
Di-n-butyl phthalate	3.0	0.55	ug/L
Di-n-octyl phthalate	1.0	0.18	ug/L
Fluoranthene	3.0	0.15	ug/L
Fluorene	2.0	0.090	ug/L
Hexachlorobenzene	0.60	0.10	ug/L
Hexachlorobutadiene	1.0	0.10	ug/L
Hexachlorocyclopentadiene	3.0	0.080	ug/L
Hexachloroethane	1.0	0.10	ug/L
Indeno[1,2,3-cd]pyrene	1.0	0.050	ug/L
Isophorone	0.40	0.10	ug/L
Naphthalene	0.40	0.10	ug/L
Nitrobenzene	0.60	0.22	ug/L
N-Nitrosodi-n-propylamine	0.60	0.10	ug/L
N-Nitrosodiphenylamine	3.0	0.14	ug/L
Pentachlorophenol	10	2.5	ug/L
Phenanthrene	1.0	0.13	ug/L
Phenol	4.0	0.29	ug/L
Pyrene	2.0	0.10	ug/L

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 8330-Prep

Analyte	RL	MDL	Units
1,3,5-Trinitrobenzene	0.10	0.031	ug/L
1,3-Dinitrobenzene	0.10	0.050	ug/L
2,4,6-Trinitrotoluene	0.10	0.050	ug/L
2,4-Dinitrotoluene	0.10	0.050	ug/L
2,6-Dinitrotoluene	0.10	0.050	ug/L
2-Amino-4,6-dinitrotoluene	0.20	0.015	ug/L
2-Nitrotoluene	0.50	0.088	ug/L
3-Nitrotoluene	0.50	0.057	ug/L
4-Amino-2,6-dinitrotoluene	0.10	0.050	ug/L
4-Nitrotoluene	0.50	0.088	ug/L
HMX	0.10	0.036	ug/L
Nitrobenzene	0.10	0.050	ug/L
Nitroglycerin	0.65	0.33	ug/L
PETN	0.65	0.30	ug/L
RDX	0.10	0.036	ug/L
Tetryl	0.10	0.050	ug/L

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Prep: Filtration

Analyte	RL	MDL	Units
Perchlorate	0.50	0.085	ug/L

Default Detection Limits

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units
Antimony	0.00040	0.00011	mg/L
Arsenic	0.0010	0.00020	mg/L
Beryllium	0.00040	0.000071	mg/L
Cadmium	0.00040	0.00010	mg/L
Chromium	0.00040	0.00017	mg/L
Copper	0.0020	0.00060	mg/L
Lead	0.00080	0.00020	mg/L
Nickel	0.0030	0.00012	mg/L
Selenium	0.0080	0.0021	mg/L
Silver	0.00040	0.000055	mg/L
Thallium	0.0010	0.000065	mg/L
Zinc	0.0070	0.0019	mg/L

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	RL	MDL	Units
Mercury	0.00030	0.00015	mg/L

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		DCA	BFB	DBFM	TOL	TFT
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)	(80-120)
580-91195-1	04Q19LCMW04DW	105	100	101	104	99
580-91195-1 MS	04Q19LCMW04DW	102	103	99	100	88
580-91195-1 MSD	04Q19LCMW04DW	102	103	101	101	91
580-91195-2	04Q19LCMW04SW	103	100	99	103	98
580-91195-3	04Q19LCMW140W	104	101	100	104	99
580-91195-4	TB120319	102	101	98	102	98
LCS 580-318341/4	Lab Control Sample	98	103	99	102	97
LCSD 580-318341/5	Lab Control Sample Dup	100	103	101	102	94
MB 580-318341/7	Method Blank	99	101	97	103	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
TFT = Trifluorotoluene (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(48-125)	(50-120)	(36-120)	(46-129)	(38-120)	(61-126)
580-91195-1	04Q19LCMW04DW	70	84	74	83	81	113
580-91195-1	04Q19LCMW04DW	67	89	73	83	75	99
580-91195-1 MS	04Q19LCMW04DW	83	87	75	88	88	100
580-91195-1 MSD	04Q19LCMW04DW	93	80	75	82	84	104
580-91195-2	04Q19LCMW04SW	72	95	75	89	80	116
580-91195-2	04Q19LCMW04SW	70	92	82	88	78	104
580-91195-3	04Q19LCMW140W	62	97	75	85	80	123
580-91195-3	04Q19LCMW140W	76	97	84	85	84	109
LCS 580-318500/2-A	Lab Control Sample	72	68	62	80	78	86
LCS 580-319850/2-A	Lab Control Sample	82	92	89	94	90	91
LCSD 580-318500/3-A	Lab Control Sample Dup	83	71	73	86	83	94
LCSD 580-319850/3-A	Lab Control Sample Dup	91	89	87	92	95	100
MB 580-318500/1-A	Method Blank	75	83	81	82	88	112
MB 580-319850/1-A	Method Blank	63	94	82	67	87	94

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DNT1
Lab Sample ID	Client Sample ID	(79-111)
580-91195-1	04Q19LCMW04DW	84
580-91195-1 MS	04Q19LCMW04DW	88
580-91195-1 MSD	04Q19LCMW04DW	86
580-91195-2	04Q19LCMW04SW	85
580-91195-3	04Q19LCMW140W	85
LCS 320-343665/2-A	Lab Control Sample	84
MB 320-343665/1-A	Method Blank	82

Surrogate Legend

DNT = 3,4-Dinitrotoluene

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/05/19 20:00	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
1,1-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/05/19 20:00	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,2-Dichloroethane	ND		0.20		ug/L			12/05/19 20:00	1
1,2-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
1,3-Dichloropropane	ND		0.20		ug/L			12/05/19 20:00	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/05/19 20:00	1
2,2-Dichloropropane	ND		0.50		ug/L			12/05/19 20:00	1
2-Chlorotoluene	ND		0.50		ug/L			12/05/19 20:00	1
4-Chlorotoluene	ND		0.30		ug/L			12/05/19 20:00	1
4-Isopropyltoluene	ND		0.30		ug/L			12/05/19 20:00	1
Benzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Bromoform	ND		0.50		ug/L			12/05/19 20:00	1
Bromomethane	ND		0.50		ug/L			12/05/19 20:00	1
Carbon tetrachloride	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobenzene	ND		0.20		ug/L			12/05/19 20:00	1
Chlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chlorodibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Chloroethane	ND		0.50		ug/L			12/05/19 20:00	1
Chloroform	ND		0.20		ug/L			12/05/19 20:00	1
Chloromethane	ND		0.50		ug/L			12/05/19 20:00	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Dibromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorobromomethane	ND		0.20		ug/L			12/05/19 20:00	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/05/19 20:00	1
Ethylbenzene	ND		0.20		ug/L			12/05/19 20:00	1
Ethylene Dibromide	ND		0.10		ug/L			12/05/19 20:00	1
Hexachlorobutadiene	ND		0.50		ug/L			12/05/19 20:00	1
Isopropylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/05/19 20:00	1
Methylene Chloride	ND		5.0		ug/L			12/05/19 20:00	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
Naphthalene	ND		1.0		ug/L			12/05/19 20:00	1
n-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318341/7
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/05/19 20:00	1
o-Xylene	ND		0.50		ug/L			12/05/19 20:00	1
sec-Butylbenzene	ND		1.0		ug/L			12/05/19 20:00	1
Styrene	ND		0.50		ug/L			12/05/19 20:00	1
tert-Butylbenzene	ND		0.50		ug/L			12/05/19 20:00	1
Tetrachloroethene	ND		0.50		ug/L			12/05/19 20:00	1
Toluene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/05/19 20:00	1
Trichloroethene	ND		0.20		ug/L			12/05/19 20:00	1
Trichlorofluoromethane	ND		0.50		ug/L			12/05/19 20:00	1
Vinyl chloride	ND		0.020		ug/L			12/05/19 20:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/05/19 20:00*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/05/19 20:00*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*12/05/19 20:00*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/05/19 20:00*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/05/19 20:00*	*1*

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.21		ug/L		104	79 - 127
1,1,1-Trichloroethane	5.00	5.08		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.97		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	5.09		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.08		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.04		ug/L		101	71 - 126
1,1-Dichloropropene	5.00	5.14		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.00		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	5.06		ug/L		101	80 - 127
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	79 - 130
1,2,4-Trimethylbenzene	5.00	5.29		ug/L		106	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.65		ug/L		93	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	5.03		ug/L		101	80 - 130
1,3,5-Trimethylbenzene	5.00	5.34		ug/L		107	80 - 139
1,3-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 130
1,3-Dichloropropane	5.00	5.19		ug/L		104	80 - 130
1,4-Dichlorobenzene	5.00	4.91		ug/L		98	80 - 129
2,2-Dichloropropane	5.00	4.66		ug/L		93	58 - 150
2-Chlorotoluene	5.00	5.32		ug/L		106	80 - 136
4-Chlorotoluene	5.00	5.43		ug/L		109	80 - 130
4-Isopropyltoluene	5.00	5.15		ug/L		103	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318341/4
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.12		ug/L		102	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.29		ug/L		106	68 - 120
Carbon tetrachloride	5.00	5.04		ug/L		101	71 - 132
Chlorobenzene	5.00	4.89		ug/L		98	80 - 123
Chlorobromomethane	5.00	4.96		ug/L		99	79 - 131
Chlorodibromomethane	5.00	4.57		ug/L		91	76 - 131
Chloroethane	5.00	5.29		ug/L		106	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.59		ug/L		92	32 - 143
cis-1,2-Dichloroethene	5.00	5.12		ug/L		102	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.94		ug/L		99	65 - 141
Dichlorobromomethane	5.00	4.55		ug/L		91	74 - 131
Dichlorodifluoromethane	5.00	4.70		ug/L		94	20 - 137
Ethylbenzene	5.00	5.34		ug/L		107	80 - 130
Ethylene Dibromide	5.00	5.07		ug/L		101	80 - 126
Hexachlorobutadiene	5.00	4.84		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.16		ug/L		103	75 - 137
Methyl tert-butyl ether	5.00	5.03		ug/L		101	60 - 150
Methylene Chloride	5.00	5.10		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.62		ug/L		112	78 - 130
Naphthalene	5.00	4.72		ug/L		94	64 - 132
n-Butylbenzene	5.00	5.27		ug/L		105	73 - 135
N-Propylbenzene	5.00	5.63		ug/L		113	77 - 142
o-Xylene	5.00	5.04		ug/L		101	80 - 139
sec-Butylbenzene	5.00	5.22		ug/L		104	78 - 140
Styrene	5.00	4.88		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.74		ug/L		95	77 - 140
Tetrachloroethene	5.00	5.10		ug/L		102	75 - 131
Toluene	5.00	4.83		ug/L		97	80 - 126
trans-1,2-Dichloroethene	5.00	4.98		ug/L		100	63 - 133
trans-1,3-Dichloropropene	5.00	4.71		ug/L		94	71 - 128
Trichloroethene	5.00	4.98		ug/L		100	72 - 136
Trichlorofluoromethane	5.00	4.96		ug/L		99	60 - 132
Vinyl chloride	5.00	5.12		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.17		ug/L		103	79 - 127	1	20
1,1,1-Trichloroethane	5.00	5.05		ug/L		101	74 - 128	1	14
1,1,2,2-Tetrachloroethane	5.00	4.98		ug/L		100	69 - 139	0	22
1,1,2-Trichloroethane	5.00	5.01		ug/L		100	80 - 127	2	19
1,1-Dichloroethane	5.00	5.10		ug/L		102	74 - 135	0	20
1,1-Dichloroethene	5.00	5.09		ug/L		102	71 - 126	1	17
1,1-Dichloropropene	5.00	5.06		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene	5.00	5.18		ug/L		104	75 - 137	4	20
1,2,3-Trichloropropane	5.00	5.13		ug/L		103	80 - 127	1	20
1,2,4-Trichlorobenzene	5.00	4.97		ug/L		99	79 - 130	2	20
1,2,4-Trimethylbenzene	5.00	5.13		ug/L		103	78 - 136	3	20
1,2-Dibromo-3-Chloropropane	5.00	4.83		ug/L		97	69 - 130	4	26
1,2-Dichlorobenzene	5.00	4.98		ug/L		100	80 - 129	1	14
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane	5.00	4.90		ug/L		98	80 - 130	3	14
1,3,5-Trimethylbenzene	5.00	5.12		ug/L		102	80 - 139	4	20
1,3-Dichlorobenzene	5.00	4.96		ug/L		99	80 - 130	4	12
1,3-Dichloropropane	5.00	5.11		ug/L		102	80 - 130	1	19
1,4-Dichlorobenzene	5.00	4.70		ug/L		94	80 - 129	4	11
2,2-Dichloropropane	5.00	4.71		ug/L		94	58 - 150	1	28
2-Chlorotoluene	5.00	5.09		ug/L		102	80 - 136	4	20
4-Chlorotoluene	5.00	5.19		ug/L		104	80 - 130	4	20
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 132	4	14
Benzene	5.00	5.04		ug/L		101	73 - 133	2	20
Bromobenzene	5.00	4.89		ug/L		98	80 - 130	3	20
Bromoform	5.00	4.57		ug/L		91	69 - 137	1	20
Bromomethane	5.00	5.18		ug/L		104	68 - 120	2	18
Carbon tetrachloride	5.00	5.02		ug/L		100	71 - 132	0	15
Chlorobenzene	5.00	4.80		ug/L		96	80 - 123	2	12
Chlorobromomethane	5.00	5.02		ug/L		100	79 - 131	1	20
Chlorodibromomethane	5.00	4.61		ug/L		92	76 - 131	1	20
Chloroethane	5.00	5.17		ug/L		103	49 - 135	2	27
Chloroform	5.00	5.07		ug/L		101	80 - 130	0	20
Chloromethane	5.00	4.42		ug/L		88	32 - 143	4	23
cis-1,2-Dichloroethene	5.00	5.18		ug/L		104	72 - 130	1	20
cis-1,3-Dichloropropene	5.00	5.06		ug/L		101	66 - 141	1	22
Dibromomethane	5.00	4.96		ug/L		99	65 - 141	0	20
Dichlorobromomethane	5.00	4.48		ug/L		90	74 - 131	2	20
Dichlorodifluoromethane	5.00	4.66		ug/L		93	20 - 137	1	22
Ethylbenzene	5.00	5.18		ug/L		104	80 - 130	3	20
Ethylene Dibromide	5.00	5.05		ug/L		101	80 - 126	0	20
Hexachlorobutadiene	5.00	4.78		ug/L		96	72 - 138	1	20
Isopropylbenzene	5.00	5.04		ug/L		101	75 - 137	2	20
Methyl tert-butyl ether	5.00	5.25		ug/L		105	60 - 150	4	25
Methylene Chloride	5.00	5.14		ug/L		103	75 - 134	1	18
m-Xylene & p-Xylene	5.00	5.45		ug/L		109	78 - 130	3	20
Naphthalene	5.00	4.93		ug/L		99	64 - 132	4	20
n-Butylbenzene	5.00	5.02		ug/L		100	73 - 135	5	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318341/5
Matrix: Water
Analysis Batch: 318341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.36		ug/L		107	77 - 142	5	20
o-Xylene			5.00	4.95		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	5.01		ug/L		100	78 - 140	4	20
Styrene			5.00	4.74		ug/L		95	74 - 136	3	20
tert-Butylbenzene			5.00	4.51		ug/L		90	77 - 140	5	20
Tetrachloroethene			5.00	5.02		ug/L		100	75 - 131	2	20
Toluene			5.00	4.67		ug/L		93	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	4.96		ug/L		99	63 - 133	0	17
trans-1,3-Dichloropropene			5.00	4.63		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.89		ug/L		98	72 - 136	2	14
Trichlorofluoromethane			5.00	4.91		ug/L		98	60 - 132	1	20
Vinyl chloride			5.00	4.94		ug/L		99	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		5.00	5.23		ug/L		105	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.31		ug/L		106	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	4.87		ug/L		97	69 - 139
1,1,2-Trichloroethane	ND		5.00	5.20		ug/L		104	80 - 127
1,1-Dichloroethane	ND		5.00	5.26		ug/L		105	74 - 135
1,1-Dichloroethene	ND		5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	ND		5.00	5.51		ug/L		110	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	4.61		ug/L		92	75 - 137
1,2,3-Trichloropropane	ND		5.00	4.81		ug/L		96	80 - 127
1,2,4-Trichlorobenzene	ND		5.00	4.34		ug/L		87	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.10		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.30		ug/L		86	69 - 130
1,2-Dichlorobenzene	ND		5.00	4.87		ug/L		97	80 - 129
1,2-Dichloroethane	ND		5.00	4.98		ug/L		100	74 - 130
1,2-Dichloropropane	ND		5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	5.14		ug/L		103	80 - 139
1,3-Dichlorobenzene	ND		5.00	4.95		ug/L		99	80 - 130
1,3-Dichloropropane	ND		5.00	5.30		ug/L		106	80 - 130
1,4-Dichlorobenzene	ND		5.00	4.75		ug/L		95	80 - 129
2,2-Dichloropropane	ND		5.00	3.84		ug/L		77	58 - 150
2-Chlorotoluene	ND		5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	ND		5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	ND		5.00	5.01		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318341

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		5.00	5.40		ug/L		108	73 - 133
Bromobenzene	ND		5.00	4.84		ug/L		97	80 - 130
Bromoform	ND		5.00	4.56		ug/L		91	69 - 137
Bromomethane	ND		5.00	5.81		ug/L		116	68 - 120
Carbon tetrachloride	ND		5.00	5.52		ug/L		110	71 - 132
Chlorobenzene	ND		5.00	5.05		ug/L		101	80 - 123
Chlorobromomethane	ND		5.00	5.20		ug/L		104	79 - 131
Chlorodibromomethane	ND		5.00	4.65		ug/L		93	76 - 131
Chloroethane	ND		5.00	6.03		ug/L		121	49 - 135
Chloroform	ND		5.00	5.34		ug/L		107	80 - 130
Chloromethane	ND		5.00	5.23		ug/L		105	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.31		ug/L		106	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.58		ug/L		92	66 - 141
Dibromomethane	ND		5.00	5.15		ug/L		103	65 - 141
Dichlorobromomethane	ND		5.00	4.75		ug/L		95	74 - 131
Dichlorodifluoromethane	ND		5.00	4.99		ug/L		100	20 - 137
Ethylbenzene	ND		5.00	5.51		ug/L		110	80 - 130
Ethylene Dibromide	ND		5.00	5.01		ug/L		100	80 - 126
Hexachlorobutadiene	ND		5.00	4.55		ug/L		91	72 - 138
Isopropylbenzene	ND		5.00	5.22		ug/L		104	75 - 137
Methyl tert-butyl ether	ND		5.00	4.92		ug/L		98	60 - 150
Methylene Chloride	ND		5.00	5.17		ug/L		103	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.70		ug/L		114	78 - 130
Naphthalene	ND		5.00	4.28		ug/L		86	64 - 132
n-Butylbenzene	ND		5.00	4.92		ug/L		98	73 - 135
N-Propylbenzene	ND		5.00	5.52		ug/L		110	77 - 142
o-Xylene	ND		5.00	5.07		ug/L		101	80 - 139
sec-Butylbenzene	ND		5.00	5.10		ug/L		102	78 - 140
Styrene	ND		5.00	5.00		ug/L		100	74 - 136
tert-Butylbenzene	ND		5.00	4.56		ug/L		89	77 - 140
Tetrachloroethene	ND		5.00	5.26		ug/L		105	75 - 131
Toluene	ND		5.00	4.91		ug/L		98	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.25		ug/L		105	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.36		ug/L		87	71 - 128
Trichloroethene	ND		5.00	5.13		ug/L		103	72 - 136
Trichlorofluoromethane	ND		5.00	5.44		ug/L		109	60 - 132
Vinyl chloride	ND		5.00	5.83		ug/L		117	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*88*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318341

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		5.00	5.31		ug/L		106	79 - 127	1	20
1,1,1-Trichloroethane	ND		5.00	5.42		ug/L		108	74 - 128	2	14
1,1,2,2-Tetrachloroethane	ND		5.00	4.94		ug/L		99	69 - 139	2	22
1,1,2-Trichloroethane	ND		5.00	5.11		ug/L		102	80 - 127	2	19
1,1-Dichloroethane	ND		5.00	5.35		ug/L		107	74 - 135	2	20
1,1-Dichloroethene	ND		5.00	5.49		ug/L		110	71 - 126	5	17
1,1-Dichloropropene	ND		5.00	5.54		ug/L		111	72 - 132	1	13
1,2,3-Trichlorobenzene	ND		5.00	5.02		ug/L		100	75 - 137	9	20
1,2,3-Trichloropropane	ND		5.00	4.94		ug/L		99	80 - 127	3	20
1,2,4-Trichlorobenzene	ND		5.00	4.69		ug/L		94	79 - 130	8	20
1,2,4-Trimethylbenzene	ND		5.00	5.20		ug/L		104	78 - 136	2	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.60		ug/L		92	69 - 130	7	26
1,2-Dichlorobenzene	ND		5.00	5.00		ug/L		100	80 - 129	3	14
1,2-Dichloroethane	ND		5.00	4.94		ug/L		99	74 - 130	1	15
1,2-Dichloropropane	ND		5.00	5.13		ug/L		103	80 - 130	3	14
1,3,5-Trimethylbenzene	ND		5.00	5.21		ug/L		104	80 - 139	1	20
1,3-Dichlorobenzene	ND		5.00	4.91		ug/L		98	80 - 130	1	12
1,3-Dichloropropane	ND		5.00	5.27		ug/L		105	80 - 130	1	19
1,4-Dichlorobenzene	ND		5.00	4.71		ug/L		94	80 - 129	1	11
2,2-Dichloropropane	ND		5.00	4.05		ug/L		81	58 - 150	5	28
2-Chlorotoluene	ND		5.00	5.09		ug/L		102	80 - 136	1	20
4-Chlorotoluene	ND		5.00	5.15		ug/L		103	80 - 130	1	20
4-Isopropyltoluene	ND		5.00	5.01		ug/L		99	78 - 132	0	14
Benzene	ND		5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene	ND		5.00	4.85		ug/L		97	80 - 130	0	20
Bromoform	ND		5.00	4.54		ug/L		91	69 - 137	0	20
Bromomethane	ND		5.00	5.86		ug/L		117	68 - 120	1	18
Carbon tetrachloride	ND		5.00	5.49		ug/L		110	71 - 132	1	15
Chlorobenzene	ND		5.00	4.98		ug/L		100	80 - 123	1	12
Chlorobromomethane	ND		5.00	5.23		ug/L		105	79 - 131	1	20
Chlorodibromomethane	ND		5.00	4.61		ug/L		92	76 - 131	1	20
Chloroethane	ND		5.00	5.84		ug/L		117	49 - 135	3	27
Chloroform	ND		5.00	5.35		ug/L		107	80 - 130	0	20
Chloromethane	ND		5.00	5.13		ug/L		103	32 - 143	2	23
cis-1,2-Dichloroethene	ND		5.00	5.37		ug/L		107	72 - 130	1	20
cis-1,3-Dichloropropene	ND		5.00	4.67		ug/L		93	66 - 141	2	22
Dibromomethane	ND		5.00	5.07		ug/L		101	65 - 141	2	20
Dichlorobromomethane	ND		5.00	4.61		ug/L		92	74 - 131	3	20
Dichlorodifluoromethane	ND		5.00	5.37		ug/L		107	20 - 137	7	22
Ethylbenzene	ND		5.00	5.44		ug/L		109	80 - 130	1	20
Ethylene Dibromide	ND		5.00	5.05		ug/L		101	80 - 126	1	20
Hexachlorobutadiene	ND		5.00	4.65		ug/L		93	72 - 138	2	20
Isopropylbenzene	ND		5.00	5.23		ug/L		105	75 - 137	0	20
Methyl tert-butyl ether	ND		5.00	5.17		ug/L		103	60 - 150	5	25
Methylene Chloride	ND		5.00	5.32		ug/L		106	75 - 134	3	18
m-Xylene & p-Xylene	ND		5.00	5.67		ug/L		113	78 - 130	1	20
Naphthalene	ND		5.00	4.70		ug/L		94	64 - 132	9	20
n-Butylbenzene	ND		5.00	4.95		ug/L		99	73 - 135	1	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318341

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene	ND		5.00	5.51		ug/L		110	77 - 142	0	20
o-Xylene	ND		5.00	5.06		ug/L		101	80 - 139	0	20
sec-Butylbenzene	ND		5.00	5.15		ug/L		103	78 - 140	1	20
Styrene	ND		5.00	4.87		ug/L		97	74 - 136	3	20
tert-Butylbenzene	ND		5.00	4.57		ug/L		89	77 - 140	0	20
Tetrachloroethene	ND		5.00	5.28		ug/L		106	75 - 131	0	20
Toluene	ND		5.00	4.88		ug/L		98	80 - 126	1	20
trans-1,2-Dichloroethene	ND		5.00	5.32		ug/L		106	63 - 133	1	17
trans-1,3-Dichloropropene	ND		5.00	4.38		ug/L		88	71 - 128	1	21
Trichloroethene	ND		5.00	5.12		ug/L		102	72 - 136	0	14
Trichlorofluoromethane	ND		5.00	5.56		ug/L		111	60 - 132	2	20
Vinyl chloride	ND		5.00	5.90		ug/L		118	52 - 128	1	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318500/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,3-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1,4-Dichlorobenzene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
1-Methylnaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,5-Trichlorophenol	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4,6-Trichlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dichlorophenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dimethylphenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrophenol	ND		10		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,4-Dinitrotoluene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2,6-Dinitrotoluene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chloronaphthalene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Chlorophenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylnaphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitroaniline	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
2-Nitrophenol	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
3 & 4 Methylphenol	ND		0.40		ug/L		12/09/19 14:43	12/13/19 11:08	1
3,3'-Dichlorobenzidine	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
3-Nitroaniline	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
4,6-Dinitro-2-methylphenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Matrix: Water
Analysis Batch: 318784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloro-3-methylphenol	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chloroaniline	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Chlorophenyl phenyl ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitroaniline	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
4-Nitrophenol	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Acenaphthylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Anthracene	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]anthracene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[a]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[b]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[g,h,i]perylene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzo[k]fluoranthene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzoic acid	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Benzyl alcohol	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethoxy)methane	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-chloroethyl)ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Bis(2-ethylhexyl) phthalate	ND		7.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
bis(chloroisopropyl) ether	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Butyl benzyl phthalate	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Carbazole	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Chrysene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenz(a,h)anthracene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dibenzofuran	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Diethyl phthalate	ND		6.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Dimethyl phthalate	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-butyl phthalate	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Di-n-octyl phthalate	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluoranthene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Fluorene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorobutadiene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachlorocyclopentadiene	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Hexachloroethane	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Indeno[1,2,3-cd]pyrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Isophorone	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Naphthalene	ND		0.20		ug/L		12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodi-n-propylamine	ND		0.30		ug/L		12/09/19 14:43	12/13/19 11:08	1
N-Nitrosodiphenylamine	ND		1.5		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pentachlorophenol	ND		5.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenanthrene	ND		0.50		ug/L		12/09/19 14:43	12/13/19 11:08	1
Phenol	ND		2.0		ug/L		12/09/19 14:43	12/13/19 11:08	1
Pyrene	ND		1.0		ug/L		12/09/19 14:43	12/13/19 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*48 - 125*	*12/09/19 14:43*	*12/13/19 11:08*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318500/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		50 - 120	12/09/19 14:43	12/13/19 11:08	1
2-Fluorophenol (Surr)	81		36 - 120	12/09/19 14:43	12/13/19 11:08	1
Nitrobenzene-d5 (Surr)	82		46 - 129	12/09/19 14:43	12/13/19 11:08	1
Phenol-d5 (Surr)	88		38 - 120	12/09/19 14:43	12/13/19 11:08	1
Terphenyl-d14 (Surr)	112		61 - 126	12/09/19 14:43	12/13/19 11:08	1

Lab Sample ID: LCS 580-318500/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.00	0.369	*	ug/L		37	46 - 120
1,2-Dichlorobenzene	1.00	0.383	*	ug/L		38	44 - 120
1,3-Dichlorobenzene	1.00	0.283	*	ug/L		28	36 - 120
1,4-Dichlorobenzene	1.00	0.314	*	ug/L		31	40 - 120
1-Methylnaphthalene	1.00	0.668		ug/L		67	59 - 120
2,4,5-Trichlorophenol	1.00	0.946		ug/L		95	56 - 122
2,4,6-Trichlorophenol	1.00	0.636		ug/L		64	50 - 126
2,4-Dichlorophenol	1.00	0.699	J	ug/L		70	54 - 120
2,4-Dimethylphenol	1.00	ND		ug/L		23	20 - 120
2,4-Dinitrophenol	2.00	ND	*	ug/L		0	20 - 150
2,4-Dinitrotoluene	1.00	0.770		ug/L		77	44 - 142
2,6-Dinitrotoluene	1.00	0.814		ug/L		81	54 - 137
2-Chloronaphthalene	1.00	0.645		ug/L		64	45 - 120
2-Chlorophenol	1.00	0.811		ug/L		81	54 - 120
2-Methylnaphthalene	1.00	0.622		ug/L		62	53 - 120
2-Methylphenol	1.00	0.662		ug/L		66	43 - 120
2-Nitroaniline	1.00	0.667		ug/L		67	50 - 137
2-Nitrophenol	1.00	0.801		ug/L		80	41 - 127
3 & 4 Methylphenol	1.00	0.632		ug/L		63	43 - 120
3,3'-Dichlorobenzidine	2.00	ND		ug/L		39	20 - 150
3-Nitroaniline	1.00	0.661	J	ug/L		66	34 - 120
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		34	20 - 150
4-Bromophenyl phenyl ether	1.00	0.651		ug/L		65	62 - 120
4-Chloro-3-methylphenol	1.00	0.593		ug/L		59	47 - 126
4-Chloroaniline	1.00	ND	*	ug/L		15	20 - 120
4-Chlorophenyl phenyl ether	1.00	0.690		ug/L		69	53 - 125
4-Nitroaniline	1.00	0.734	J	ug/L		73	51 - 120
4-Nitrophenol	2.00	1.84	J	ug/L		92	33 - 150
Acenaphthene	1.00	0.711		ug/L		71	56 - 120
Acenaphthylene	1.00	0.771		ug/L		77	50 - 120
Anthracene	1.00	0.615	J	ug/L		62	44 - 120
Benzo[a]anthracene	1.00	0.827		ug/L		83	65 - 124
Benzo[a]pyrene	1.00	0.494	J	ug/L		49	41 - 120
Benzo[b]fluoranthene	1.00	0.744		ug/L		74	62 - 131
Benzo[g,h,i]perylene	1.00	0.799		ug/L		80	65 - 125
Benzo[k]fluoranthene	1.00	0.716		ug/L		72	57 - 128
Benzoic acid	2.00	0.751	J	ug/L		38	20 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318500/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	1.00	0.565	J	ug/L		56	20 - 150
Bis(2-chloroethoxy)methane	1.00	0.819		ug/L		82	53 - 120
Bis(2-chloroethyl)ether	1.00	0.829		ug/L		83	47 - 120
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		119	20 - 150
bis(chloroisopropyl) ether	1.00	0.793		ug/L		79	32 - 142
Butyl benzyl phthalate	1.00	1.15	J	ug/L		115	55 - 150
Carbazole	1.00	1.48	*	ug/L		148	67 - 135
Chrysene	1.00	0.914		ug/L		91	57 - 126
Dibenz(a,h)anthracene	1.00	0.796		ug/L		80	62 - 131
Dibenzofuran	1.00	0.754		ug/L		75	60 - 120
Diethyl phthalate	1.00	0.889	J	ug/L		89	55 - 135
Dimethyl phthalate	1.00	0.852		ug/L		85	64 - 128
Di-n-butyl phthalate	1.00	0.979	J	ug/L		98	57 - 136
Di-n-octyl phthalate	1.00	0.812		ug/L		81	51 - 150
Fluoranthene	1.00	0.842	J	ug/L		84	64 - 128
Fluorene	1.00	0.780	J	ug/L		78	64 - 120
Hexachlorobenzene	1.00	0.586		ug/L		59	50 - 120
Hexachlorobutadiene	1.00	0.0554	J *	ug/L		6	21 - 120
Hexachlorocyclopentadiene	1.00	0.0493	J *	ug/L		5	20 - 120
Hexachloroethane	1.00	0.128	J *	ug/L		13	30 - 120
Indeno[1,2,3-cd]pyrene	1.00	0.755		ug/L		75	55 - 148
Isophorone	1.00	0.876		ug/L		88	56 - 125
Naphthalene	1.00	0.727		ug/L		73	63 - 120
Nitrobenzene	1.00	0.832		ug/L		83	45 - 139
N-Nitrosodi-n-propylamine	1.00	0.766		ug/L		77	46 - 120
N-Nitrosodiphenylamine	1.00	0.423	J	ug/L		42	33 - 120
Pentachlorophenol	2.00	ND	*	ug/L		13	20 - 135
Phenanthrene	1.00	0.719		ug/L		72	63 - 120
Phenol	1.00	0.727	J	ug/L		73	41 - 120
Pyrene	1.00	0.856	J	ug/L		86	64 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*72*		*48 - 125*
2-Fluorobiphenyl	*68*		*50 - 120*
2-Fluorophenol (Surr)	*62*		*36 - 120*
Nitrobenzene-d5 (Surr)	*80*		*46 - 129*
Phenol-d5 (Surr)	*78*		*38 - 120*
Terphenyl-d14 (Surr)	*86*		*61 - 126*

Lab Sample ID: LCSD 580-318500/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	1.00	0.458		ug/L		46	46 - 120	21	35
1,2-Dichlorobenzene	1.00	0.421	*	ug/L		42	44 - 120	9	35
1,3-Dichlorobenzene	1.00	0.324	*	ug/L		32	36 - 120	13	35
1,4-Dichlorobenzene	1.00	0.363	*	ug/L		36	40 - 120	15	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	1.00	0.743		ug/L		74	59 - 120	11	25
2,4,5-Trichlorophenol	1.00	0.831		ug/L		83	56 - 122	13	35
2,4,6-Trichlorophenol	1.00	0.675		ug/L		68	50 - 126	6	20
2,4-Dichlorophenol	1.00	0.791	J	ug/L		79	54 - 120	12	35
2,4-Dimethylphenol	1.00	0.505	J *	ug/L		51	20 - 120	76	35
2,4-Dinitrophenol	2.00	ND	*	ug/L		20	20 - 150	200	35
2,4-Dinitrotoluene	1.00	0.810		ug/L		81	44 - 142	5	36
2,6-Dinitrotoluene	1.00	0.831		ug/L		83	54 - 137	2	33
2-Chloronaphthalene	1.00	0.661		ug/L		66	45 - 120	3	35
2-Chlorophenol	1.00	0.830		ug/L		83	54 - 120	2	35
2-Methylnaphthalene	1.00	0.688		ug/L		69	53 - 120	10	29
2-Methylphenol	1.00	0.722		ug/L		72	43 - 120	9	35
2-Nitroaniline	1.00	0.762		ug/L		76	50 - 137	13	35
2-Nitrophenol	1.00	0.791		ug/L		79	41 - 127	1	35
3 & 4 Methylphenol	1.00	0.699		ug/L		70	43 - 120	10	35
3,3'-Dichlorobenzidine	2.00	ND		ug/L		30	20 - 150	26	35
3-Nitroaniline	1.00	0.608	J	ug/L		61	34 - 120	8	35
4,6-Dinitro-2-methylphenol	2.00	ND		ug/L		42	20 - 150	20	35
4-Bromophenyl phenyl ether	1.00	0.735		ug/L		74	62 - 120	12	20
4-Chloro-3-methylphenol	1.00	0.709		ug/L		71	47 - 126	18	35
4-Chloroaniline	1.00	ND	*	ug/L		5	20 - 120	103	35
4-Chlorophenyl phenyl ether	1.00	0.698		ug/L		70	53 - 125	1	27
4-Nitroaniline	1.00	1.09	*	ug/L		109	51 - 120	39	35
4-Nitrophenol	2.00	1.63	J	ug/L		81	33 - 150	12	35
Acenaphthene	1.00	0.723		ug/L		72	56 - 120	2	35
Acenaphthylene	1.00	0.724		ug/L		72	50 - 120	6	35
Anthracene	1.00	0.678	J	ug/L		68	44 - 120	10	26
Benzo[a]anthracene	1.00	0.843		ug/L		84	65 - 124	2	27
Benzo[a]pyrene	1.00	0.635		ug/L		63	41 - 120	25	29
Benzo[b]fluoranthene	1.00	0.830		ug/L		83	62 - 131	11	27
Benzo[g,h,i]perylene	1.00	0.856		ug/L		86	65 - 125	7	25
Benzo[k]fluoranthene	1.00	0.744		ug/L		74	57 - 128	4	26
Benzoic acid	2.00	0.872	J	ug/L		44	20 - 120	15	35
Benzyl alcohol	1.00	0.671	J	ug/L		67	20 - 150	17	35
Bis(2-chloroethoxy)methane	1.00	0.802		ug/L		80	53 - 120	2	27
Bis(2-chloroethyl)ether	1.00	0.817		ug/L		82	47 - 120	1	35
Bis(2-ethylhexyl) phthalate	1.00	ND		ug/L		102	20 - 150	16	35
bis(chloroisopropyl) ether	1.00	0.758		ug/L		76	32 - 142	4	33
Butyl benzyl phthalate	1.00	1.08	J	ug/L		108	55 - 150	6	35
Carbazole	1.00	1.58	*	ug/L		158	67 - 135	7	20
Chrysene	1.00	0.856		ug/L		86	57 - 126	7	26
Dibenz(a,h)anthracene	1.00	0.902		ug/L		90	62 - 131	12	28
Dibenzofuran	1.00	0.758		ug/L		76	60 - 120	0	35
Diethyl phthalate	1.00	0.892	J	ug/L		89	55 - 135	0	35
Dimethyl phthalate	1.00	0.888		ug/L		89	64 - 128	4	24
Di-n-butyl phthalate	1.00	1.08	J	ug/L		108	57 - 136	10	20
Di-n-octyl phthalate	1.00	0.886		ug/L		89	51 - 150	9	26
Fluoranthene	1.00	0.910	J	ug/L		91	64 - 128	8	20
Fluorene	1.00	0.793	J	ug/L		79	64 - 120	2	28

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318500/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			1.00	0.783	*	ug/L		78	50 - 120	29	26
Hexachlorobutadiene			1.00	0.0996	J *	ug/L		10	21 - 120	57	35
Hexachlorocyclopentadiene			1.00	ND	*	ug/L		3	20 - 120	55	35
Hexachloroethane			1.00	0.156	J *	ug/L		16	30 - 120	20	35
Indeno[1,2,3-cd]pyrene			1.00	0.771		ug/L		77	55 - 148	2	20
Isophorone			1.00	0.847		ug/L		85	56 - 125	3	20
Naphthalene			1.00	0.769		ug/L		77	63 - 120	6	34
Nitrobenzene			1.00	0.817		ug/L		82	45 - 139	2	33
N-Nitrosodi-n-propylamine			1.00	0.766		ug/L		77	46 - 120	0	28
N-Nitrosodiphenylamine			1.00	0.325	J *	ug/L		32	33 - 120	26	35
Pentachlorophenol			2.00	ND	*	ug/L		38	20 - 135	97	35
Phenanthrene			1.00	0.791		ug/L		79	63 - 120	10	20
Phenol			1.00	0.807	J	ug/L		81	41 - 120	10	35
Pyrene			1.00	0.921	J	ug/L		92	64 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*71*		*50 - 120*
2-Fluorophenol (Surr)	*73*		*36 - 120*
Nitrobenzene-d5 (Surr)	*86*		*46 - 129*
Phenol-d5 (Surr)	*83*		*38 - 120*
Terphenyl-d14 (Surr)	*94*		*61 - 126*

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND	*	1.93	1.44		ug/L		75	46 - 120
1,2-Dichlorobenzene	ND	*	1.93	1.50		ug/L		78	44 - 120
1,3-Dichlorobenzene	ND	*	1.93	1.48		ug/L		77	36 - 120
1,4-Dichlorobenzene	ND	*	1.93	1.46		ug/L		76	40 - 120
1-Methylnaphthalene	ND		1.93	1.61		ug/L		84	59 - 120
2,4,5-Trichlorophenol	ND		1.93	1.43		ug/L		74	56 - 122
2,4,6-Trichlorophenol	ND		1.93	1.42		ug/L		74	50 - 126
2,4-Dichlorophenol	ND		1.93	ND		ug/L		79	54 - 120
2,4-Dimethylphenol	ND	F2 *	1.93	ND		ug/L		43	20 - 120
2,4-Dinitrophenol	ND	*	3.86	ND		ug/L		NC	20 - 150
2,4-Dinitrotoluene	ND		1.93	1.67		ug/L		87	44 - 142
2,6-Dinitrotoluene	ND		1.93	1.67		ug/L		87	54 - 137
2-Chloronaphthalene	ND		1.93	1.54		ug/L		80	45 - 120
2-Chlorophenol	ND		1.93	1.66		ug/L		86	54 - 120
2-Methylnaphthalene	ND		1.93	1.59		ug/L		82	53 - 120
2-Methylphenol	ND		1.93	1.47		ug/L		76	43 - 120
2-Nitroaniline	ND		1.93	1.62		ug/L		84	50 - 137
2-Nitrophenol	ND		1.93	1.56		ug/L		81	41 - 127
3 & 4 Methylphenol	ND		1.93	1.44		ug/L		75	43 - 120
3,3'-Dichlorobenzidine	ND	F2	3.86	ND		ug/L		89	20 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
3-Nitroaniline	ND		1.93	ND		ug/L		70	34 - 120
4,6-Dinitro-2-methylphenol	ND	F1	3.86	ND	F1	ug/L		0	20 - 150
4-Bromophenyl phenyl ether	ND		1.93	1.63		ug/L		84	62 - 120
4-Chloro-3-methylphenol	ND		1.93	1.50		ug/L		78	47 - 126
4-Chloroaniline	ND	*	1.93	ND		ug/L		NC	20 - 120
4-Chlorophenyl phenyl ether	ND		1.93	1.72		ug/L		89	53 - 125
4-Nitroaniline	ND	*	1.93	ND		ug/L		90	51 - 120
4-Nitrophenol	ND		3.86	ND		ug/L		91	33 - 150
Acenaphthene	ND		1.93	1.57		ug/L		81	56 - 120
Acenaphthylene	ND		1.93	1.55		ug/L		80	50 - 120
Anthracene	ND		1.93	ND		ug/L		81	44 - 120
Benzo[a]anthracene	ND		1.93	1.60		ug/L		83	65 - 124
Benzo[a]pyrene	ND		1.93	1.46		ug/L		76	41 - 120
Benzo[b]fluoranthene	ND		1.93	1.75		ug/L		91	62 - 131
Benzo[g,h,i]perylene	ND		1.93	1.84		ug/L		95	65 - 125
Benzo[k]fluoranthene	ND		1.93	1.70		ug/L		88	57 - 128
Benzoic acid	ND		3.86	ND		ug/L		47	20 - 120
Benzyl alcohol	ND		1.93	ND		ug/L		78	20 - 150
Bis(2-chloroethoxy)methane	ND		1.93	1.62		ug/L		84	53 - 120
Bis(2-chloroethyl)ether	ND		1.93	1.65		ug/L		86	47 - 120
Bis(2-ethylhexyl) phthalate	ND		1.93	ND		ug/L		NC	20 - 150
bis(chloroisopropyl) ether	ND		1.93	1.53		ug/L		79	32 - 142
Butyl benzyl phthalate	ND		1.93	ND		ug/L		105	55 - 150
Carbazole	ND	* F2 F1	1.93	3.12	F1	ug/L		162	67 - 135
Chrysene	ND		1.93	1.64		ug/L		85	57 - 126
Dibenz(a,h)anthracene	ND		1.93	1.81		ug/L		94	62 - 131
Dibenzofuran	ND		1.93	1.70		ug/L		88	60 - 120
Diethyl phthalate	ND		1.93	ND		ug/L		96	55 - 135
Dimethyl phthalate	ND		1.93	1.76		ug/L		91	64 - 128
Di-n-butyl phthalate	ND		1.93	ND		ug/L		104	57 - 136
Di-n-octyl phthalate	ND		1.93	1.85		ug/L		96	51 - 150
Fluoranthene	ND		1.93	ND		ug/L		92	64 - 128
Fluorene	ND		1.93	ND		ug/L		89	64 - 120
Hexachlorobenzene	ND	*	1.93	1.54		ug/L		80	50 - 120
Hexachlorobutadiene	ND	*	1.93	1.45		ug/L		75	21 - 120
Hexachlorocyclopentadiene	ND	*	1.93	ND		ug/L		39	20 - 120
Hexachloroethane	ND	*	1.93	1.44		ug/L		75	30 - 120
Indeno[1,2,3-cd]pyrene	ND		1.93	1.73		ug/L		90	55 - 148
Isophorone	ND		1.93	1.71		ug/L		89	56 - 125
Naphthalene	ND		1.93	1.59		ug/L		83	63 - 120
Nitrobenzene	ND		1.93	1.64		ug/L		85	45 - 139
N-Nitrosodi-n-propylamine	ND		1.93	1.65		ug/L		85	46 - 120
N-Nitrosodiphenylamine	ND	*	1.93	ND		ug/L		64	33 - 120
Pentachlorophenol	ND	F1 *	3.86	ND	F1	ug/L		0	20 - 135
Phenanthrene	ND		1.93	1.62		ug/L		84	63 - 120
Phenol	ND		1.93	ND		ug/L		81	41 - 120
Pyrene	ND		1.93	ND		ug/L		92	64 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*83*		*48 - 125*
2-Fluorobiphenyl	*87*		*50 - 120*
2-Fluorophenol (Surr)	*75*		*36 - 120*
Nitrobenzene-d5 (Surr)	*88*		*46 - 129*
Phenol-d5 (Surr)	*88*		*38 - 120*
Terphenyl-d14 (Surr)	*100*		*61 - 126*

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318784

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND	*	1.95	1.53		ug/L		78	46 - 120	6	35
1,2-Dichlorobenzene	ND	*	1.95	1.54		ug/L		79	44 - 120	3	35
1,3-Dichlorobenzene	ND	*	1.95	1.55		ug/L		80	36 - 120	4	35
1,4-Dichlorobenzene	ND	*	1.95	1.52		ug/L		78	40 - 120	4	35
1-Methylnaphthalene	ND		1.95	1.61		ug/L		82	59 - 120	0	25
2,4,5-Trichlorophenol	ND		1.95	1.50		ug/L		77	56 - 122	5	35
2,4,6-Trichlorophenol	ND		1.95	1.54		ug/L		79	50 - 126	8	20
2,4-Dichlorophenol	ND		1.95	ND		ug/L		78	54 - 120	0	35
2,4-Dimethylphenol	ND	F2 *	1.95	ND	F2	ug/L		66	20 - 120	44	35
2,4-Dinitrophenol	ND	*	3.90	ND		ug/L		NC	20 - 150	NC	35
2,4-Dinitrotoluene	ND		1.95	1.95		ug/L		100	44 - 142	16	36
2,6-Dinitrotoluene	ND		1.95	1.89		ug/L		97	54 - 137	13	33
2-Chloronaphthalene	ND		1.95	1.56		ug/L		80	45 - 120	1	35
2-Chlorophenol	ND		1.95	1.78		ug/L		91	54 - 120	7	35
2-Methylnaphthalene	ND		1.95	1.57		ug/L		81	53 - 120	1	29
2-Methylphenol	ND		1.95	1.59		ug/L		81	43 - 120	8	35
2-Nitroaniline	ND		1.95	1.79		ug/L		92	50 - 137	10	35
2-Nitrophenol	ND		1.95	1.61		ug/L		83	41 - 127	3	35
3 & 4 Methylphenol	ND		1.95	1.54		ug/L		79	43 - 120	7	35
3,3'-Dichlorobenzidine	ND	F2	3.90	ND	F2	ug/L		129	20 - 150	38	35
3-Nitroaniline	ND		1.95	ND		ug/L		98	34 - 120	34	35
4,6-Dinitro-2-methylphenol	ND	F1	3.90	ND	F1	ug/L		0	20 - 150	NC	35
4-Bromophenyl phenyl ether	ND		1.95	1.89		ug/L		97	62 - 120	15	20
4-Chloro-3-methylphenol	ND		1.95	1.54		ug/L		79	47 - 126	2	35
4-Chloroaniline	ND	*	1.95	ND		ug/L		NC	20 - 120	NC	35
4-Chlorophenyl phenyl ether	ND		1.95	1.79		ug/L		91	53 - 125	4	27
4-Nitroaniline	ND	*	1.95	2.20		ug/L		112	51 - 120	23	35
4-Nitrophenol	ND		3.90	ND		ug/L		70	33 - 150	25	35
Acenaphthene	ND		1.95	1.58		ug/L		81	56 - 120	1	35
Acenaphthylene	ND		1.95	1.66		ug/L		85	50 - 120	7	35
Anthracene	ND		1.95	ND		ug/L		103	44 - 120	26	26
Benzo[a]anthracene	ND		1.95	1.97		ug/L		101	65 - 124	21	27
Benzo[a]pyrene	ND		1.95	1.82		ug/L		93	41 - 120	22	29
Benzo[b]fluoranthene	ND		1.95	2.05		ug/L		105	62 - 131	16	27
Benzo[g,h,i]perylene	ND		1.95	2.10		ug/L		107	65 - 125	13	25
Benzo[k]fluoranthene	ND		1.95	2.01		ug/L		103	57 - 128	16	26

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-91195-1 MSD
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 318784
Prep Batch: 318500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid	ND		3.90	ND		ug/L		45	20 - 120	3	35
Benzyl alcohol	ND		1.95	ND		ug/L		73	20 - 150	6	35
Bis(2-chloroethoxy)methane	ND		1.95	1.60		ug/L		82	53 - 120	1	27
Bis(2-chloroethyl)ether	ND		1.95	1.66		ug/L		85	47 - 120	0	35
Bis(2-ethylhexyl) phthalate	ND		1.95	ND		ug/L		NC	20 - 150	NC	35
bis(chloroisopropyl) ether	ND		1.95	1.58		ug/L		81	32 - 142	4	33
Butyl benzyl phthalate	ND		1.95	ND		ug/L		128	55 - 150	21	35
Carbazole	ND	* F2 F1	1.95	3.84	F1 F2	ug/L		197	67 - 135	21	20
Chrysene	ND		1.95	1.98		ug/L		102	57 - 126	19	26
Dibenz(a,h)anthracene	ND		1.95	1.91		ug/L		98	62 - 131	5	28
Dibenzofuran	ND		1.95	1.75		ug/L		90	60 - 120	3	35
Diethyl phthalate	ND		1.95	ND		ug/L		105	55 - 135	11	35
Dimethyl phthalate	ND		1.95	2.02		ug/L		104	64 - 128	14	24
Di-n-butyl phthalate	ND		1.95	ND		ug/L		123	57 - 136	18	20
Di-n-octyl phthalate	ND		1.95	2.11		ug/L		108	51 - 150	13	26
Fluoranthene	ND		1.95	ND		ug/L		109	64 - 128	18	20
Fluorene	ND		1.95	ND		ug/L		94	64 - 120	7	28
Hexachlorobenzene	ND	*	1.95	1.76		ug/L		90	50 - 120	13	26
Hexachlorobutadiene	ND	*	1.95	1.47		ug/L		75	21 - 120	1	35
Hexachlorocyclopentadiene	ND	*	1.95	ND		ug/L		33	20 - 120	14	35
Hexachloroethane	ND	*	1.95	1.53		ug/L		78	30 - 120	6	35
Indeno[1,2,3-cd]pyrene	ND		1.95	2.00		ug/L		102	55 - 148	14	20
Isophorone	ND		1.95	1.76		ug/L		90	56 - 125	3	20
Naphthalene	ND		1.95	1.64		ug/L		84	63 - 120	3	34
Nitrobenzene	ND		1.95	1.70		ug/L		87	45 - 139	4	33
N-Nitrosodi-n-propylamine	ND		1.95	1.59		ug/L		82	46 - 120	3	28
N-Nitrosodiphenylamine	ND	*	1.95	ND		ug/L		82	33 - 120	26	35
Pentachlorophenol	ND	F1 *	3.90	ND	F1	ug/L		0	20 - 135	NC	35
Phenanthrene	ND		1.95	1.91		ug/L		98	63 - 120	16	20
Phenol	ND		1.95	ND		ug/L		87	41 - 120	9	35
Pyrene	ND		1.95	2.14		ug/L		109	64 - 120	19	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*93*		*48 - 125*
2-Fluorobiphenyl	*80*		*50 - 120*
2-Fluorophenol (Surr)	*75*		*36 - 120*
Nitrobenzene-d5 (Surr)	*82*		*46 - 129*
Phenol-d5 (Surr)	*84*		*38 - 120*
Terphenyl-d14 (Surr)	*104*		*61 - 126*

Lab Sample ID: MB 580-319850/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 319972
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,2-Dichlorobenzene	ND		0.60		ug/L		12/30/19 13:18	01/03/20 15:46	1
1,3-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-319850/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 319972
Prep Batch: 319850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.40		ug/L		12/30/19 13:18	01/03/20 15:46	1
Anthracene	ND		15		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachlorobutadiene	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Hexachloroethane	ND		1.0		ug/L		12/30/19 13:18	01/03/20 15:46	1
Pentachlorophenol	ND		10		ug/L		12/30/19 13:18	01/03/20 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*48 - 125*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorobiphenyl	*94*		*50 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
2-Fluorophenol (Surr)	*82*		*36 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Nitrobenzene-d5 (Surr)	*67*		*46 - 129*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Phenol-d5 (Surr)	*87*		*38 - 120*	*12/30/19 13:18*	*01/03/20 15:46*	*1*
Terphenyl-d14 (Surr)	*94*		*61 - 126*	*12/30/19 13:18*	*01/03/20 15:46*	*1*

Lab Sample ID: LCS 580-319850/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 319972
Prep Batch: 319850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.69		ug/L		85	46 - 120
1,2-Dichlorobenzene	2.00	1.80		ug/L		90	44 - 120
1,3-Dichlorobenzene	2.00	1.76		ug/L		88	36 - 120
1,4-Dichlorobenzene	2.00	1.78		ug/L		89	40 - 120
Hexachlorobutadiene	2.00	1.63		ug/L		82	21 - 120
Hexachloroethane	2.00	1.74		ug/L		87	30 - 120
Pentachlorophenol	4.00	ND		ug/L		30	20 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*48 - 125*
2-Fluorobiphenyl	*92*		*50 - 120*
2-Fluorophenol (Surr)	*89*		*36 - 120*
Nitrobenzene-d5 (Surr)	*94*		*46 - 129*
Phenol-d5 (Surr)	*90*		*38 - 120*
Terphenyl-d14 (Surr)	*91*		*61 - 126*

Lab Sample ID: LCSD 580-319850/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 319972
Prep Batch: 319850

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.81		ug/L		90	46 - 120	7	35
1,2-Dichlorobenzene	2.00	1.84		ug/L		92	44 - 120	2	35
1,3-Dichlorobenzene	2.00	1.82		ug/L		91	36 - 120	4	35
1,4-Dichlorobenzene	2.00	1.84		ug/L		92	40 - 120	3	35
Hexachlorobutadiene	2.00	1.85		ug/L		92	21 - 120	12	35
Hexachloroethane	2.00	1.87		ug/L		94	30 - 120	7	35
Pentachlorophenol	4.00	ND	*	ug/L		44	20 - 135	37	35

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-319850/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 319972
Prep Batch: 319850

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*48 - 125*
2-Fluorobiphenyl	*89*		*50 - 120*
2-Fluorophenol (Surr)	*87*		*36 - 120*
Nitrobenzene-d5 (Surr)	*92*		*46 - 129*
Phenol-d5 (Surr)	*95*		*38 - 120*
Terphenyl-d14 (Surr)	*100*		*61 - 126*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-343665/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 347605
Prep Batch: 343665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/06/19 12:05	12/26/19 05:59	1
2-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
3-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Nitrotoluene	ND		0.50		ug/L		12/06/19 12:05	12/26/19 05:59	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
HMX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
RDX	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitrobenzene	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Tetryl	ND		0.10		ug/L		12/06/19 12:05	12/26/19 05:59	1
Nitroglycerin	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1
PETN	ND		0.65		ug/L		12/06/19 12:05	12/26/19 05:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*82*		*79 - 111*	*12/06/19 12:05*	*12/26/19 05:59*	*1*

Lab Sample ID: LCS 320-343665/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 347605
Prep Batch: 343665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.936		ug/L		94	74 - 120
1,3-Dinitrobenzene	1.00	0.977		ug/L		98	72 - 123
2,4,6-Trinitrotoluene	1.00	0.849		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.929		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.924		ug/L		92	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.01		ug/L		101	77 - 123
2-Nitrotoluene	1.00	0.849		ug/L		85	64 - 120
3-Nitrotoluene	1.00	0.928		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.920		ug/L		92	67 - 115

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-343665/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 347605
Prep Batch: 343665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Amino-2,6-dinitrotoluene	1.00	0.913		ug/L		91	68 - 113
HMX	1.00	1.06		ug/L		106	67 - 115
RDX	1.00	1.08		ug/L		108	68 - 122
Nitrobenzene	1.00	0.978		ug/L		98	69 - 119
Tetryl	1.00	0.856		ug/L		86	66 - 105
Nitroglycerin	5.00	4.57		ug/L		91	85 - 115
PETN	5.00	4.37		ug/L		87	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*84*		*79 - 111*

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 347605
Prep Batch: 343665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	ND		1.05	1.00		ug/L		96	74 - 120
1,3-Dinitrobenzene	ND		1.05	1.07		ug/L		102	72 - 123
2,4,6-Trinitrotoluene	ND		1.05	0.923		ug/L		88	69 - 111
2,4-Dinitrotoluene	ND		1.05	1.03		ug/L		98	70 - 119
2,6-Dinitrotoluene	ND		1.05	1.02		ug/L		97	71 - 119
2-Amino-4,6-dinitrotoluene	ND		1.05	1.13		ug/L		108	77 - 123
2-Nitrotoluene	ND		1.05	0.973		ug/L		93	64 - 120
3-Nitrotoluene	ND		1.05	0.994		ug/L		95	67 - 114
4-Nitrotoluene	ND		1.05	1.00		ug/L		96	67 - 115
4-Amino-2,6-dinitrotoluene	ND		1.05	0.990		ug/L		95	68 - 113
HMX	ND		1.05	1.13		ug/L		108	67 - 115
RDX	ND		1.05	1.15		ug/L		110	68 - 122
Nitrobenzene	ND		1.05	1.07		ug/L		102	69 - 119
Tetryl	ND		1.05	0.930		ug/L		89	66 - 105
Nitroglycerin	ND		5.23	4.92		ug/L		94	85 - 115
PETN	ND		5.23	4.86		ug/L		93	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: 580-91195-1 MSD
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 347605
Prep Batch: 343665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.06	0.976		ug/L		92	74 - 120	2	29
1,3-Dinitrobenzene	ND		1.06	1.01		ug/L		95	72 - 123	6	29
2,4,6-Trinitrotoluene	ND		1.06	0.885		ug/L		83	69 - 111	4	28
2,4-Dinitrotoluene	ND		1.06	0.976		ug/L		92	70 - 119	5	30
2,6-Dinitrotoluene	ND		1.06	0.951		ug/L		89	71 - 119	7	29
2-Amino-4,6-dinitrotoluene	ND		1.06	1.10		ug/L		103	77 - 123	3	27
2-Nitrotoluene	ND		1.06	0.919		ug/L		86	64 - 120	6	36

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: 580-91195-1 MSD — **Client Sample ID: 04Q19LCMW04DW**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347605 — **Prep Batch: 343665**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3-Nitrotoluene	ND		1.06	0.944		ug/L		89	67 - 114	5	31
4-Nitrotoluene	ND		1.06	0.923		ug/L		87	67 - 115	8	32
4-Amino-2,6-dinitrotoluene	ND		1.06	0.951		ug/L		89	68 - 113	4	30
HMX	ND		1.06	1.09		ug/L		102	67 - 115	3	32
RDX	ND		1.06	1.12		ug/L		105	68 - 122	3	32
Nitrobenzene	ND		1.06	0.991		ug/L		93	69 - 119	7	31
Tetryl	ND		1.06	0.885		ug/L		83	66 - 105	5	26
Nitroglycerin	ND		5.32	4.96		ug/L		93	85 - 115	1	15
PETN	ND		5.32	4.84		ug/L		91	84 - 117	0	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*86*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 344441 — **Prep Batch: 344342**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 344441 — **Prep Batch: 344342**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Lab Sample ID: INF 320-344342/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water
Analysis Batch: 344441 — **Prep Batch: 344342**

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.65		ng/mL		113	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-318385/10-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 318532 — **Prep Batch: 318385**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Antimony	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Beryllium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Cadmium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Chromium	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Copper	ND		0.0020		mg/L		12/06/19 11:34	12/09/19 11:04	1
Lead	ND		0.00080		mg/L		12/06/19 11:34	12/09/19 11:04	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-318385/10-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		0.0030		mg/L		12/06/19 11:34	12/09/19 11:04	1
Selenium	ND		0.0080		mg/L		12/06/19 11:34	12/09/19 11:04	1
Silver	ND		0.00040		mg/L		12/06/19 11:34	12/09/19 11:04	1
Thallium	ND		0.0010		mg/L		12/06/19 11:34	12/09/19 11:04	1
Zinc	ND		0.0070		mg/L		12/06/19 11:34	12/09/19 11:04	1

Lab Sample ID: LCS 580-318385/11-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.00		mg/L		100	80 - 120
Antimony	1.00	1.00		mg/L		100	80 - 120
Beryllium	1.00	0.982		mg/L		98	80 - 120
Cadmium	1.00	1.01		mg/L		101	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Copper	1.00	1.06		mg/L		106	80 - 120
Lead	1.00	1.01		mg/L		101	80 - 120
Nickel	1.00	1.05		mg/L		105	80 - 120
Selenium	1.00	0.980		mg/L		98	80 - 120
Silver	1.00	1.02		mg/L		102	80 - 120
Thallium	1.00	0.971		mg/L		97	80 - 120
Zinc	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: LCSD 580-318385/12-A
Matrix: Water
Analysis Batch: 318532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.00		mg/L		100	80 - 120	0	20
Antimony	1.00	0.999		mg/L		100	80 - 120	0	20
Beryllium	1.00	0.985		mg/L		99	80 - 120	0	20
Cadmium	1.00	1.02		mg/L		102	80 - 120	1	20
Chromium	1.00	1.03		mg/L		103	80 - 120	2	20
Copper	1.00	1.04		mg/L		104	80 - 120	1	20
Lead	1.00	1.01		mg/L		101	80 - 120	0	20
Nickel	1.00	1.03		mg/L		103	80 - 120	2	20
Selenium	1.00	1.00		mg/L		100	80 - 120	2	20
Silver	1.00	1.02		mg/L		102	80 - 120	0	20
Thallium	1.00	0.974		mg/L		97	80 - 120	0	20
Zinc	1.00	1.03		mg/L		103	80 - 120	2	20

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318532

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total Recoverable
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.06		mg/L		106	80 - 120
Antimony	ND		1.00	1.10		mg/L		110	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-91195-1 MS
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 318532
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		1.00	1.04		mg/L		104	80 - 120
Cadmium	ND		1.00	1.08		mg/L		108	80 - 120
Chromium	0.00051		1.00	1.08		mg/L		108	80 - 120
Copper	ND		1.00	1.10		mg/L		110	80 - 120
Lead	ND		1.00	1.07		mg/L		107	80 - 120
Nickel	ND		1.00	1.11		mg/L		111	80 - 120
Selenium	ND		1.00	1.04		mg/L		104	80 - 120
Silver	ND		1.00	1.02		mg/L		102	80 - 120
Thallium	ND		1.00	1.18		mg/L		118	80 - 120
Zinc	ND		1.00	1.04		mg/L		103	80 - 120

Lab Sample ID: 580-91195-1 MSD
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 318532
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.02		mg/L		102	80 - 120	4	20
Antimony	ND		1.00	1.07		mg/L		107	80 - 120	3	20
Beryllium	ND		1.00	1.01		mg/L		101	80 - 120	3	20
Cadmium	ND		1.00	1.01		mg/L		101	80 - 120	7	20
Chromium	0.00051		1.00	1.04		mg/L		104	80 - 120	4	20
Copper	ND		1.00	1.06		mg/L		106	80 - 120	4	20
Lead	ND		1.00	1.03		mg/L		103	80 - 120	4	20
Nickel	ND		1.00	1.06		mg/L		106	80 - 120	5	20
Selenium	ND		1.00	0.978		mg/L		98	80 - 120	6	20
Silver	ND		1.00	1.02		mg/L		102	80 - 120	0	20
Thallium	ND		1.00	1.16		mg/L		116	80 - 120	2	20
Zinc	ND		1.00	1.03		mg/L		103	80 - 120	1	20

Lab Sample ID: 580-91195-1 DU
Client Sample ID: 04Q19LCMW04DW
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 318532
Prep Batch: 318385

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/L		NC	20
Antimony	ND		ND		mg/L		NC	20
Beryllium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.00051		0.000631	F5	mg/L		21	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Nickel	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Thallium	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-318467/17-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030		mg/L		12/09/19 10:18	12/09/19 13:55	1

Lab Sample ID: LCS 580-318467/18-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00212		mg/L		106	80 - 120

Lab Sample ID: LCSD 580-318467/19-A
Matrix: Water
Analysis Batch: 318502

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00210		mg/L		105	80 - 120	1	20

Lab Sample ID: 580-91195-1 MS
Matrix: Water
Analysis Batch: 318502

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00200	0.00207		mg/L		104	80 - 120

Lab Sample ID: 580-91195-1 MSD
Matrix: Water
Analysis Batch: 318502

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00200	0.00215		mg/L		108	80 - 120	4	20

Lab Sample ID: 580-91195-1 DU
Matrix: Water
Analysis Batch: 318502

Client Sample ID: 04Q19LCMW04DW
Prep Type: Total/NA
Prep Batch: 318467

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

GC/MS VOA

Analysis Batch: 318341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	8260C	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	8260C	
580-91195-3	04Q19LCMW140W	Total/NA	Water	8260C	
580-91195-4	TB120319	Total/NA	Water	8260C	
MB 580-318341/7	Method Blank	Total/NA	Water	8260C	
LCS 580-318341/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-318341/5	Lab Control Sample Dup	Total/NA	Water	8260C	
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	8260C	
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 318500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	3520C	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	3520C	
580-91195-3	04Q19LCMW140W	Total/NA	Water	3520C	
MB 580-318500/1-A	Method Blank	Total/NA	Water	3520C	
LCS 580-318500/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 580-318500/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	3520C	
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	3520C	

Analysis Batch: 318784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	8270D	318500
580-91195-2	04Q19LCMW04SW	Total/NA	Water	8270D	318500
580-91195-3	04Q19LCMW140W	Total/NA	Water	8270D	318500
MB 580-318500/1-A	Method Blank	Total/NA	Water	8270D	318500
LCS 580-318500/2-A	Lab Control Sample	Total/NA	Water	8270D	318500
LCSD 580-318500/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	318500
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	8270D	318500
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	8270D	318500

Prep Batch: 319850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	3520C	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	3520C	
580-91195-3	04Q19LCMW140W	Total/NA	Water	3520C	
MB 580-319850/1-A	Method Blank	Total/NA	Water	3520C	
LCS 580-319850/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 580-319850/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 319972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	8270D	319850
580-91195-2	04Q19LCMW04SW	Total/NA	Water	8270D	319850
580-91195-3	04Q19LCMW140W	Total/NA	Water	8270D	319850
MB 580-319850/1-A	Method Blank	Total/NA	Water	8270D	319850
LCS 580-319850/2-A	Lab Control Sample	Total/NA	Water	8270D	319850
LCSD 580-319850/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	319850

HPLC/IC

Prep Batch: 343665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	8330-Prep	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	8330-Prep	
580-91195-3	04Q19LCMW140W	Total/NA	Water	8330-Prep	
MB 320-343665/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-343665/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	8330-Prep	
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	8330-Prep	

Analysis Batch: 347605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	8330B	343665
580-91195-2	04Q19LCMW04SW	Total/NA	Water	8330B	343665
580-91195-3	04Q19LCMW140W	Total/NA	Water	8330B	343665
MB 320-343665/1-A	Method Blank	Total/NA	Water	8330B	343665
LCS 320-343665/2-A	Lab Control Sample	Total/NA	Water	8330B	343665
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	8330B	343665
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	8330B	343665

LCMS

Prep Batch: 344342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	Filtration	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	Filtration	
580-91195-3	04Q19LCMW140W	Total/NA	Water	Filtration	
MB 320-344342/1-A	Method Blank	Total/NA	Water	Filtration	
INF 320-344342/3-A	Lab Control Sample		Water	Filtration	
LCS 320-344342/2-A	Lab Control Sample	Total/NA	Water	Filtration	

Analysis Batch: 344441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	6850	344342
580-91195-2	04Q19LCMW04SW	Total/NA	Water	6850	344342
580-91195-3	04Q19LCMW140W	Total/NA	Water	6850	344342
MB 320-344342/1-A	Method Blank	Total/NA	Water	6850	344342
INF 320-344342/3-A	Lab Control Sample		Water	6850	344342
LCS 320-344342/2-A	Lab Control Sample	Total/NA	Water	6850	344342

Metals

Prep Batch: 318385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total Recoverable	Water	3005A	
580-91195-2	04Q19LCMW04SW	Total Recoverable	Water	3005A	
580-91195-3	04Q19LCMW140W	Total Recoverable	Water	3005A	
MB 580-318385/10-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-318385/11-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-318385/12-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
580-91195-1 MS	04Q19LCMW04DW	Total Recoverable	Water	3005A	
580-91195-1 MSD	04Q19LCMW04DW	Total Recoverable	Water	3005A	
580-91195-1 DU	04Q19LCMW04DW	Total Recoverable	Water	3005A	

Metals

Prep Batch: 318467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	7470A	
580-91195-2	04Q19LCMW04SW	Total/NA	Water	7470A	
580-91195-3	04Q19LCMW140W	Total/NA	Water	7470A	
MB 580-318467/17-A	Method Blank	Total/NA	Water	7470A	
LCS 580-318467/18-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 580-318467/19-A	Lab Control Sample Dup	Total/NA	Water	7470A	
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	7470A	
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	7470A	
580-91195-1 DU	04Q19LCMW04DW	Total/NA	Water	7470A	

Analysis Batch: 318502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total/NA	Water	7470A	318467
580-91195-2	04Q19LCMW04SW	Total/NA	Water	7470A	318467
580-91195-3	04Q19LCMW140W	Total/NA	Water	7470A	318467
MB 580-318467/17-A	Method Blank	Total/NA	Water	7470A	318467
LCS 580-318467/18-A	Lab Control Sample	Total/NA	Water	7470A	318467
LCSD 580-318467/19-A	Lab Control Sample Dup	Total/NA	Water	7470A	318467
580-91195-1 MS	04Q19LCMW04DW	Total/NA	Water	7470A	318467
580-91195-1 MSD	04Q19LCMW04DW	Total/NA	Water	7470A	318467
580-91195-1 DU	04Q19LCMW04DW	Total/NA	Water	7470A	318467

Analysis Batch: 318532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91195-1	04Q19LCMW04DW	Total Recoverable	Water	6020A	318385
580-91195-2	04Q19LCMW04SW	Total Recoverable	Water	6020A	318385
580-91195-3	04Q19LCMW140W	Total Recoverable	Water	6020A	318385
MB 580-318385/10-A	Method Blank	Total Recoverable	Water	6020A	318385
LCS 580-318385/11-A	Lab Control Sample	Total Recoverable	Water	6020A	318385
LCSD 580-318385/12-A	Lab Control Sample Dup	Total Recoverable	Water	6020A	318385
580-91195-1 MS	04Q19LCMW04DW	Total Recoverable	Water	6020A	318385
580-91195-1 MSD	04Q19LCMW04DW	Total Recoverable	Water	6020A	318385
580-91195-1 DU	04Q19LCMW04DW	Total Recoverable	Water	6020A	318385

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Date Collected: 12/03/19 11:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/06/19 03:04	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 15:24	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:07	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 09:34	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:13	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:06	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:02	A1B	TAL SEA

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2
Date Collected: 12/03/19 12:20
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 21:46	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 16:34	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:31	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 13:08	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:26	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:39	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:11	A1B	TAL SEA

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3
Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 22:13	DCV	TAL SEA
Total/NA	Prep	3520C			318500	12/09/19 14:43	FCG	TAL SEA
Total/NA	Analysis	8270D		1	318784	12/13/19 16:58	ERZ	TAL SEA
Total/NA	Prep	3520C			319850	12/30/19 13:18	PRO	TAL SEA
Total/NA	Analysis	8270D		1	319972	01/03/20 18:54	JCM	TAL SEA
Total/NA	Prep	8330-Prep			343665	12/06/19 12:05	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347605	12/26/19 15:49	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3

Date Collected: 12/03/19 12:00
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 14:39	JY1	TAL SAC
Total Recoverable	Prep	3005A			318385	12/06/19 11:34	ART	TAL SEA
Total Recoverable	Analysis	6020A		1	318532	12/09/19 11:42	FCW	TAL SEA
Total/NA	Prep	7470A			318467	12/09/19 10:17	A1B	TAL SEA
Total/NA	Analysis	7470A		1	318502	12/09/19 14:13	A1B	TAL SEA

Client Sample ID: TB120319
Lab Sample ID: 580-91195-4

Date Collected: 12/03/19 00:01
Matrix: Water
Date Received: 12/04/19 13:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318341	12/05/19 20:27	DCV	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SEA
8330B	Nitroaromatics and Nitramines (HPLC)	SW846	TAL SAC
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6020A	Metals (ICP/MS)	SW846	TAL SEA
7470A	Mercury (CVAA)	SW846	TAL SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SEA
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA
7470A	Preparation, Mercury	SW846	TAL SEA
8330-Prep	Solid-Phase Extraction (Explosives)	SW846	TAL SAC
Filtration	Sample Filtration	None	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91195-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91195-1	04Q19LCMW04DW	Water	12/03/19 11:00	12/04/19 13:05	
580-91195-2	04Q19LCMW04SW	Water	12/03/19 12:20	12/04/19 13:05	
580-91195-3	04Q19LCMW140W	Water	12/03/19 12:00	12/04/19 13:05	
580-91195-4	TB120319	Water	12/03/19 00:01	12/04/19 13:05	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.11	Invalid Compound ID	wongsakul t	12/05/19 12:08
Vinyl chloride	2.25	Unspecified		
Bromomethane	2.63	Peak assignment corrected	vaughand	12/05/19 12:07
Trichlorofluoromethane	3.09	Baseline	vaughand	12/05/19 09:27
Acrolein	3.74	Peak assignment corrected	vaughand	12/05/19 12:07
1,1-Dichloroethene	3.88	Invalid Compound ID	vaughand	12/05/19 12:07
1,1,2-Trichloro-1,2,2-trifluoroet hane	3.95	Unspecified		
Acetone	3.98	Invalid Compound ID	wongsakul t	12/05/19 12:09
Carbon disulfide	4.19	Invalid Compound ID	wongsakul t	12/05/19 12:09
Methylene Chloride	4.79	Invalid Compound ID	wongsakul t	12/05/19 12:09
Acrylonitrile	5.28	Unspecified		
Methyl tert-butyl ether	5.35	Incomplete Integration	wongsakul t	12/05/19 12:09
Vinyl acetate	6.23	Incomplete Integration	vaughand	12/05/19 12:17
Tert-butyl ethyl ether	6.94	Shouldering	vaughand	12/05/19 10:14
2,2-Dichloropropane	7.14	Incomplete Integration	wongsakul t	12/05/19 12:09
2-Butanone (MEK)	7.18	Incomplete Integration	vaughand	12/05/19 12:17
Chlorobromomethane	7.52	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1,1-Trichloroethane	7.91	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1-Dichloropropene	8.13	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakul t	12/05/19 12:10
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakul t	12/05/19 12:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 12:10
Dichlorobromomethane	9.74	Invalid Compound ID	wongsakul t	12/05/19 12:10
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakul t	12/05/19 12:10
4-Methyl-2-pentanone (MIBK)	10.32	Invalid Compound ID	wongsakul t	12/05/19 12:10
Toluene	10.47	Invalid Compound ID	wongsakul t	12/05/19 12:10
trans-1,3-Dichloropropene	10.71	Peak assignment corrected	vaughand	12/05/19 10:03
2-Hexanone	11.07	Invalid Compound ID	wongsakul t	12/05/19 12:10
Chlorodibromomethane	11.21	Invalid Compound ID	wongsakul t	12/05/19 12:10
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 12:10
1,1,1,2-Tetrachloroethane	11.81	Invalid Compound ID	wongsakul t	12/05/19 12:10
Styrene	12.26	Invalid Compound ID	wongsakul t	12/05/19 12:10
Bromoform	12.42	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakul t	12/05/19 12:10
trans-1,4-Dichloro-2-butene	12.82	Unspecified		
1,2,3-Trichloropropane	12.85	Assign Peak	vaughand	12/05/19 12:16
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 12:11
1,2,4-Trimethylbenzene	13.66	Unspecified		
n-Butylbenzene	13.90	Invalid Compound ID	wongsakul t	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane	14.55	Invalid Compound ID	wongsakul t	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/4 IC Client Sample ID:

Date Analyzed: 12/04/19 16:43 Lab File ID: 12041904b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.10	Invalid Compound ID	wongsakul t	12/05/19 12:05
Vinyl chloride	2.25	Invalid Compound ID	wongsakul t	12/05/19 12:05
Bromomethane	2.63	Invalid Compound ID	wongsakul t	12/05/19 12:05
Chloroethane	2.75	Assign Peak	vaughand	12/05/19 09:37
Trichlorofluoromethane	3.10	Shouldering	vaughand	12/05/19 09:27
Acrolein	3.73	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,1,2-Trichloro-1,2,2-trifluoroet hane	3.94	Invalid Compound ID	wongsakul t	12/05/19 12:06
Acetone	3.98	Invalid Compound ID	wongsakul t	12/05/19 12:06
Methylene Chloride	4.78	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Methyl-2-propanol	5.09	Assign Peak	wongsakul t	12/05/19 12:06
Acrylonitrile	5.28	Invalid Compound ID	wongsakul t	12/05/19 12:06
Vinyl acetate	6.23	Invalid Compound ID	wongsakul t	12/05/19 12:06
Tert-butyl ethyl ether	6.93	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Butanone (MEK)	7.18	Invalid Compound ID	wongsakul t	12/05/19 12:06
Chlorobromomethane	7.52	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,1-Dichloropropene	8.13	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakul t	12/05/19 12:06
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakul t	12/05/19 12:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/4 IC Client Sample ID:

Date Analyzed: 12/04/19 16:43 Lab File ID: 12041904b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorobromomethane	9.74	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakul t	12/05/19 12:06
4-Methyl-2-pentanone (MIBK)	10.31	Invalid Compound ID	wongsakul t	12/05/19 12:06
trans-1,3-Dichloropropene	10.71	Peak assignment corrected	vaughand	12/05/19 10:03
Chlorodibromomethane	11.21	Invalid Compound ID	wongsakul t	12/05/19 12:06
Chlorobenzene	11.74	Assign Peak	wongsakul t	12/05/19 12:07
1,1,1,2-Tetrachloroethane	11.81	Invalid Compound ID	wongsakul t	12/05/19 12:07
Styrene	12.26	Invalid Compound ID	wongsakul t	12/05/19 12:07
Bromoform	12.43	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakul t	12/05/19 12:07
trans-1,4-Dichloro-2-butene	12.83	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,4-Dichlorobenzene	13.65	Assign Peak	wongsakul t	12/05/19 12:07
1,2,4-Trimethylbenzene	13.66	Unspecified		
n-Butylbenzene	13.90	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,2-Dibromo-3-Chloropropane	14.54	Invalid Compound ID	wongsakul t	12/05/19 12:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/5 IC Client Sample ID:

Date Analyzed: 12/04/19 17:10 Lab File ID: 12041905b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane	2.75	Assign Peak	vaughand	12/05/19 09:37
Trichlorofluoromethane	3.11	Assign Peak	vaughand	12/05/19 09:26
1,1,2-Trichloro-1,2,2-trifluoroethane	3.94	Invalid Compound ID	wongsakult	12/05/19 11:59
Acetone	3.97	Invalid Compound ID	wongsakult	12/05/19 11:59
Methylene Chloride	4.78	Invalid Compound ID	wongsakult	12/05/19 11:59
2-Methyl-2-propanol	5.11	Incomplete Integration	vaughand	12/05/19 10:36
Acrylonitrile	5.28	Invalid Compound ID	wongsakult	12/05/19 11:59
trans-1,2-Dichloroethene	5.32	Assign Peak	wongsakult	12/05/19 11:59
Vinyl acetate	6.23	Invalid Compound ID	wongsakult	12/05/19 11:59
2-Butanone (MEK)	7.20	Unspecified		
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakult	12/05/19 11:59
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakult	12/05/19 11:59
1,2-Dichloropropane	9.45	Assign Peak	wongsakult	12/05/19 12:00
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakult	12/05/19 12:00
4-Methyl-2-pentanone (MIBK)	10.32	Invalid Compound ID	wongsakult	12/05/19 12:00
Chlorobenzene	11.74	Assign Peak	wongsakult	12/05/19 12:00
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakult	12/05/19 12:00
trans-1,4-Dichloro-2-butene	12.82	Invalid Compound ID	wongsakult	12/05/19 12:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/5 IC Client Sample ID:

Date Analyzed: 12/04/19 17:10 Lab File ID: 12041905b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene	13.65	Assign Peak	wongsakul t	12/05/19 12:00
1,2,4-Trimethylbenzene	13.66	Unspecified		
1,2-Dibromo-3-Chloropropane	14.55	Invalid Compound ID	wongsakul t	12/05/19 12:00

Lab Sample ID: STD 580-318234/6 IC Client Sample ID:

Date Analyzed: 12/04/19 17:36 Lab File ID: 12041906b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.79	Invalid Compound ID	wongsakul t	12/05/19 11:56
2-Methyl-2-propanol	5.12	Incomplete Integration	wongsakul t	12/05/19 11:56
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 11:57
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 11:57
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 11:57
1,2,4-Trimethylbenzene	13.66	Incomplete Integration	wongsakul t	12/05/19 11:58
1,2-Dibromo-3-Chloropropane	14.55	Peak assignment corrected	vaughand	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/7 IC Client Sample ID:

Date Analyzed: 12/04/19 18:03 Lab File ID: 12041907b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Shouldering	vaughand	12/05/19 09:25
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 11:53
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 11:54
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 11:54
1,2,4-Trimethylbenzene	13.66	Incomplete Integration	wongsakul t	12/05/19 11:54

Lab Sample ID: STD 580-318234/8 IC Client Sample ID:

Date Analyzed: 12/04/19 18:30 Lab File ID: 12041908b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.12	Incomplete Integration	vaughand	12/05/19 09:25
Fluorobenzene (IS)	8.76	Peak assignment corrected	vaughand	12/05/19 09:15
Chlorobenzene	11.74	Peak assignment corrected	vaughand	12/05/19 09:15
1,4-Dichlorobenzene	13.65	Peak assignment corrected	vaughand	12/05/19 09:15

Lab Sample ID: STD 580-318234/9 IC Client Sample ID:

Date Analyzed: 12/04/19 18:56 Lab File ID: 12041909b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Incomplete Integration	vaughand	12/05/19 09:25
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: ICIS 580-318234/10 Client Sample ID:

Date Analyzed: 12/04/19 19:23 Lab File ID: 12041910b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:06

Lab Sample ID: STD 580-318234/11 IC Client Sample ID:

Date Analyzed: 12/04/19 19:49 Lab File ID: 12041911b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.13	Incomplete Integration	vaughand	12/05/19 09:24
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:05

Lab Sample ID: STD 580-318234/12 IC Client Sample ID:

Date Analyzed: 12/04/19 20:16 Lab File ID: 12041912b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.13	Incomplete Integration	vaughand	12/05/19 09:10
1,2-Dichloropropane	9.45	Assign Peak	vaughand	12/05/19 09:05
Isopropylbenzene	12.54	Assign Peak	vaughand	12/05/19 09:05

Lab Sample ID: STD 580-318234/15 IC Client Sample ID:

Date Analyzed: 12/04/19 20:42 Lab File ID: 12041913b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: ICV 580-318234/14 Client Sample ID:

Date Analyzed: 12/04/19 21:35 Lab File ID: 12041915b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	overmand	12/05/19 10:46

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318341

Lab Sample ID: CCVIS 580-318341/3 Client Sample ID:

Date Analyzed: 12/05/19 18:14 Lab File ID: 12051917.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/06/19 09:23

Lab Sample ID: LCS 580-318341/4 Client Sample ID:

Date Analyzed: 12/05/19 18:40 Lab File ID: 12051918.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.12	Incomplete Integration	vaughand	12/06/19 14:42
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/06/19 09:24

Lab Sample ID: LCSD 580-318341/5 Client Sample ID:

Date Analyzed: 12/05/19 19:07 Lab File ID: 12051919.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.12	Incomplete Integration	vaughand	12/06/19 14:43
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/06/19 09:24

Lab Sample ID: MB 580-318341/7 Client Sample ID:

Date Analyzed: 12/05/19 20:00 Lab File ID: 12051921.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorobenzene	11.74	Peak assignment corrected	vaughand	12/06/19 09:42

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318341

Lab Sample ID: 580-91195-4 Client Sample ID: TB120319

Date Analyzed: 12/05/19 20:27 Lab File ID: 12051922.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,3-Dichloropropene	10.17	Assign Peak	vaughand	12/06/19 09:56
Chlorobenzene	11.74	Assign Peak	vaughand	12/06/19 09:57
1,4-Dichlorobenzene	13.65	Assign Peak	vaughand	12/06/19 09:57
1,2,4-Trimethylbenzene	13.66	Assign Peak	vaughand	12/06/19 09:57

Lab Sample ID: 580-91195-2 Client Sample ID: 04Q19LCMW04SW

Date Analyzed: 12/05/19 21:46 Lab File ID: 12051925.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene	10.48	Peak assignment corrected	vaughand	12/06/19 10:46
4-Isopropyltoluene	13.58	Peak assignment corrected	vaughand	12/06/19 13:18

Lab Sample ID: 580-91195-3 Client Sample ID: 04Q19LCMW140W

Date Analyzed: 12/05/19 22:13 Lab File ID: 12051926.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzene	8.37	Peak assignment corrected	vaughand	12/06/19 13:21
1,3,5-Trimethylbenzene	13.02	Peak assignment corrected	vaughand	12/06/19 13:24
4-Isopropyltoluene	13.58	Peak assignment corrected	vaughand	12/06/19 13:24

Lab Sample ID: 580-91195-1 Client Sample ID: 04Q19LCMW04DW

Date Analyzed: 12/06/19 03:04 Lab File ID: 12051937.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Isopropyltoluene	13.58	Peak assignment corrected	vaughand	12/06/19 13:58

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318341

Lab Sample ID: 580-91195-1 MS Client Sample ID: 04Q19LCMW04DW MS

Date Analyzed: 12/06/19 03:30 Lab File ID: 12051938.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.13	Incomplete Integration	vaughand	12/06/19 14:44
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/06/19 14:06

Lab Sample ID: 580-91195-1 MSD Client Sample ID: 04Q19LCMW04DW MSD

Date Analyzed: 12/06/19 03:57 Lab File ID: 12051939.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.12	Incomplete Integration	vaughand	12/06/19 14:44
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/06/19 14:06

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 316923

Lab Sample ID: ICV 580-316923/15 Client Sample ID:

Date Analyzed: 11/14/19 20:18 Lab File ID: 1114B017.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Nitrosodimethylamine	2.49	Peak Tail	mohammedjc	11/18/19 11:44
Pyridine	2.51	Peak Tail	mohammedjc	11/18/19 11:44
Aniline	4.27	Peak Tail	mohammedjc	11/18/19 11:44
n-Decane	4.42	Peak Tail	mohammedjc	11/18/19 11:44
4-Chloro-3-methylphenol	6.00	Peak Tail	mohammedjc	11/18/19 11:44
2,4-Dinitrophenol	7.01	Peak Tail	mohammedjc	11/18/19 11:44
Benzo[b]fluoranthene	11.46	Peak assignment corrected	mohammedjc	11/18/19 11:43
Benzo[k]fluoranthene	11.49	Peak assignment corrected	mohammedjc	11/18/19 11:43
Benzofluoranthene	11.49	Peak assignment corrected	mohammedjc	11/18/19 11:43
Dibenz(a,h)anthracene	13.23	Peak assignment corrected	mohammedjc	11/18/19 11:43
Benzo[g,h,i]perylene	13.52	Peak assignment corrected	mohammedjc	11/18/19 11:43

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: CCVIS 580-318784/3 Client Sample ID:

Date Analyzed: 12/13/19 10:06 Lab File ID: 1213A004.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzyl alcohol	4.62	Baseline	limmere	12/13/19 12:46
2,4-Dinitrophenol	7.00	Peak assignment corrected	limmere	12/13/19 10:53
4-Nitroaniline	7.41	Baseline	limmere	12/13/19 12:47
4,6-Dinitro-2-methylphenol	7.44	Baseline	limmere	12/13/19 12:48
Pentachlorophenol	8.00	Baseline	limmere	12/13/19 12:48
Benzofluoranthene	11.43	Peak assignment corrected	limmere	12/13/19 10:54
Benzo[k]fluoranthene	11.45	Peak assignment corrected	limmere	12/13/19 10:54

Lab Sample ID: CCVL 580-318784/4 Client Sample ID:

Date Analyzed: 12/13/19 10:29 Lab File ID: 1213A005.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3 & 4 Methylphenol	4.84	Peak assignment corrected	limmere	12/13/19 12:49
2,4,6-Trichlorophenol	6.35	Incomplete Integration	wongsakul t	12/16/19 10:48
2,4,5-Trichlorophenol	6.40	Incomplete Integration	wongsakul t	12/16/19 10:48
3-Nitroaniline	6.96	Incomplete Integration	wongsakul t	12/16/19 10:49
2,4-Dinitrotoluene	7.12	Incomplete Integration	wongsakul t	12/16/19 10:49
4-Nitroaniline	7.48	Incomplete Integration	wongsakul t	12/16/19 10:49
Anthracene	8.22	Incomplete Integration	wongsakul t	12/16/19 10:49
Carbazole	8.36	Baseline	limmere	12/13/19 12:50
Benzo[k]fluoranthene	11.46	Incomplete Integration	wongsakul t	12/16/19 10:50
Benzofluoranthene	11.46	Baseline	limmere	12/13/19 12:51
Dibenz(a,h)anthracene	13.21	Baseline	limmere	12/13/19 12:51
Benzo[g,h,i]perylene	13.50	Baseline	limmere	12/13/19 12:51

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: MB 580-318500/1-A Client Sample ID:

Date Analyzed: 12/13/19 11:08 Lab File ID: 1213A006.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichlorobenzene		Invalid Compound ID	limmere	12/13/19 12:53
1,4-Dichlorobenzene		Invalid Compound ID	limmere	12/13/19 12:53
2,6-Dinitrotoluene		Invalid Compound ID	limmere	12/13/19 12:55
2-Methylphenol		Invalid Compound ID	limmere	12/13/19 12:53
3 & 4 Methylphenol		Invalid Compound ID	limmere	12/13/19 12:53
4-Chloroaniline		Invalid Compound ID	limmere	12/13/19 12:54
Acenaphthene		Invalid Compound ID	limmere	12/13/19 12:55
Acenaphthylene		Invalid Compound ID	limmere	12/13/19 12:55
Benzyl alcohol		Invalid Compound ID	limmere	12/13/19 12:53
Bis(2-chloroethoxy)methane		Invalid Compound ID	wongsakul t	12/16/19 10:52
bis(chloroisopropyl) ether		Invalid Compound ID	limmere	12/13/19 12:53
Carbazole		Invalid Compound ID	limmere	12/13/19 12:56
Dibenzofuran		Invalid Compound ID	limmere	12/13/19 12:55
Dimethyl phthalate		Invalid Compound ID	limmere	12/13/19 12:55
Fluoranthene		Invalid Compound ID	limmere	12/13/19 12:56
Isophorone		Invalid Compound ID	limmere	12/13/19 12:54
Nitrobenzene		Invalid Compound ID	limmere	12/13/19 12:54
N-Nitrosodi-n-propylamine		Invalid Compound ID	limmere	12/13/19 12:54
N-Nitrosodiphenylamine		Invalid Compound ID	limmere	12/13/19 12:55
Phenol		Invalid Compound ID	wongsakul t	12/16/19 10:51

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: LCS 580-318500/2-A Client Sample ID:

Date Analyzed: 12/13/19 11:31 Lab File ID: 1213A007.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3 & 4 Methylphenol	4.84	Assign Peak	limmere	12/13/19 12:58
Benzoic acid	5.31	Baseline	limmere	12/13/19 13:00
2,4,5-Trichlorophenol	6.36	Incomplete Integration	wongsakul t	12/16/19 10:54
3-Nitroaniline	6.92	Baseline	limmere	12/13/19 13:00
4-Nitrophenol	7.08	Baseline	limmere	12/13/19 13:00
N-Nitrosodiphenylamine	7.49	Baseline	limmere	12/13/19 13:01

Lab Sample ID: LCSD 580-318500/3-A Client Sample ID:

Date Analyzed: 12/13/19 11:54 Lab File ID: 1213A008.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzyl alcohol	4.62	Baseline	limmere	12/13/19 13:03
3 & 4 Methylphenol	4.84	Baseline	limmere	12/13/19 13:03
Benzoic acid	5.31	Baseline	limmere	12/13/19 13:03
2,4-Dinitrophenol	7.00	Baseline	limmere	12/13/19 13:04
4-Nitroaniline	7.41	Baseline	limmere	12/13/19 13:04
3,3'-Dichlorobenzidine	10.33	Baseline	limmere	12/13/19 13:05
Benzo[a]pyrene	11.79	Baseline	limmere	12/13/19 13:06
Dibenz(a,h)anthracene	13.19	Baseline	limmere	12/13/19 13:06

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: 580-91195-1 Client Sample ID: 04Q19LCMW04DW

Date Analyzed: 12/13/19 15:24 Lab File ID: 1213A017.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Methylnaphthalene	6.09	Incomplete Integration	wongsakul t	12/16/19 11:15
1-Methylnaphthalene	6.18	Invalid Compound ID	wongsakul t	12/16/19 11:15
2-Methylphenol		Invalid Compound ID	wongsakul t	12/16/19 11:15
3 & 4 Methylphenol		Invalid Compound ID	wongsakul t	12/16/19 11:15
4-Chloroaniline		Invalid Compound ID	wongsakul t	12/16/19 11:15
Acenaphthene		Invalid Compound ID	wongsakul t	12/16/19 11:16
Acenaphthylene		Invalid Compound ID	wongsakul t	12/16/19 11:16
Benzyl alcohol		Invalid Compound ID	wongsakul t	12/16/19 11:15
bis(chloroisopropyl) ether		Invalid Compound ID	wongsakul t	12/16/19 11:15
Fluoranthene		Invalid Compound ID	wongsakul t	12/16/19 11:16

Lab Sample ID: 580-91195-1 MS Client Sample ID: 04Q19LCMW04DW MS

Date Analyzed: 12/13/19 15:47 Lab File ID: 1213A018.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3 & 4 Methylphenol	4.84	Peak assignment corrected	wongsakul t	12/16/19 11:18
Benzoic acid	5.33	Peak assignment corrected	wongsakul t	12/16/19 11:18
2,4-Dinitrophenol	7.00	Peak assignment corrected	wongsakul t	12/16/19 11:18

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: 580-91195-1 MSD Client Sample ID: 04Q19LCMW04DW MSD

Date Analyzed: 12/13/19 16:11 Lab File ID: 1213A019.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3 & 4 Methylphenol	4.84	Peak assignment corrected	wongsakul t	12/16/19 11:20
Benzoic acid	5.34	Peak assignment corrected	wongsakul t	12/16/19 11:20
2,4-Dinitrophenol	7.01	Peak assignment corrected	wongsakul t	12/16/19 11:21

Lab Sample ID: 580-91195-2 Client Sample ID: 04Q19LCMW04SW

Date Analyzed: 12/13/19 16:34 Lab File ID: 1213A020.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Anthracene	8.21	Peak assignment corrected	wongsakul t	12/16/19 11:23
1,4-Dichlorobenzene		Invalid Compound ID	wongsakul t	12/16/19 11:22
Acenaphthylene		Invalid Compound ID	wongsakul t	12/16/19 11:22
bis(chloroisopropyl) ether		Invalid Compound ID	wongsakul t	12/16/19 11:22
Carbazole		Invalid Compound ID	wongsakul t	12/16/19 11:23
Isophorone		Invalid Compound ID	wongsakul t	12/16/19 11:22
Nitrobenzene		Invalid Compound ID	wongsakul t	12/16/19 11:22

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 318784

Lab Sample ID: 580-91195-3 Client Sample ID: 04Q19LCMW140W

Date Analyzed: 12/13/19 16:58 Lab File ID: 1213A021.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,6-Dinitrotoluene	6.78	Peak assignment corrected	wongsakul t	12/16/19 11:24
Dibenzofuran	7.12	Peak assignment corrected	wongsakul t	12/16/19 11:24
Fluorene	7.39	Peak assignment corrected	wongsakul t	12/16/19 11:24
Anthracene	8.21	Peak assignment corrected	wongsakul t	12/16/19 11:25
1,4-Dichlorobenzene		Invalid Compound ID	wongsakul t	12/16/19 11:24
Benzyl alcohol		Invalid Compound ID	wongsakul t	12/16/19 11:24
Bis(2-chloroethyl)ether		Invalid Compound ID	wongsakul t	12/16/19 11:24
bis(chloroisopropyl) ether		Invalid Compound ID	wongsakul t	12/16/19 11:24

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Analysis Batch Number: 319972

Lab Sample ID: CCVIS 580-319972/3 Client Sample ID:

Date Analyzed: 01/03/20 14:59 Lab File ID: 0103C004.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3 & 4 Methylphenol	4.82	Peak assignment corrected	mohammedjc	01/04/20 17:34
2,4-Dinitrophenol	6.99	Peak assignment corrected	mohammedjc	01/04/20 17:34

Lab Sample ID: MB 580-319850/1-A Client Sample ID:

Date Analyzed: 01/03/20 15:46 Lab File ID: 0103C006.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichlorobenzene		Invalid Compound ID	mohammedjc	01/04/20 17:35

Lab Sample ID: 580-91195-2 Client Sample ID: 04Q19LCMW04SW

Date Analyzed: 01/03/20 18:31 Lab File ID: 0103C013.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichlorobenzene		Invalid Compound ID	mohammedjc	01/04/20 17:46

Lab Sample ID: 580-91195-3 Client Sample ID: 04Q19LCMW140W

Date Analyzed: 01/03/20 18:54 Lab File ID: 0103C014.D GC Column: ZB-SV ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichlorobenzene		Invalid Compound ID	mohammedjc	01/04/20 17:47

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 346162

Lab Sample ID: STD1 320-346162/4 IC Client Sample ID:

Date Analyzed: 12/17/19 22:04 Lab File ID: O0000022.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	34.00	Incomplete Integration	cartiera	12/18/19 14:43
4-Nitrotoluene	35.34	Incomplete Integration	cartiera	12/18/19 14:43
PETN	37.44	Peak not integrated	cartiera	12/18/19 14:43

Lab Sample ID: STD2 320-346162/5 IC Client Sample ID:

Date Analyzed: 12/17/19 22:57 Lab File ID: O0000023.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	34.00	Baseline Smoothing	cartiera	12/18/19 15:06
PETN	37.50	Baseline Smoothing	cartiera	12/18/19 14:44

Lab Sample ID: STD5 320-346162/8 IC Client Sample ID:

Date Analyzed: 12/18/19 01:38 Lab File ID: O0000026.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,4-Dinitrotoluene	28.84	Split Peak	cartiera	12/18/19 14:42
2-Amino-4,6-dinitrotoluene	29.01	Split Peak	cartiera	12/18/19 14:42

Lab Sample ID: STD7 320-346162/13 IC Client Sample ID:

Date Analyzed: 12/18/19 03:25 Lab File ID: O0000028.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	29.02	Split Peak	cartiera	12/18/19 15:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347605

Lab Sample ID: CCV 320-347605/37 Client Sample ID:

Date Analyzed: 12/26/19 02:25 Lab File ID: X0000037.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,4-Dinitrotoluene	29.11	Peak assignment corrected	cartiera	12/26/19 12:54
2-Amino-4,6-dinitrotoluene	29.37	Peak assignment corrected	cartiera	12/26/19 12:55

Lab Sample ID: MB 320-343665/1-A Client Sample ID:

Date Analyzed: 12/26/19 05:59 Lab File ID: X0000041.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/26/19 13:49
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/26/19 13:49
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:50
3-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:50
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:50
4-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:50
Nitrobenzene		Invalid Compound ID	cartiera	12/26/19 13:49
PETN		Invalid Compound ID	cartiera	12/26/19 13:50
RDX		Invalid Compound ID	cartiera	12/26/19 13:49

Lab Sample ID: LCS 320-343665/2-A Client Sample ID:

Date Analyzed: 12/26/19 06:53 Lab File ID: X0000042.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.75	Split Peak	cartiera	12/26/19 13:50
3-Nitrotoluene	37.24	Split Peak	cartiera	12/26/19 13:50

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347605

Lab Sample ID: 580-91195-1 Client Sample ID: 04Q19LCMW04DW

Date Analyzed: 12/26/19 09:34 Lab File ID: X0000045.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/26/19 13:51
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:51
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:51
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:51
3-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 13:51
Nitrobenzene		Invalid Compound ID	cartiera	12/26/19 13:51
PETN		Invalid Compound ID	cartiera	12/26/19 13:51

Lab Sample ID: 580-91195-1 MS Client Sample ID: 04Q19LCMW04DW MS

Date Analyzed: 12/26/19 10:28 Lab File ID: X0000046.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.72	Split Peak	cartiera	12/26/19 13:52

Lab Sample ID: 580-91195-2 Client Sample ID: 04Q19LCMW04SW

Date Analyzed: 12/26/19 13:08 Lab File ID: X0000049.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:58
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:58
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:58
2-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:58
3-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:59
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 14:58
HMX		Invalid Compound ID	cartiera	12/26/19 14:58
RDX		Invalid Compound ID	cartiera	12/26/19 14:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347605

Lab Sample ID: 580-91195-3 Client Sample ID: 04Q19LCMW140W

Date Analyzed: 12/26/19 15:49 Lab File ID: X0000052.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/26/19 17:21
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	12/26/19 17:21
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 17:21
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/26/19 17:21
3-Nitrotoluene		Invalid Compound ID	cartiera	12/26/19 17:21
Nitrobenzene		Invalid Compound ID	cartiera	12/26/19 17:21
Nitroglycerin		Invalid Compound ID	cartiera	12/26/19 17:21
PETN		Invalid Compound ID	cartiera	12/26/19 17:21
RDX		Invalid Compound ID	cartiera	12/26/19 17:21

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91195-1

SDG No.:

Instrument ID: A5 Analysis Batch Number: 344441

Lab Sample ID: 580-91195-2 Client Sample ID: 04Q19LCMW04SW

Date Analyzed: 12/10/19 14:26 Lab File ID: 2019.12.10_Perc_019.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	9.94	Baseline	yuj	12/10/19 17:26

Lab Sample ID: 580-91195-3 Client Sample ID: 04Q19LCMW140W

Date Analyzed: 12/10/19 14:39 Lab File ID: 2019.12.10_Perc_020.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	10.01	Incomplete Integration	yuj	12/10/19 17:26

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
5X SUR/IS/TFT_00011							Tentatively Identified Compound	
							Xylenes, Total	
					SURR/IS/TFT_00107	20 mL	Trifluorotoluene (Surr)	49.98 ppm
							1,2-Dichloroethane-d4 (Surr)	48.75 ppm
							1,4-Dichlorobenzene-d4	48.75 ppm
							4-Bromofluorobenzene (Surr)	48.75 ppm
							BFB	48.75 ppm
							Chlorobenzene-d5	48.75 ppm
							Dibromofluoromethane (Surr)	48.75 ppm
							Fluorobenzene (IS)	48.75 ppm
							TBA-d9 (IS)	975 ppm
							Toluene-d8 (Surr)	48.75 ppm
.SURR/IS/TFT_00107	03/12/20	09/11/19	MeOH, Lot voarsurr/is_00048	25 mL	V-TFTStk_00037	625 uL	Trifluorotoluene (Surr)	249.9 ppm
					VOARSURR/IS_00048	24.375 mL	1,2-Dichloroethane-d4 (Surr)	243.75 ppm
							1,4-Dichlorobenzene-d4	243.75 ppm
							4-Bromofluorobenzene (Surr)	243.75 ppm
							BFB	243.75 ppm
							Chlorobenzene-d5	243.75 ppm
							Dibromofluoromethane (Surr)	243.75 ppm
							Fluorobenzene (IS)	243.75 ppm
							TBA-d9 (IS)	4875 ppm
							Toluene-d8 (Surr)	243.75 ppm
..V-TFTStk_00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat_00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
...TFTneat_00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
..VOARSURR/IS_00048	10/31/22	Restek, Lot A0131478			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							BFB	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
8270flspk_00258	07/31/20	12/04/19	Acetone/DCM, Lot 234648/MeCl_CT170	50 mL	8270Mega_1stk_00011	1 mL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzofluoranthene	40 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							bis(chloroisopropyl) ether	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					8270S#10_1stk_00012	1 mL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					8270S#11_1stk_00006	1 mL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
					8270S#9_1stk_00011	1 mL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
.8270Mega_1stk_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzofluoranthene	2000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							bis(chloroisopropyl) ether	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.8270S#10_1stk_00012	01/31/21		Restek, Lot A0150520		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.8270S#11_1stk_00006	09/30/20		Restek, Lot A0147257		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.8270S#9_1stk_00011	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
8270SIM_IS_00061	08/09/20	08/09/19	DCM, Lot CT#162	50 mL	8270ISstk_00006	250 uL	1,4-Dichlorobenzene-d4	10 ug/mL
							Acenaphthene-d10	10 ug/mL
							Chrysene-d12	10 ug/mL
							Naphthalene-d8	10 ug/mL
							Perylene-d12	10 ug/mL
							Phenanthrene-d10	10 ug/mL
.8270ISstk_00006	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
8270waterSurr_00084	10/03/20	10/03/19	MeOH, Lot 0000216909	50 mL	8270Surr_Phen_00011	10 mL	1,4-Dioxane-d8	100 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10 (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.8270Surr_Phen_00011	08/31/23		Phenova, Lot CL13005		(Purchased Reagent)		1,4-Dioxane-d8	500 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							2-methylnaphthalene-d10	100 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene-d10 (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
8270waterSurr_00087	12/17/20	12/17/19	MeOH, Lot 0000216909	50 mL	8270Surr_Phen_00011	10 mL	1,4-Dioxane-d8	100 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10 (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.8270Surr_Phen_00011	08/31/23		Phenova, Lot CL13005		(Purchased Reagent)		1,4-Dioxane-d8	500 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							2-methylnaphthalene-d10	100 ug/mL
							Fluoranthene-d10 (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
ccv_8270_1000_00047	05/31/20	09/09/19	DCM, Lot MeCl2_CT_00163	10 mL	8270SIM_IS_00061	100 uL	1,4-Dichlorobenzene-d4	100 ug/L
							Acenaphthene-d10	100 ug/L
							Chrysene-d12	100 ug/L
							Naphthalene-d8	100 ug/L
							Perylene-d12	100 ug/L
							Phenanthrene-d10	100 ug/L
.8270SIM_IS_00061	08/09/20	08/09/19	DCM, Lot CT#162	50 mL	8270ISstk_00006	250 uL	1,4-Dichlorobenzene-d4	10 ug/mL
							Acenaphthene-d10	10 ug/mL
							Chrysene-d12	10 ug/mL
							Naphthalene-d8	10 ug/mL
							Perylene-d12	10 ug/mL
							Phenanthrene-d10	10 ug/mL
..8270ISstk_00006	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
ccv_8270_1000_00047	05/31/20	09/09/19	DCM, Lot MeCl2_CT_00163	10 mL	8270_ic_stk_00048	100 uL	1,2,4-Trichlorobenzene	1000 ug/L
							1,2-Dichlorobenzene	1000 ug/L
							1,3-Dichlorobenzene	1000 ug/L
							1,4-Dichlorobenzene	1000 ug/L
							1-Methylnaphthalene	1000 ug/L
							2,4,5-Trichlorophenol	1000 ug/L
							2,4,6-Trichlorophenol	1000 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	1000 ug/L
							2,4-Dimethylphenol	1000 ug/L
							2,4-Dinitrophenol	2000 ug/L
							2,4-Dinitrotoluene	1000 ug/L
							2,6-Dinitrotoluene	1000 ug/L
							2-Chloronaphthalene	1000 ug/L
							2-Chlorophenol	1000 ug/L
							2-Methylnaphthalene	1000 ug/L
							2-Methylphenol	1000 ug/L
							2-Nitroaniline	1000 ug/L
							2-Nitrophenol	1000 ug/L
							3 & 4 Methylphenol	1000 ug/L
							3-Nitroaniline	1000 ug/L
							4,6-Dinitro-2-methylphenol	2000 ug/L
							4-Bromophenyl phenyl ether	1000 ug/L
							4-Chloro-3-methylphenol	1000 ug/L
							4-Chloroaniline	1000 ug/L
							4-Chlorophenyl phenyl ether	1000 ug/L
							4-Nitroaniline	1000 ug/L
							4-Nitrophenol	2000 ug/L
							Acenaphthene	1000 ug/L
							Acenaphthylene	1000 ug/L
							Anthracene	1000 ug/L
							Benzo[a]anthracene	1000 ug/L
							Benzo[a]pyrene	1000 ug/L
							Benzo[b]fluoranthene	1000 ug/L
							Benzo[g,h,i]perylene	1000 ug/L
							Benzo[k]fluoranthene	1000 ug/L
							Benzyl alcohol	1000 ug/L
							Bis(2-chloroethoxy)methane	1000 ug/L
							Bis(2-chloroethyl)ether	1000 ug/L
							Bis(2-ethylhexyl) phthalate	1000 ug/L
							bis(chloroisopropyl) ether	1000 ug/L
							Butyl benzyl phthalate	1000 ug/L
							Carbazole	1000 ug/L
							Chrysene	1000 ug/L
							Di-n-butyl phthalate	1000 ug/L
							Di-n-octyl phthalate	1000 ug/L
							Dibenz(a,h)anthracene	1000 ug/L
							Dibenzofuran	1000 ug/L
							Diethyl phthalate	1000 ug/L
							Dimethyl phthalate	1000 ug/L
							Fluoranthene	1000 ug/L
							Fluorene	1000 ug/L
							Hexachlorobenzene	1000 ug/L
							Hexachlorobutadiene	1000 ug/L
							Hexachlorocyclopentadiene	1000 ug/L
							Hexachloroethane	1000 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	1000 ug/L
							Isophorone	1000 ug/L
							N-Nitrosodi-n-propylamine	1000 ug/L
							N-Nitrosodiphenylamine	1000 ug/L
							Naphthalene	1000 ug/L
							Nitrobenzene	1000 ug/L
							Pentachlorophenol	2000 ug/L
							Phenanthrene	1000 ug/L
							Phenol	1000 ug/L
							Pyrene	1000 ug/L
							Benzoic acid	2000 ug/L
							3,3'-Dichlorobenzidine	2000 ug/L
							2,4,6-Tribromophenol (Surr)	1000 ug/L
							2-Fluorobiphenyl	1000 ug/L
							2-Fluorophenol (Surr)	1000 ug/L
							2-methylnaphthalene-d10	1000 ug/L
							Fluoranthene-d10 (Surr)	1000 ug/L
							Nitrobenzene-d5 (Surr)	1000 ug/L
							Phenol-d5 (Surr)	1000 ug/L
							Terphenyl-d14 (Surr)	1000 ug/L
.8270_ic_stk_00048	05/31/20	06/03/19	DCM, Lot DCM CT#158	10 mL	8270Mega_1stk_00011	1 mL	1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							bis(chloroisopropyl) ether	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
					8270S#10_1stk_00011	1 mL	Benzoic acid	200 ug/mL
					8270S#9_1stk_00010	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					8270SSstkPhen_00004	0.2 mL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							2-methylnaphthalene-d10	100 ug/mL
							Fluoranthene-d10 (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..8270Mega_1stk_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							bis(chloroisopropyl) ether	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
..8270S#10_1stk_00011	08/31/20		Restek, Lot A0145854		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..8270S#9_1stk_00010	05/31/20		Restek, Lot A0143498		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..8270SSstkPhen_00004	08/31/23		Phenova, Lot CL12771		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							2-methylnaphthalene-d10	5000 ug/mL
							Fluoranthene-d10 (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
DFTPPx2_00040							4,4'-DDD	
							4,4'-DDE	
							Tentatively Identified Compound	
					DFTPPSTK_00013	125 uL	4,4'-DDT	12.5 ug/mL
							Benzidine_T	12.5 ug/mL
							DFTPP	12.5 ug/mL
							Pentachlorophenol_T	12.5 ug/mL
.DFTPPSTK_00013	03/31/22		Restek, Lot A0147424		(Purchased Reagent)		4,4'-DDT	1000 ug/mL
							Benzidine_T	1000 ug/mL
							DFTPP	1000 ug/mL
							Pentachlorophenol_T	1000 ug/mL
Hg_CAL_WORK_00046	01/28/20	10/28/19	H2O, Lot standard	1000 mg/L	Hg_CAL_STOCK_00003	1 mL	Mercury	0.1 mg/L
.Hg_CAL_STOCK_00003	11/29/20		AccuStandard, Lot 213115080		(Purchased Reagent)		Mercury	100 mg/L
Hg_ICV_WORK_00051	01/28/20	10/28/19	H2O, Lot standard	1000 mg/L	Hg-1000_00003	0.1 mL	Mercury	0.1 mg/L
.Hg-1000_00003	11/30/20		AccuStandard, Lot 215105125		(Purchased Reagent)		Mercury	1000 mg/L
Hg_SPK_WORK_00045	01/28/20	10/28/19	H2O, Lot standard	1000 mg/L	Hg_CAL_STOCK_00003	1 mL	Mercury	0.1 mg/L
.Hg_CAL_STOCK_00003	11/29/20		AccuStandard, Lot 213115080		(Purchased Reagent)		Mercury	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC_8270IS_50_00035	07/31/20	09/27/19	DCM, Lot MeCl2_CT_00165	10 mL	8270_icb100is_00020	9 mL	1,4-Dichlorobenzene-d4	100 ug/L
							Acenaphthene-d10	100 ug/L
							Chrysene-d12	100 ug/L
							Naphthalene-d8	100 ug/L
							Perylene-d12	100 ug/L
							Phenanthrene-d10	100 ug/L
					IC_8270IS_500_00037	1 mL	1,4-Dichlorobenzene-d4	100 ug/L
							Acenaphthene-d10	100 ug/L
							Chrysene-d12	100 ug/L
							Naphthalene-d8	100 ug/L
							Perylene-d12	100 ug/L
							Phenanthrene-d10	100 ug/L
.8270_icb100is_00020	08/09/20	09/27/19	DCM, Lot MeCl2_CT_00165	100 mL	8270SIM_IS_00061	1 mL	1,4-Dichlorobenzene-d4	100 ug/L
							Acenaphthene-d10	100 ug/L
							Chrysene-d12	100 ug/L
							Naphthalene-d8	100 ug/L
							Perylene-d12	100 ug/L
							Phenanthrene-d10	100 ug/L
..8270SIM_IS_00061	08/09/20	08/09/19	DCM, Lot CT#162	50 mL	8270ISstk_00006	250 uL	1,4-Dichlorobenzene-d4	10 ug/mL
							Acenaphthene-d10	10 ug/mL
							Chrysene-d12	10 ug/mL
							Naphthalene-d8	10 ug/mL
							Perylene-d12	10 ug/mL
							Phenanthrene-d10	10 ug/mL
...8270ISstk_00006	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.IC_8270IS_500_00037	07/31/20	09/27/19	DCM, Lot MeCl2_CT_00165	20 mL	8270SIM_IS_00061	200 uL	1,4-Dichlorobenzene-d4	100 ug/L
							Acenaphthene-d10	100 ug/L
							Chrysene-d12	100 ug/L
							Naphthalene-d8	100 ug/L
							Perylene-d12	100 ug/L
							Phenanthrene-d10	100 ug/L
..8270SIM_IS_00061	08/09/20	08/09/19	DCM, Lot CT#162	50 mL	8270ISstk_00006	250 uL	1,4-Dichlorobenzene-d4	10 ug/mL
							Acenaphthene-d10	10 ug/mL
							Chrysene-d12	10 ug/mL
							Naphthalene-d8	10 ug/mL
							Perylene-d12	10 ug/mL
							Phenanthrene-d10	10 ug/mL
...8270ISstk_00006	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC_8270IS_50_00035	07/31/20	09/27/19	DCM, Lot MeCl2_CT_00165	10 mL	IC_8270IS_500_00037	1 mL	1,2,4-Trichlorobenzene	50 ug/L
							1,2-Dichlorobenzene	50 ug/L
							1,3-Dichlorobenzene	50 ug/L
							1,4-Dichlorobenzene	50 ug/L
							1-Methylnaphthalene	50 ug/L
							2,4,5-Trichlorophenol	50 ug/L
							2,4,6-Trichlorophenol	50 ug/L
							2,4-Dichlorophenol	50 ug/L
							2,4-Dimethylphenol	50 ug/L
							2,4-Dinitrophenol	100 ug/L
							2,4-Dinitrotoluene	50 ug/L
							2,6-Dinitrotoluene	50 ug/L
							2-Chloronaphthalene	50 ug/L
							2-Chlorophenol	50 ug/L
							2-Methylnaphthalene	50 ug/L
							2-Methylphenol	50 ug/L
							2-Nitroaniline	50 ug/L
							2-Nitrophenol	50 ug/L
							3 & 4 Methylphenol	50 ug/L
							3-Nitroaniline	50 ug/L
							4,6-Dinitro-2-methylphenol	100 ug/L
							4-Bromophenyl phenyl ether	50 ug/L
							4-Chloro-3-methylphenol	50 ug/L
							4-Chloroaniline	50 ug/L
							4-Chlorophenyl phenyl ether	50 ug/L
							4-Nitroaniline	50 ug/L
							4-Nitrophenol	100 ug/L
							Acenaphthene	50 ug/L
							Acenaphthylene	50 ug/L
							Anthracene	50 ug/L
							Benzo[a]anthracene	50 ug/L
							Benzo[a]pyrene	50 ug/L
							Benzo[b]fluoranthene	50 ug/L
							Benzo[g,h,i]perylene	50 ug/L
							Benzo[k]fluoranthene	50 ug/L
							Benzyl alcohol	50 ug/L
							Bis(2-chloroethoxy)methane	50 ug/L
							Bis(2-chloroethyl)ether	50 ug/L
							Bis(2-ethylhexyl) phthalate	50 ug/L
							bis(chloroisopropyl) ether	50 ug/L
							Butyl benzyl phthalate	50 ug/L
							Carbazole	50 ug/L
							Chrysene	50 ug/L
							Di-n-butyl phthalate	50 ug/L
							Di-n-octyl phthalate	50 ug/L
							Dibenz(a,h)anthracene	50 ug/L
							Dibenzofuran	50 ug/L
							Diethyl phthalate	50 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	50 ug/L
							Fluoranthene	50 ug/L
							Fluorene	50 ug/L
							Hexachlorobenzene	50 ug/L
							Hexachlorobutadiene	50 ug/L
							Hexachlorocyclopentadiene	50 ug/L
							Hexachloroethane	50 ug/L
							Indeno[1,2,3-cd]pyrene	50 ug/L
							Isophorone	50 ug/L
							N-Nitrosodi-n-propylamine	50 ug/L
							N-Nitrosodiphenylamine	50 ug/L
							Naphthalene	50 ug/L
							Nitrobenzene	50 ug/L
							Pentachlorophenol	100 ug/L
							Phenanthrene	50 ug/L
							Phenol	50 ug/L
							Pyrene	50 ug/L
							Benzoic acid	100 ug/L
							3,3'-Dichlorobenzidine	100 ug/L
							2,4,6-Tribromophenol (Surr)	50 ug/L
							2-Fluorobiphenyl	50 ug/L
							2-Fluorophenol (Surr)	50 ug/L
							Nitrobenzene-d5 (Surr)	50 ug/L
							Phenol-d5 (Surr)	50 ug/L
							Terphenyl-d14 (Surr)	50 ug/L
.IC_8270IS_500_00037	07/31/20	09/27/19	DCM, Lot MeCl2_CT_00165	20 mL	8270_ic_stk_00049	100 uL	1,2,4-Trichlorobenzene	500 ug/L
							1,2-Dichlorobenzene	500 ug/L
							1,3-Dichlorobenzene	500 ug/L
							1,4-Dichlorobenzene	500 ug/L
							1-Methylnaphthalene	500 ug/L
							2,4,5-Trichlorophenol	500 ug/L
							2,4,6-Trichlorophenol	500 ug/L
							2,4-Dichlorophenol	500 ug/L
							2,4-Dimethylphenol	500 ug/L
							2,4-Dinitrophenol	1000 ug/L
							2,4-Dinitrotoluene	500 ug/L
							2,6-Dinitrotoluene	500 ug/L
							2-Chloronaphthalene	500 ug/L
							2-Chlorophenol	500 ug/L
							2-Methylnaphthalene	500 ug/L
							2-Methylphenol	500 ug/L
							2-Nitroaniline	500 ug/L
							2-Nitrophenol	500 ug/L
							3 & 4 Methylphenol	500 ug/L
							3-Nitroaniline	500 ug/L
							4,6-Dinitro-2-methylphenol	1000 ug/L
							4-Bromophenyl phenyl ether	500 ug/L
							4-Chloro-3-methylphenol	500 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloroaniline	500 ug/L
							4-Chlorophenyl phenyl ether	500 ug/L
							4-Nitroaniline	500 ug/L
							4-Nitrophenol	1000 ug/L
							Acenaphthene	500 ug/L
							Acenaphthylene	500 ug/L
							Anthracene	500 ug/L
							Benzo[a]anthracene	500 ug/L
							Benzo[a]pyrene	500 ug/L
							Benzo[b]fluoranthene	500 ug/L
							Benzo[g,h,i]perylene	500 ug/L
							Benzo[k]fluoranthene	500 ug/L
							Benzyl alcohol	500 ug/L
							Bis(2-chloroethoxy)methane	500 ug/L
							Bis(2-chloroethyl)ether	500 ug/L
							Bis(2-ethylhexyl) phthalate	500 ug/L
							bis(chloroisopropyl) ether	500 ug/L
							Butyl benzyl phthalate	500 ug/L
							Carbazole	500 ug/L
							Chrysene	500 ug/L
							Di-n-butyl phthalate	500 ug/L
							Di-n-octyl phthalate	500 ug/L
							Dibenz(a,h)anthracene	500 ug/L
							Dibenzofuran	500 ug/L
							Diethyl phthalate	500 ug/L
							Dimethyl phthalate	500 ug/L
							Fluoranthene	500 ug/L
							Fluorene	500 ug/L
							Hexachlorobenzene	500 ug/L
							Hexachlorobutadiene	500 ug/L
							Hexachlorocyclopentadiene	500 ug/L
							Hexachloroethane	500 ug/L
							Indeno[1,2,3-cd]pyrene	500 ug/L
							Isophorone	500 ug/L
							N-Nitrosodi-n-propylamine	500 ug/L
							N-Nitrosodiphenylamine	500 ug/L
							Naphthalene	500 ug/L
							Nitrobenzene	500 ug/L
							Pentachlorophenol	1000 ug/L
							Phenanthrene	500 ug/L
							Phenol	500 ug/L
							Pyrene	500 ug/L
							Benzoic acid	1000 ug/L
							3,3'-Dichlorobenzidine	1000 ug/L
							2,4,6-Tribromophenol (Surr)	500 ug/L
							2-Fluorobiphenyl	500 ug/L
							2-Fluorophenol (Surr)	500 ug/L
							Nitrobenzene-d5 (Surr)	500 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	500 ug/L
							Terphenyl-d14 (Surr)	500 ug/L
..8270_ic_stk_00049	07/31/20	09/27/19	DCM, Lot DCM CT#165	10 mL	8270Mega_1stk_00011	1 mL	1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							bis(chloroisopropyl) ether	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
					8270S#10_1stk_00011	1 mL	Benzoic acid	200 ug/mL
					8270S#9_1stk_00011	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					8270SSstkPhen_00004	0.2 mL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
...8270Mega_1stk_00011	09/30/20		Restek, Lot A0147571		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							bis(chloroisopropyl) ether	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
...8270S#10_1stk_00011	08/31/20		Restek, Lot A0145854		(Purchased Reagent)		Benzoic acid	2000 ug/mL
...8270S#9_1stk_00011	07/31/20		Restek, Lot A0145230		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
...8270SSstkPhen_00004	08/31/23		Phenova, Lot CL12771		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
ICP CAL 1_00005	02/28/21		CPI, Lot 1018875-2		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							As (Bioaccessible)	100 mg/L
							As (Fine)	100 mg/L
							Ba	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Co	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Li	100 mg/L
							Mn	100 mg/L
							Mo	100 mg/L
							Nickel	100 mg/L
							Pb (Bioaccessible)	100 mg/L
							Pb [Fine]	100 mg/L
							Selenium	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	100 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Ti	100 mg/L
							V	100 mg/L
ICP CAL 2_00005	02/28/21		CPI, Lot 1018877-1-1		(Purchased Reagent)		Al	2000 mg/L
							Ca	2000 mg/L
							Fe	2000 mg/L
							K	2000 mg/L
							Mg	2000 mg/L
							Na	2000 mg/L
ICP-MS CCVL_00006	01/31/20	10/29/19	H2O, Lot 062018	1000 mL	CCVL STOCK_00001	1 mL	Silver	0.0004 ug/mL
							Arsenic	0.001 ug/mL
							Beryllium	0.0004 ug/mL
							Cadmium	0.0004 ug/mL
							Chromium	0.0004 ug/mL
							Copper	0.002 ug/mL
							Nickel	0.003 ug/mL
							Lead	0.0008 ug/mL
							Antimony	0.0004 ug/mL
							Selenium	0.008 ug/mL
							Thallium	0.001 ug/mL
							Zinc	0.007 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.CCVL STOCK_00001	01/31/20	06/19/18	H2O, Lot 06/20/2018	1000 mL	Ag-1000_00004	0.4 mL	Silver	0.4 ug/mL
					As-1000_00004	1 mL	Arsenic	1 ug/mL
					Be-1000_00003	0.4 mL	Beryllium	0.4 ug/mL
					Cd-1000_00003	0.4 mL	Cadmium	0.4 ug/mL
					Cr-1000_00003	0.4 mL	Chromium	0.4 ug/mL
					Cu-1000_00004	2 mL	Copper	2 ug/mL
					Ni-1000_00004	3 mL	Nickel	3 ug/mL
					Pb-1000_00005	0.8 mL	Lead	0.8 ug/mL
					Sb-1000_00004	0.4 mL	Antimony	0.4 ug/mL
					Se-1000_00004	8 mL	Selenium	8 ug/mL
					Tl-1000_00003	1 mL	Thallium	1 ug/mL
					Zn-1000_00003	7 mL	Zinc	7 ug/mL
..Ag-1000_00004	06/20/20		AccuStandard, Lot 214035115		(Purchased Reagent)		Silver	1000 mg/L
..As-1000_00004	11/30/20		AccuStandard, Lot 215105135		(Purchased Reagent)		Arsenic	1000 mg/L
..Be-1000_00003	06/30/20		AccuStandard, Lot 215065066		(Purchased Reagent)		Beryllium	1000 mg/L
..Cd-1000_00003	01/31/21		AccuStandard, Lot 215125117		(Purchased Reagent)		Cadmium	1000 mg/L
..Cr-1000_00003	11/30/20		AccuStandard, Lot 215105095		(Purchased Reagent)		Chromium	1000 mg/L
..Cu-1000_00004	10/04/21		AccuStandard, Lot 216095132		(Purchased Reagent)		Copper	1000 mg/L
..Ni-1000_00004	04/13/22		AccuStandard, Lot 215035130-01		(Purchased Reagent)		Nickel	1000 mg/L
..Pb-1000_00005	04/30/20		AccuStandard, Lot 215045013		(Purchased Reagent)		Lead	1000 mg/L
..Sb-1000_00004	06/20/20		AccuStandard, Lot 215055071		(Purchased Reagent)		Antimony	1000 mg/L
..Se-1000_00004	06/20/20		AccuStandard, Lot 213095044		(Purchased Reagent)		Selenium	1000 mg/L
..Tl-1000_00003	02/28/20		AccuStandard, Lot 215025131		(Purchased Reagent)		Thallium	1000 mg/L
..Zn-1000_00003	03/31/21		AccuStandard, Lot 216035069		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS CAL #1_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	ICPMS CAL #5_00031	1 mL	Silver	0.1 ug/L
							Antimony	0.1 ug/L
							Arsenic	0.1 ug/L
							Beryllium	0.1 ug/L
							Cadmium	0.1 ug/L
							Chromium	0.1 ug/L
							Copper	0.1 ug/L
							Lead	0.1 ug/L
							Nickel	0.1 ug/L
							Selenium	0.1 ug/L
							Thallium	0.1 ug/L
							Zinc	0.1 ug/L
.ICPMS CAL #5_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	Ag-1000 2nd_00002	0.1 mL	Silver	100 ug/L
					ICP CAL 1_00004	1 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					Zn-1000 2nd_00002	0.1 mL	Zinc	100 ug/L
..Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
..ICP CAL 1_00004	01/31/21		CPI, Lot 1018875-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
..Zn-1000 2nd_00002	01/31/21		CPI, Lot 984171-63		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS CAL #2_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	ICPMS CAL #5_00031	10 mL	Silver	1 ug/L
							Antimony	1 ug/L
							Arsenic	1 ug/L
							Beryllium	1 ug/L
							Cadmium	1 ug/L
							Chromium	1 ug/L
							Copper	1 ug/L
							Lead	1 ug/L
							Nickel	1 ug/L
							Selenium	1 ug/L
							Thallium	1 ug/L
							Zinc	1 ug/L
.ICPMS CAL #5_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	Ag-1000 2nd_00002	0.1 mL	Silver	100 ug/L
					ICP CAL 1_00004	1 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
					Zn-1000 2nd_00002	0.1 mL	Zinc	100 ug/L
..Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
..ICP CAL 1_00004	01/31/21		CPI, Lot 1018875-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Thallium	100 mg/L
..Zn-1000 2nd_00002	01/31/21		CPI, Lot 984171-63		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS CAL #3_00031	02/28/20	10/29/19	H2O, Lot 020713	1000 mL	ICPMS CAL #5_00031	100 mL	Silver	10 ug/L
							Antimony	10 ug/L
							Arsenic	10 ug/L
							Beryllium	10 ug/L
							Cadmium	10 ug/L
							Chromium	10 ug/L
							Copper	10 ug/L
							Lead	10 ug/L
							Nickel	10 ug/L
							Selenium	10 ug/L
							Thallium	10 ug/L
							Zinc	10 ug/L
.ICPMS CAL #5_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	Ag-1000 2nd_00002	0.1 mL	Silver	100 ug/L
					ICP CAL 1_00004	1 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
					Zn-1000 2nd_00002	0.1 mL	Zinc	100 ug/L
..Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
..ICP CAL 1_00004	01/31/21		CPI, Lot 1018875-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
..Zn-1000 2nd_00002	01/31/21		CPI, Lot 984171-63		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS CAL #4_00033	02/09/20	10/29/19	H2O, Lot 020713	1000 mL	ICPMS CAL #5_00031	500 mL	Silver	50 ug/L
							Antimony	50 ug/L
							Arsenic	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Copper	50 ug/L
							Lead	50 ug/L
							Nickel	50 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	50 ug/L
							Thallium	50 ug/L
							Zinc	50 ug/L
.ICPMS CAL #5_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	Ag-1000 2nd_00002	0.1 mL	Silver	100 ug/L
					ICP CAL 1_00004	1 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
					Zn-1000 2nd_00002	0.1 mL	Zinc	100 ug/L
..Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
..ICP CAL 1_00004	01/31/21		CPI, Lot 1018875-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
..Zn-1000 2nd_00002	01/31/21		CPI, Lot 984171-63		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS CAL #5_00031	02/29/20	10/29/19	H2O, Lot 020713	1000 mL	Ag-1000 2nd_00002	0.1 mL	Silver	100 ug/L
					ICP CAL 1_00004	1 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
					Zn-1000 2nd_00002	0.1 mL	Zinc	100 ug/L
.Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
.ICP CAL 1_00004	01/31/21		CPI, Lot 1018875-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
.Zn-1000 2nd_00002	01/31/21		CPI, Lot 984171-63		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS ICV_00043	02/09/20	10/29/19	H2O, Lot 122713	1000 mL	Ag-1000 2nd_00002	0.04 mL	Silver	40 ug/L
					ICP ICV 1_00001	0.4 mL	Antimony	40 ug/L
							Arsenic	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
					Zn-1000 2nd_00001	0.04 mL	Zinc	40 ug/L
.Ag-1000 2nd_00002	01/31/21		CPI, Lot 975475-80		(Purchased Reagent)		Silver	1000 mg/L
.ICP ICV 1_00001	03/28/20		CPI, Lot 982733-1		(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
.Zn-1000 2nd_00001	08/25/20		CPI, Lot 984272-23		(Purchased Reagent)		Zinc	1000 mg/L
ICPMS- ICSA_00015	08/21/20		CPI, Lot 992328-1		(Purchased Reagent)		Al	1000 ug/mL
							Fe	1000 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mo	20 ug/mL
							Na	1000 ug/mL
							P	1000 ug/mL
							Ti	20 ug/mL
ICPMS-ICSB_00014	08/21/20		CPI, Lot 992327-1		(Purchased Reagent)		Antimony	5 ug/mL
							Arsenic	10 ug/mL
							Ba	10 ug/mL
							Beryllium	10 ug/mL
							Cadmium	10 ug/mL
							Chromium	10 ug/mL
							Co	10 ug/mL
							Copper	10 ug/mL
							Lead	10 ug/mL
							Mn	10 ug/mL
							Nickel	10 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	10 ug/mL
							Sn	10 ug/mL
							Sr	10 ug/mL
							Thallium	5 ug/mL
							V	10 ug/mL
ICPMS-ICSC_00001	08/25/20	07/25/19	H2O, Lot standard	100 mg/L	Ag-1000 2nd_00001	0.5 mL	Silver	5 mg/L
					Zn-1000 2nd_00001	1 mL	Zinc	10 mg/L
.Ag-1000 2nd_00001	08/25/20		CPI, Lot 975475-12		(Purchased Reagent)		Silver	1000 mg/L
.Zn-1000 2nd_00001	08/25/20		CPI, Lot 984272-23		(Purchased Reagent)		Zinc	1000 mg/L
icv_8270_1000_00006	12/31/19	09/09/19	DCM, Lot CT_163	10 mL	8270_IC_STK_00046	100 uL	1,2,4-Trichlorobenzene	1000 ug/L
							1,2-Dichlorobenzene	1000 ug/L
							1,3-Dichlorobenzene	1000 ug/L
							1,4-Dichlorobenzene	1000 ug/L
							1-Methylnaphthalene	1000 ug/L
							2,4,5-Trichlorophenol	1000 ug/L
							2,4,6-Trichlorophenol	1000 ug/L
							2,4-Dichlorophenol	1000 ug/L
							2,4-Dimethylphenol	1000 ug/L
							2,4-Dinitrophenol	2000 ug/L
							2,4-Dinitrotoluene	1000 ug/L
							2,6-Dinitrotoluene	1000 ug/L
							2-Chloronaphthalene	1000 ug/L
							2-Chlorophenol	1000 ug/L
							2-Methylnaphthalene	1000 ug/L
							2-Methylphenol	1000 ug/L
							2-Nitroaniline	1000 ug/L
							2-Nitrophenol	1000 ug/L
							3 & 4 Methylphenol	1000 ug/L
							3-Nitroaniline	1000 ug/L
							4,6-Dinitro-2-methylphenol	2000 ug/L
							4-Bromophenyl phenyl ether	1000 ug/L
							4-Chloro-3-methylphenol	1000 ug/L
							4-Chloroaniline	1000 ug/L
							4-Chlorophenyl phenyl ether	1000 ug/L
							4-Nitroaniline	1000 ug/L
							4-Nitrophenol	2000 ug/L
							Acenaphthene	1000 ug/L
							Acenaphthylene	1000 ug/L
							Anthracene	1000 ug/L
							Benzo[a]anthracene	1000 ug/L
							Benzo[a]pyrene	1000 ug/L
							Benzo[b]fluoranthene	1000 ug/L
							Benzo[g,h,i]perylene	1000 ug/L
							Benzo[k]fluoranthene	1000 ug/L
							Benzyl alcohol	1000 ug/L
							Bis(2-chloroethoxy)methane	1000 ug/L
							Bis(2-chloroethyl)ether	1000 ug/L

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-ethylhexyl) phthalate	1000 ug/L
							bis(chloroisopropyl) ether	1000 ug/L
							Butyl benzyl phthalate	1000 ug/L
							Carbazole	1000 ug/L
							Chrysene	1000 ug/L
							Di-n-butyl phthalate	1000 ug/L
							Di-n-octyl phthalate	1000 ug/L
							Dibenz(a,h)anthracene	1000 ug/L
							Dibenzofuran	1000 ug/L
							Diethyl phthalate	1000 ug/L
							Dimethyl phthalate	1000 ug/L
							Fluoranthene	1000 ug/L
							Fluorene	1000 ug/L
							Hexachlorobenzene	1000 ug/L
							Hexachlorobutadiene	1000 ug/L
							Hexachlorocyclopentadiene	1000 ug/L
							Hexachloroethane	1000 ug/L
							Indeno[1,2,3-cd]pyrene	1000 ug/L
							Isophorone	1000 ug/L
							N-Nitrosodi-n-propylamine	1000 ug/L
							N-Nitrosodiphenylamine	1000 ug/L
							Naphthalene	1000 ug/L
							Nitrobenzene	1000 ug/L
							Pentachlorophenol	2000 ug/L
							Phenanthrene	1000 ug/L
							Phenol	1000 ug/L
							Pyrene	1000 ug/L
							Benzoic acid	2000 ug/L
							3,3'-Dichlorobenzidine	2000 ug/L
							2,4,6-Tribromophenol (Surr)	1000 ug/L
							2-Fluorobiphenyl	1000 ug/L
							2-Fluorophenol (Surr)	1000 ug/L
							2-methylnaphthalene-d10	1000 ug/L
							Fluoranthene-d10 (Surr)	1000 ug/L
							Nitrobenzene-d5 (Surr)	1000 ug/L
							Phenol-d5 (Surr)	1000 ug/L
							Terphenyl-d14 (Surr)	1000 ug/L
.8270_IC_STK_00046	12/31/19	05/14/19	DCM, Lot CT#156	10 mL	8270L1S1-S_00004	1 mL	1,2,4-Trichlorobenzene	100000 ug/L
							1,2-Dichlorobenzene	100000 ug/L
							1,3-Dichlorobenzene	100000 ug/L
							1,4-Dichlorobenzene	100000 ug/L
							1-Methylnaphthalene	100000 ug/L
							2,4,5-Trichlorophenol	100000 ug/L
							2,4,6-Trichlorophenol	100000 ug/L
							2,4-Dichlorophenol	100000 ug/L
							2,4-Dimethylphenol	100000 ug/L
							2,4-Dinitrophenol	200000 ug/L
							2,4-Dinitrotoluene	100000 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	100000 ug/L
							2-Chloronaphthalene	100000 ug/L
							2-Chlorophenol	100000 ug/L
							2-Methylnaphthalene	100000 ug/L
							2-Methylphenol	100000 ug/L
							2-Nitroaniline	100000 ug/L
							2-Nitrophenol	100000 ug/L
							3 & 4 Methylphenol	100000 ug/L
							3-Nitroaniline	100000 ug/L
							4,6-Dinitro-2-methylphenol	200000 ug/L
							4-Bromophenyl phenyl ether	100000 ug/L
							4-Chloro-3-methylphenol	100000 ug/L
							4-Chloroaniline	100000 ug/L
							4-Chlorophenyl phenyl ether	100000 ug/L
							4-Nitroaniline	100000 ug/L
							4-Nitrophenol	200000 ug/L
							Acenaphthene	100000 ug/L
							Acenaphthylene	100000 ug/L
							Anthracene	100000 ug/L
							Benzo[a]anthracene	100000 ug/L
							Benzo[a]pyrene	100000 ug/L
							Benzo[b]fluoranthene	100000 ug/L
							Benzo[g,h,i]perylene	100000 ug/L
							Benzo[k]fluoranthene	100000 ug/L
							Benzyl alcohol	100000 ug/L
							Bis(2-chloroethoxy)methane	100000 ug/L
							Bis(2-chloroethyl)ether	100000 ug/L
							Bis(2-ethylhexyl) phthalate	100000 ug/L
							bis(chloroisopropyl) ether	100000 ug/L
							Butyl benzyl phthalate	100000 ug/L
							Carbazole	100000 ug/L
							Chrysene	100000 ug/L
							Di-n-butyl phthalate	100000 ug/L
							Di-n-octyl phthalate	100000 ug/L
							Dibenz(a,h)anthracene	100000 ug/L
							Dibenzofuran	100000 ug/L
							Diethyl phthalate	100000 ug/L
							Dimethyl phthalate	100000 ug/L
							Fluoranthene	100000 ug/L
							Fluorene	100000 ug/L
							Hexachlorobenzene	100000 ug/L
							Hexachlorobutadiene	100000 ug/L
							Hexachlorocyclopentadiene	100000 ug/L
							Hexachloroethane	100000 ug/L
							Indeno[1,2,3-cd]pyrene	100000 ug/L
							Isophorone	100000 ug/L
							N-Nitrosodi-n-propylamine	100000 ug/L
							N-Nitrosodiphenylamine	100000 ug/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	100000 ug/L
							Nitrobenzene	100000 ug/L
							Pentachlorophenol	200000 ug/L
							Phenanthrene	100000 ug/L
							Phenol	100000 ug/L
							Pyrene	100000 ug/L
					8270L1S10-S_00005	1 mL	Benzoic acid	200000 ug/L
					8270L1S9-S_00005	1 mL	3,3'-Dichlorobenzidine	200000 ug/L
					8270SSstkPhen_00004	0.2 mL	2,4,6-Tribromophenol (Surr)	100000 ug/L
							2-Fluorobiphenyl	100000 ug/L
							2-Fluorophenol (Surr)	100000 ug/L
							2-methylnaphthalene-d10	100000 ug/L
							Fluoranthene-d10 (Surr)	100000 ug/L
							Nitrobenzene-d5 (Surr)	100000 ug/L
							Phenol-d5 (Surr)	100000 ug/L
							Terphenyl-d14 (Surr)	100000 ug/L
..8270L1S1-S_00004	12/31/19		Restek, Lot A0138890		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							bis(chloroisopropyl) ether	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
..8270L1S10-S_00005	04/30/20		Restek, Lot A0142196		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..8270L1S9-S_00005	06/30/20		Restek, Lot A0144159		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..8270SSstkPhen_00004	08/31/23		Phenova, Lot CL12771		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							2-methylnaphthalene-d10	5000 ug/mL
							Fluoranthene-d10 (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
MET Spike 3C_00016	02/15/20	11/15/19	DI, Lot DI	500 mL	Ag-1000_00004	50 mL	Silver	100 mg/L
					B-10000_00004	50 mL	B	1000 mg/L
					ICP CAL 3_00005	250 mL	P	500 mg/L
							Sulfur	500 mg/L

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							U	50 mg/L
							W	50 mg/L
					Zn-1000_00006	50 mL	Zinc	100 mg/L
.Ag-1000_00004	06/20/20	AccuStandard, Lot 214035115			(Purchased Reagent)		Silver	1000 mg/L
.B-10000_00004	01/24/24	AccuStandard, Lot 219015115			(Purchased Reagent)		B	10000 mg/L
.ICP CAL 3_00005	02/28/21	CPI, Lot 1025494-1			(Purchased Reagent)		P	1000 mg/L
							Sulfur	1000 mg/L
							U	100 mg/L
							W	100 mg/L
.Zn-1000_00006	03/01/21	CPI, Lot 984272-63			(Purchased Reagent)		Zinc	1000 mg/L
VOAMasterMix_00046	02/29/20	11/13/19	MeOH, Lot 230446	50 mL	VOAR2CEVE__00019	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					VOARAcrolein_00057	750 uL	Acrolein	300 ug/mL
					VOARADDCOM__00024	1000 uL	1,3,5-Trichlorobenzene	50 ug/mL
					VOARGAS__00022	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOARKETON__00024	1000 uL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOARMegMix__00032	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							4-Chlorotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					VOARPOLARAD__00017	1250 uL	Tert-amyl methyl ether	62.5 ug/mL
							Tert-butyl ethyl ether	62.5 ug/mL
					VOARVA__00046	1250 uL	Vinyl acetate	125 ug/mL
.VOAR2CEVE__00019	10/31/21		Restek, Lot A0142584		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.VOARAcrolein_00057	03/31/20		Restek, Lot A0153030		(Purchased Reagent)		Acrolein	20000 ug/mL
.VOARADDCOM__00024	07/31/20		Restek, Lot A0145375		(Purchased Reagent)		1,3,5-Trichlorobenzene	2500 ug/mL
.VOARGAS__00022	11/30/21		Restek, Lot A0143158		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vinyl chloride	2500 ug/mL
.VOARKETON__00024	12/31/21		Restek, Lot A0143988		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.VOARMegMix__00032	06/30/21		Restek, Lot A0143774		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.VOARPOLARAD__00017	01/31/21		Restek, Lot A0144915		(Purchased Reagent)		Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.VOARVA__00046	02/29/20		Restek, Lot A0152359		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VOAMasterSEC_00039	12/15/19	11/15/19	MeOH, Lot 230446	25 mL	VOASGAS2__00024	500 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOASMegMix2__00022	500 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
.VOASGAS2__00024	03/31/22		Restek, Lot A0147004		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOASMegMix2__00022	06/30/21		Restek, Lot A0144202		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
.HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
HP8330IC_00072	01/13/20	12/17/19		25 mL	HP8330SP_00110	100 uL	1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
					HPNGTA_00062	50 uL	Nitroglycerin	200 ng/mL
					HPPETNTA_00061	50 uL	PETN	200 ng/mL
.HP8330SP_00110	01/15/20	07/15/19	Acetonitrile, Lot Acetonitrile_00145	25 mL	HP8330TA_00065	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP8330TA_00065	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	1000 ug/mL
.HPNGTA_00062	01/13/20	Accustandard, Lot 217121234			(Purchased Reagent)		Nitroglycerin	100 ug/mL
.HPPETNTA_00061	04/06/20	Accustandard, Lot 215051302-04			(Purchased Reagent)		PETN	100 ug/mL
HP8330L1_00046	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	50 mL	HP8330L7_00042	0.5 mL	3,4-Dinitrotoluene	5 ng/mL
							3,5-Dinitroaniline	5 ng/mL
							1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL
							PETN	5 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol 00465	25 mL	HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L2_00038	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	50 mL	HP8330L7_00042	1 mL	3,4-Dinitrotoluene	10 ng/mL
							3,5-Dinitroaniline	10 ng/mL
							1,3,5-Trinitrobenzene	10 ng/mL
							1,3-Dinitrobenzene	10 ng/mL
							2,4,6-Trinitrotoluene	10 ng/mL
							2,4-Dinitrotoluene	10 ng/mL
							2,6-Dinitrotoluene	10 ng/mL
							2-Amino-4,6-dinitrotoluene	10 ng/mL
							2-Nitrotoluene	10 ng/mL
							3-Nitrotoluene	10 ng/mL
							4-Amino-2,6-dinitrotoluene	10 ng/mL
							4-Nitrotoluene	10 ng/mL
							HMX	10 ng/mL
							Nitrobenzene	10 ng/mL
							RDX	10 ng/mL
							Tetryl	10 ng/mL
							Nitroglycerin	10 ng/mL
							PETN	10 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L3_00041	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	50 mL	HP8330L7_00042	2 mL	3,4-Dinitrotoluene	20 ng/mL
							3,5-Dinitroaniline	20 ng/mL
							1,3,5-Trinitrobenzene	20 ng/mL
							1,3-Dinitrobenzene	20 ng/mL
							2,4,6-Trinitrotoluene	20 ng/mL
							2,4-Dinitrotoluene	20 ng/mL
							2,6-Dinitrotoluene	20 ng/mL
							2-Amino-4,6-dinitrotoluene	20 ng/mL
							2-Nitrotoluene	20 ng/mL
							3-Nitrotoluene	20 ng/mL
							4-Amino-2,6-dinitrotoluene	20 ng/mL
							4-Nitrotoluene	20 ng/mL
							HMX	20 ng/mL
							Nitrobenzene	20 ng/mL
							RDX	20 ng/mL
							Tetryl	20 ng/mL
							Nitroglycerin	20 ng/mL
							PETN	20 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00070	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0040	200 mL	HP8330L7_00042	20 mL	3,4-Dinitrotoluene	50 ng/mL
							3,5-Dinitroaniline	50 ng/mL
							1,3,5-Trinitrobenzene	50 ng/mL
							1,3-Dinitrobenzene	50 ng/mL
							2,4,6-Trinitrotoluene	50 ng/mL
							2,4-Dinitrotoluene	50 ng/mL
							2,6-Dinitrotoluene	50 ng/mL
							2-Amino-4,6-dinitrotoluene	50 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	50 ng/mL
							3-Nitrotoluene	50 ng/mL
							4-Amino-2,6-dinitrotoluene	50 ng/mL
							4-Nitrotoluene	50 ng/mL
							HMX	50 ng/mL
							Nitrobenzene	50 ng/mL
							RDX	50 ng/mL
							Tetryl	50 ng/mL
							Nitroglycerin	50 ng/mL
							PETN	50 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00075	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	100 mL	HP8330L7_00042	20 mL	3,4-Dinitrotoluene	100 ng/mL
							3,5-Dinitroaniline	100 ng/mL
							1,3,5-Trinitrobenzene	100 ng/mL
							1,3-Dinitrobenzene	100 ng/mL
							2,4,6-Trinitrotoluene	100 ng/mL
							2,4-Dinitrotoluene	100 ng/mL
							2,6-Dinitrotoluene	100 ng/mL
							2-Amino-4,6-dinitrotoluene	100 ng/mL
							2-Nitrotoluene	100 ng/mL
							3-Nitrotoluene	100 ng/mL
							4-Amino-2,6-dinitrotoluene	100 ng/mL
							4-Nitrotoluene	100 ng/mL
							HMX	100 ng/mL
							Nitrobenzene	100 ng/mL
							RDX	100 ng/mL
							Tetryl	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HPPETNTA_00065	09/04/20	Restek, Lot A0147962			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L6_00058	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	25 mL	HP8330L7_00042	10 mL	3,4-Dinitrotoluene	200 ng/mL
							3,5-Dinitroaniline	200 ng/mL
							1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PETN	500 ng/mL
.HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
..HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
.HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP35DNATA_00073	06/30/23	Restek, Lot A0143132			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
..HP8330TA_00070	11/30/22	Restek, Lot A0148050			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
..HPNGTA_00067	09/04/20	Restek, Lot A0151049			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
..HPPETNTA_00065	09/04/20	Restek, Lot A0147962			(Purchased Reagent)		PETN	1000 ug/mL
HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
.HP35DNATA_00073	06/30/23	Restek, Lot A0143132			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.HP8330TA_00070	11/30/22	Restek, Lot A0148050			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
.HPNGTA_00067	09/04/20	Restek, Lot A0151049			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.HPPETNTA_00065	09/04/20	Restek, Lot A0147962			(Purchased Reagent)		PETN	1000 ug/mL
LC6850IC_00025	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
LC6850IC_00025	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850IM_00018	125 uL	Perchlorate	5 ng/mL
.LC6850IM_00018	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850TA_00013	25 uL	Perchlorate	1 ug/mL
..LC6850TA_00013	04/25/22	Absolute Standards, Inc., Lot 042519			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850IS_00045	10/30/20	10/30/19	MIllipore Water, Lot M12142016	99 g	LC6850IS_00044	1.2246 g	18-O Perchlorate	1.00801 ug/mL
.LC6850IS_00044	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.49 ug/mL
LC6850L1_00025	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	37.5 uL	Perchlorate	0.15 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L2_00020	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	62.5 uL	Perchlorate	0.25 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L3_00027	01/15/20	11/23/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	125 uL	Perchlorate	0.5 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L4_00024	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	25 uL	Perchlorate	1 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L5_00024	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	50 uL	Perchlorate	2 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L6_00023	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	125 uL	Perchlorate	5 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L7_00020	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	250 uL	Perchlorate	10 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L8_00020	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	500 uL	Perchlorate	20 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L9_00029	02/24/20	08/24/19	MIllipore Water, Lot M05162017	250 mL	LC6850IS_00043	2.5 mL	18-O Perchlorate	10.0337 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
.LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL

Method 8260C Low Level

Volatile Organic Compounds (GC/MS) by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-VRX ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TFT #	TOL #	BFB #
04Q19LCMW04DW	580-91195-1	101	105	99	104	100
04Q19LCMW04SW	580-91195-2	99	103	98	103	100
04Q19LCMW140W	580-91195-3	100	104	99	104	101
TB120319	580-91195-4	98	102	98	102	101
	MB 580-318341/7	97	99	100	103	101
	LCS 580-318341/4	99	98	97	102	103
	LCSD 580-318341/5	101	100	94	102	103
04Q19LCMW04DW MS	580-91195-1 MS	99	102	88	100	103
04Q19LCMW04DW MSD	580-91195-1 MSD	101	102	91	101	103

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TFT = Trifluorotoluene (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051918.D

Lab ID: LCS 580-318341/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.21	104	79-127	
1,1,1-Trichloroethane	5.00	5.08	102	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.97	99	69-139	
1,1,2-Trichloroethane	5.00	5.09	102	80-127	
1,1-Dichloroethane	5.00	5.08	102	74-135	
1,1-Dichloroethene	5.00	5.04	101	71-126	
1,1-Dichloropropene	5.00	5.14	103	72-132	
1,2,3-Trichlorobenzene	5.00	5.00	100	75-137	
1,2,3-Trichloropropane	5.00	5.06	101	80-127	
1,2,4-Trichlorobenzene	5.00	4.89	98	79-130	
1,2,4-Trimethylbenzene	5.00	5.29	106	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.65	93	69-130	
1,2-Dichlorobenzene	5.00	5.03	101	80-129	
1,2-Dichloroethane	5.00	4.75	95	74-130	
1,2-Dichloropropane	5.00	5.03	101	80-130	
1,3,5-Trimethylbenzene	5.00	5.34	107	80-139	
1,3-Dichlorobenzene	5.00	5.16	103	80-130	
1,3-Dichloropropane	5.00	5.19	104	80-130	
1,4-Dichlorobenzene	5.00	4.91	98	80-129	
2,2-Dichloropropane	5.00	4.66	93	58-150	
2-Chlorotoluene	5.00	5.32	106	80-136	
4-Chlorotoluene	5.00	5.43	109	80-130	
4-Isopropyltoluene	5.00	5.15	103	78-132	
Benzene	5.00	5.12	102	73-133	
Bromobenzene	5.00	5.05	101	80-130	
Bromoform	5.00	4.62	92	69-137	
Bromomethane	5.00	5.29	106	68-120	
Carbon tetrachloride	5.00	5.04	101	71-132	
Chlorobenzene	5.00	4.89	98	80-123	
Chlorobromomethane	5.00	4.96	99	79-131	
Chlorodibromomethane	5.00	4.57	91	76-131	
Chloroethane	5.00	5.29	106	49-135	
Chloroform	5.00	5.07	101	80-130	
Chloromethane	5.00	4.59	92	32-143	
cis-1,2-Dichloroethene	5.00	5.12	102	72-130	
cis-1,3-Dichloropropene	5.00	5.13	103	66-141	
Dibromomethane	5.00	4.94	99	65-141	
Dichlorobromomethane	5.00	4.55	91	74-131	
Dichlorodifluoromethane	5.00	4.70	94	20-137	
Ethylbenzene	5.00	5.34	107	80-130	
Ethylene Dibromide	5.00	5.07	101	80-126	
Hexachlorobutadiene	5.00	4.84	97	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051918.D

Lab ID: LCS 580-318341/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	5.16	103	75-137	
Methyl tert-butyl ether	5.00	5.03	101	60-150	
Methylene Chloride	5.00	5.10	102	75-134	
m-Xylene & p-Xylene	5.00	5.62	112	78-130	
Naphthalene	5.00	4.72	94	64-132	
n-Butylbenzene	5.00	5.27	105	73-135	
N-Propylbenzene	5.00	5.63	113	77-142	
o-Xylene	5.00	5.04	101	80-139	
sec-Butylbenzene	5.00	5.22	104	78-140	
Styrene	5.00	4.88	98	74-136	
tert-Butylbenzene	5.00	4.74	95	77-140	
Tetrachloroethene	5.00	5.10	102	75-131	
Toluene	5.00	4.83	97	80-126	
trans-1,2-Dichloroethene	5.00	4.98	100	63-133	
trans-1,3-Dichloropropene	5.00	4.71	94	71-128	
Trichloroethene	5.00	4.98	100	72-136	
Trichlorofluoromethane	5.00	4.96	99	60-132	
Vinyl chloride	5.00	5.12	102	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051919.D

Lab ID: LCSD 580-318341/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.17	103	1	20	79-127	
1,1,1-Trichloroethane	5.00	5.05	101	1	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.98	100	0	22	69-139	
1,1,2-Trichloroethane	5.00	5.01	100	2	19	80-127	
1,1-Dichloroethane	5.00	5.10	102	0	20	74-135	
1,1-Dichloroethene	5.00	5.09	102	1	17	71-126	
1,1-Dichloropropene	5.00	5.06	101	2	13	72-132	
1,2,3-Trichlorobenzene	5.00	5.18	104	4	20	75-137	
1,2,3-Trichloropropane	5.00	5.13	103	1	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.97	99	2	20	79-130	
1,2,4-Trimethylbenzene	5.00	5.13	103	3	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.83	97	4	26	69-130	
1,2-Dichlorobenzene	5.00	4.98	100	1	14	80-129	
1,2-Dichloroethane	5.00	4.75	95	0	15	74-130	
1,2-Dichloropropane	5.00	4.90	98	3	14	80-130	
1,3,5-Trimethylbenzene	5.00	5.12	102	4	20	80-139	
1,3-Dichlorobenzene	5.00	4.96	99	4	12	80-130	
1,3-Dichloropropane	5.00	5.11	102	1	19	80-130	
1,4-Dichlorobenzene	5.00	4.70	94	4	11	80-129	
2,2-Dichloropropane	5.00	4.71	94	1	28	58-150	
2-Chlorotoluene	5.00	5.09	102	4	20	80-136	
4-Chlorotoluene	5.00	5.19	104	4	20	80-130	
4-Isopropyltoluene	5.00	4.96	99	4	14	78-132	
Benzene	5.00	5.04	101	2	20	73-133	
Bromobenzene	5.00	4.89	98	3	20	80-130	
Bromoform	5.00	4.57	91	1	20	69-137	
Bromomethane	5.00	5.18	104	2	18	68-120	
Carbon tetrachloride	5.00	5.02	100	0	15	71-132	
Chlorobenzene	5.00	4.80	96	2	12	80-123	
Chlorobromomethane	5.00	5.02	100	1	20	79-131	
Chlorodibromomethane	5.00	4.61	92	1	20	76-131	
Chloroethane	5.00	5.17	103	2	27	49-135	
Chloroform	5.00	5.07	101	0	20	80-130	
Chloromethane	5.00	4.42	88	4	23	32-143	
cis-1,2-Dichloroethene	5.00	5.18	104	1	20	72-130	
cis-1,3-Dichloropropene	5.00	5.06	101	1	22	66-141	
Dibromomethane	5.00	4.96	99	0	20	65-141	
Dichlorobromomethane	5.00	4.48	90	2	20	74-131	
Dichlorodifluoromethane	5.00	4.66	93	1	22	20-137	
Ethylbenzene	5.00	5.18	104	3	20	80-130	
Ethylene Dibromide	5.00	5.05	101	0	20	80-126	
Hexachlorobutadiene	5.00	4.78	96	1	20	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051919.D

Lab ID: LCSD 580-318341/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	5.04	101	2	20	75-137	
Methyl tert-butyl ether	5.00	5.25	105	4	25	60-150	
Methylene Chloride	5.00	5.14	103	1	18	75-134	
m-Xylene & p-Xylene	5.00	5.45	109	3	20	78-130	
Naphthalene	5.00	4.93	99	4	20	64-132	
n-Butylbenzene	5.00	5.02	100	5	18	73-135	
N-Propylbenzene	5.00	5.36	107	5	20	77-142	
o-Xylene	5.00	4.95	99	2	20	80-139	
sec-Butylbenzene	5.00	5.01	100	4	20	78-140	
Styrene	5.00	4.74	95	3	20	74-136	
tert-Butylbenzene	5.00	4.51	90	5	20	77-140	
Tetrachloroethene	5.00	5.02	100	2	20	75-131	
Toluene	5.00	4.67	93	3	20	80-126	
trans-1,2-Dichloroethene	5.00	4.96	99	0	17	63-133	
trans-1,3-Dichloropropene	5.00	4.63	93	2	21	71-128	
Trichloroethene	5.00	4.89	98	2	14	72-136	
Trichlorofluoromethane	5.00	4.91	98	1	20	60-132	
Vinyl chloride	5.00	4.94	99	4	21	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051938.D

Lab ID: 580-91195-1 MS Client ID: 04Q19LCMW04DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	ND	5.23	105	79-127	
1,1,1-Trichloroethane	5.00	ND	5.31	106	74-128	
1,1,2,2-Tetrachloroethane	5.00	ND	4.87	97	69-139	
1,1,2-Trichloroethane	5.00	ND	5.20	104	80-127	
1,1-Dichloroethane	5.00	ND	5.26	105	74-135	
1,1-Dichloroethene	5.00	ND	5.25	105	71-126	
1,1-Dichloropropene	5.00	ND	5.51	110	72-132	
1,2,3-Trichlorobenzene	5.00	ND	4.61	92	75-137	
1,2,3-Trichloropropane	5.00	ND	4.81	96	80-127	
1,2,4-Trichlorobenzene	5.00	ND	4.34	87	79-130	
1,2,4-Trimethylbenzene	5.00	ND	5.10	102	78-136	
1,2-Dibromo-3-Chloropropane	5.00	ND	4.30	86	69-130	
1,2-Dichlorobenzene	5.00	ND	4.87	97	80-129	
1,2-Dichloroethane	5.00	ND	4.98	100	74-130	
1,2-Dichloropropane	5.00	ND	5.28	106	80-130	
1,3,5-Trimethylbenzene	5.00	ND	5.14	103	80-139	
1,3-Dichlorobenzene	5.00	ND	4.95	99	80-130	
1,3-Dichloropropane	5.00	ND	5.30	106	80-130	
1,4-Dichlorobenzene	5.00	ND	4.75	95	80-129	
2,2-Dichloropropane	5.00	ND	3.84	77	58-150	
2-Chlorotoluene	5.00	ND	5.02	100	80-136	
4-Chlorotoluene	5.00	ND	5.23	105	80-130	
4-Isopropyltoluene	5.00	ND	5.01	99	78-132	
Benzene	5.00	ND	5.40	108	73-133	
Bromobenzene	5.00	ND	4.84	97	80-130	
Bromoform	5.00	ND	4.56	91	69-137	
Bromomethane	5.00	ND	5.81	116	68-120	
Carbon tetrachloride	5.00	ND	5.52	110	71-132	
Chlorobenzene	5.00	ND	5.05	101	80-123	
Chlorobromomethane	5.00	ND	5.20	104	79-131	
Chlorodibromomethane	5.00	ND	4.65	93	76-131	
Chloroethane	5.00	ND	6.03	121	49-135	
Chloroform	5.00	ND	5.34	107	80-130	
Chloromethane	5.00	ND	5.23	105	32-143	
cis-1,2-Dichloroethene	5.00	ND	5.31	106	72-130	
cis-1,3-Dichloropropene	5.00	ND	4.58	92	66-141	
Dibromomethane	5.00	ND	5.15	103	65-141	
Dichlorobromomethane	5.00	ND	4.75	95	74-131	
Dichlorodifluoromethane	5.00	ND	4.99	100	20-137	
Ethylbenzene	5.00	ND	5.51	110	80-130	
Ethylene Dibromide	5.00	ND	5.01	100	80-126	
Hexachlorobutadiene	5.00	ND	4.55	91	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051938.D

Lab ID: 580-91195-1 MS Client ID: 04Q19LCMW04DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	ND	5.22	104	75-137	
Methyl tert-butyl ether	5.00	ND	4.92	98	60-150	
Methylene Chloride	5.00	ND	5.17	103	75-134	
m-Xylene & p-Xylene	5.00	ND	5.70	114	78-130	
Naphthalene	5.00	ND	4.28	86	64-132	
n-Butylbenzene	5.00	ND	4.92	98	73-135	
N-Propylbenzene	5.00	ND	5.52	110	77-142	
o-Xylene	5.00	ND	5.07	101	80-139	
sec-Butylbenzene	5.00	ND	5.10	102	78-140	
Styrene	5.00	ND	5.00	100	74-136	
tert-Butylbenzene	5.00	ND	4.56	89	77-140	
Tetrachloroethene	5.00	ND	5.26	105	75-131	
Toluene	5.00	ND	4.91	98	80-126	
trans-1,2-Dichloroethene	5.00	ND	5.25	105	63-133	
trans-1,3-Dichloropropene	5.00	ND	4.36	87	71-128	
Trichloroethene	5.00	ND	5.13	103	72-136	
Trichlorofluoromethane	5.00	ND	5.44	109	60-132	
Vinyl chloride	5.00	ND	5.83	117	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051939.D

Lab ID: 580-91195-1 MSD Client ID: 04Q19LCMW04DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.31	106	1	20	79-127	
1,1,1-Trichloroethane	5.00	5.42	108	2	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.94	99	2	22	69-139	
1,1,2-Trichloroethane	5.00	5.11	102	2	19	80-127	
1,1-Dichloroethane	5.00	5.35	107	2	20	74-135	
1,1-Dichloroethene	5.00	5.49	110	5	17	71-126	
1,1-Dichloropropene	5.00	5.54	111	1	13	72-132	
1,2,3-Trichlorobenzene	5.00	5.02	100	9	20	75-137	
1,2,3-Trichloropropane	5.00	4.94	99	3	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.69	94	8	20	79-130	
1,2,4-Trimethylbenzene	5.00	5.20	104	2	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.60	92	7	26	69-130	
1,2-Dichlorobenzene	5.00	5.00	100	3	14	80-129	
1,2-Dichloroethane	5.00	4.94	99	1	15	74-130	
1,2-Dichloropropane	5.00	5.13	103	3	14	80-130	
1,3,5-Trimethylbenzene	5.00	5.21	104	1	20	80-139	
1,3-Dichlorobenzene	5.00	4.91	98	1	12	80-130	
1,3-Dichloropropane	5.00	5.27	105	1	19	80-130	
1,4-Dichlorobenzene	5.00	4.71	94	1	11	80-129	
2,2-Dichloropropane	5.00	4.05	81	5	28	58-150	
2-Chlorotoluene	5.00	5.09	102	1	20	80-136	
4-Chlorotoluene	5.00	5.15	103	1	20	80-130	
4-Isopropyltoluene	5.00	5.01	99	0	14	78-132	
Benzene	5.00	5.37	107	1	20	73-133	
Bromobenzene	5.00	4.85	97	0	20	80-130	
Bromoform	5.00	4.54	91	0	20	69-137	
Bromomethane	5.00	5.86	117	1	18	68-120	
Carbon tetrachloride	5.00	5.49	110	1	15	71-132	
Chlorobenzene	5.00	4.98	100	1	12	80-123	
Chlorobromomethane	5.00	5.23	105	1	20	79-131	
Chlorodibromomethane	5.00	4.61	92	1	20	76-131	
Chloroethane	5.00	5.84	117	3	27	49-135	
Chloroform	5.00	5.35	107	0	20	80-130	
Chloromethane	5.00	5.13	103	2	23	32-143	
cis-1,2-Dichloroethene	5.00	5.37	107	1	20	72-130	
cis-1,3-Dichloropropene	5.00	4.67	93	2	22	66-141	
Dibromomethane	5.00	5.07	101	2	20	65-141	
Dichlorobromomethane	5.00	4.61	92	3	20	74-131	
Dichlorodifluoromethane	5.00	5.37	107	7	22	20-137	
Ethylbenzene	5.00	5.44	109	1	20	80-130	
Ethylene Dibromide	5.00	5.05	101	1	20	80-126	
Hexachlorobutadiene	5.00	4.65	93	2	20	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12051939.D

Lab ID: 580-91195-1 MSD Client ID: 04Q19LCMW04DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	5.23	105	0	20	75-137	
Methyl tert-butyl ether	5.00	5.17	103	5	25	60-150	
Methylene Chloride	5.00	5.32	106	3	18	75-134	
m-Xylene & p-Xylene	5.00	5.67	113	1	20	78-130	
Naphthalene	5.00	4.70	94	9	20	64-132	
n-Butylbenzene	5.00	4.95	99	1	18	73-135	
N-Propylbenzene	5.00	5.51	110	0	20	77-142	
o-Xylene	5.00	5.06	101	0	20	80-139	
sec-Butylbenzene	5.00	5.15	103	1	20	78-140	
Styrene	5.00	4.87	97	3	20	74-136	
tert-Butylbenzene	5.00	4.57	89	0	20	77-140	
Tetrachloroethene	5.00	5.28	106	0	20	75-131	
Toluene	5.00	4.88	98	1	20	80-126	
trans-1,2-Dichloroethene	5.00	5.32	106	1	17	63-133	
trans-1,3-Dichloropropene	5.00	4.38	88	1	21	71-128	
Trichloroethene	5.00	5.12	102	0	14	72-136	
Trichlorofluoromethane	5.00	5.56	111	2	20	60-132	
Vinyl chloride	5.00	5.90	118	1	21	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 12051921.D Lab Sample ID: MB 580-318341/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC113 Date Analyzed: 12/05/2019 20:00

GC Column: DB-VRX ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-318341/4	12051918.D	12/05/2019 18:40
	LCSD 580-318341/5	12051919.D	12/05/2019 19:07
TB120319	580-91195-4	12051922.D	12/05/2019 20:27
04Q19LCMW04SW	580-91195-2	12051925.D	12/05/2019 21:46
04Q19LCMW140W	580-91195-3	12051926.D	12/05/2019 22:13
04Q19LCMW04DW	580-91195-1	12051937.D	12/06/2019 03:04
04Q19LCMW04DW MS	580-91195-1 MS	12051938.D	12/06/2019 03:30
04Q19LCMW04DW MSD	580-91195-1 MSD	12051939.D	12/06/2019 03:57

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 12041902b.D BFB Injection Date: 12/04/2019

Instrument ID: TAC113 BFB Injection Time: 15:51

Analysis Batch No.: 318234

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.7	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	75.4	
175	5.0 - 9.0 % of mass 174	5.4	(7.2) 1
176	95.0 - 101.0 % of mass 174	72.6	(96.3) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 580-318234/3	12041903b.D	12/04/2019	16:17
	STD 580-318234/4	12041904b.D	12/04/2019	16:43
	STD 580-318234/5	12041905b.D	12/04/2019	17:10
	STD 580-318234/6	12041906b.D	12/04/2019	17:36
	STD 580-318234/7	12041907b.D	12/04/2019	18:03
	STD 580-318234/8	12041908b.D	12/04/2019	18:30
	STD 580-318234/9	12041909b.D	12/04/2019	18:56
	ICIS 580-318234/10	12041910b.D	12/04/2019	19:23
	STD 580-318234/11	12041911b.D	12/04/2019	19:49
	STD 580-318234/12	12041912b.D	12/04/2019	20:16
	STD 580-318234/15	12041913b.D	12/04/2019	20:42
	ICV 580-318234/14	12041915b.D	12/04/2019	21:35

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 12051916.D BFB Injection Date: 12/05/2019

Instrument ID: TAC113 BFB Injection Time: 17:47

Analysis Batch No.: 318341

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	57.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.6) 1
174	50.0 - 120.00 % of mass 95	75.1	
175	5.0 - 9.0 % of mass 174	5.4	(7.2) 1
176	95.0 - 101.0 % of mass 174	72.4	(96.5) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-318341/3	12051917.D	12/05/2019	18:14
	LCS 580-318341/4	12051918.D	12/05/2019	18:40
	LCSD 580-318341/5	12051919.D	12/05/2019	19:07
	MB 580-318341/7	12051921.D	12/05/2019	20:00
TB120319	580-91195-4	12051922.D	12/05/2019	20:27
04Q19LCMW04SW	580-91195-2	12051925.D	12/05/2019	21:46
04Q19LCMW140W	580-91195-3	12051926.D	12/05/2019	22:13
04Q19LCMW04DW	580-91195-1	12051937.D	12/06/2019	03:04
04Q19LCMW04DW MS	580-91195-1 MS	12051938.D	12/06/2019	03:30
04Q19LCMW04DW MSD	580-91195-1 MSD	12051939.D	12/06/2019	03:57

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: ICIS 580-318234/10 Date Analyzed: 12/04/2019 19:23

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12041910b.D Heated Purge: (Y/N) N

Calibration ID: 28568

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		381331	4.93	3453720	8.76	2623509	11.71
UPPER LIMIT			5.10		8.92		11.88
LOWER LIMIT			4.77		8.59		11.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-318234/14		466997	4.93	3533281	8.76	2718416	11.71

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: ICIS 580-318234/10 Date Analyzed: 12/04/2019 19:23

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12041910b.D Heated Purge: (Y/N) N

Calibration ID: 28568

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1355165	13.63				
UPPER LIMIT			13.79				
LOWER LIMIT			13.46				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-318234/14		1393301	13.63				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: CCVIS 580-318341/3 Date Analyzed: 12/05/2019 18:14

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12051917.D Heated Purge: (Y/N) N

Calibration ID: 28568

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2748131	8.76	2147973	11.71	1116068	13.63
UPPER LIMIT			8.93		11.88		13.79
LOWER LIMIT			8.59		11.55		13.46
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-318341/4		2853269	8.76	2173275	11.71	1128624	13.63
LCSD 580-318341/5		2792966	8.76	2093280	11.71	1109099	13.63
MB 580-318341/7		2503162	8.76	1809715	11.71	944966	13.63
580-91195-4	TB120319	2435801	8.76	1801971	11.71	946488	13.63
580-91195-2	04Q19LCMW04SW	2302368	8.76	1706909	11.71	901947	13.63
580-91195-3	04Q19LCMW140W	2277882	8.76	1639197	11.71	873424	13.63
580-91195-1	04Q19LCMW04DW	2111485	8.76	1552906	11.71	813901	13.63
580-91195-1 MS	04Q19LCMW04DW MS	2433031	8.76	1918160	11.71	1051726	13.63
580-91195-1 MSD	04Q19LCMW04DW MSD	2476607	8.76	1874855	11.71	1016264	13.63

FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 12051937.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 12051937.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: 12051925.D

Analysis Method: 8260C Date Collected: 12/03/2019 12:20

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 21:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: 12051925.D

Analysis Method: 8260C Date Collected: 12/03/2019 12:20

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 21:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	103		80-120
98-08-8	Trifluorotoluene (Surr)	98		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: 12051926.D

Analysis Method: 8260C Date Collected: 12/03/2019 12:00

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 22:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: 12051926.D

Analysis Method: 8260C Date Collected: 12/03/2019 12:00

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 22:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: TB120319 Lab Sample ID: 580-91195-4

Matrix: Water Lab File ID: 12051922.D

Analysis Method: 8260C Date Collected: 12/03/2019 00:01

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 20:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: TB120319 Lab Sample ID: 580-91195-4

Matrix: Water Lab File ID: 12051922.D

Analysis Method: 8260C Date Collected: 12/03/2019 00:01

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 20:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	98		80-120

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Dichlorodifluoromethane	+++++ +++++ 0.2620	0.2533 0.2974	0.2580 0.2591	0.2453 0.2881	0.2430 0.2793	Ave		0.2651			0.1000	7.2		20.0			
Chloromethane	+++++ +++++ 0.2542	+++++ 0.3427	+++++ 0.3397	0.3742 0.3100	0.3299 0.2750	Qua2	0.0069	0.3337	-0.000867		0.1000	5.6			0.9980		0.9900
Vinyl chloride	0.5523 +++++ 0.2452	0.3606 0.3397	0.3209 0.3248	0.3139 0.3130	0.3085 0.2790	Qua2	0.0045	0.3070	-0.000549		0.1000	8.9			0.9920		0.9900
Bromomethane	+++++ +++++ +++++	+++++ 0.2432	0.2412 0.2387	0.2432 0.2235	0.2306 0.1893	Ave		0.2299			0.1000	8.4		20.0			
Chloroethane	+++++ +++++ +++++	+++++ 0.0671	+++++ 0.0651	0.0800 0.0597	0.0688 0.0510	Lin2	0.0040	0.0604			0.0600	10.0			0.9900		0.9900
Trichlorofluoromethane	+++++ +++++ 0.4658	+++++ 0.4950	0.5239 0.4555	0.5043 0.4937	0.4917 0.4761	Ave		0.4882			0.1000	4.5		20.0			
Acrolein	+++++ +++++ 0.0199	+++++ 0.0194	+++++ 0.0166	0.0158 0.0188	0.0171 0.0194	Lin2	-0.004	0.0188				6.2			0.9960		0.9900
1,1-Dichloroethene	+++++ +++++ 0.2367	+++++ 0.2309	0.2202 0.2293	0.2192 0.2396	0.2139 0.2387	Ave		0.2286			0.1000	4.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ +++++ 0.2090	+++++ 0.2100	0.2218 0.1874	0.2159 0.2113	0.2137 0.2110	Ave		0.2100			0.1000	4.8		20.0			
Acetone	+++++ +++++ 0.0358	+++++ 0.0444	+++++ 0.0409	0.1233 0.0410	0.0714 0.0361	Lin2	0.0848	0.0382			0.0200	5.9			0.9970		0.9900
Iodomethane	+++++ +++++ 0.4114	+++++ 0.3978	0.3836 0.4101	0.3807 0.4164	0.3742 0.4158	Ave		0.3987				4.3		20.0			
Carbon disulfide	+++++ +++++ 0.7159	+++++ 0.7421	0.7253 0.7807	0.6082 0.8100	0.5851 0.7966	Ave		0.7205			0.1000	11.6		20.0			
Methylene Chloride	+++++ +++++ 0.2528	+++++ 0.2671	+++++ 0.2612	0.3476 0.2602	0.3073 0.2560	Lin2	0.0186	0.2593			0.1000	2.5			0.9990		0.9900
2-Methyl-2-propanol	+++++ +++++ 0.0075	+++++ 0.0065	0.0053 0.0053	0.0064 0.0057	0.0057 0.0066	Ave		0.0061				12.4		20.0			
Acrylonitrile	+++++ +++++ 0.0398	+++++ 0.0424	+++++ 0.0393	0.0387 0.0406	0.0381 0.0411	Ave		0.0400				3.7		20.0			
trans-1,2-Dichloroethene	+++++ +++++ 0.2836	+++++ 0.2826	0.3096 0.2843	0.2729 0.2883	0.2674 0.2875	Ave		0.2845			0.1000	4.4		20.0			
Methyl tert-butyl ether	+++++ +++++ 0.4262	0.3129 0.3878	0.3349 0.3695	0.3264 0.3950	0.3160 0.4200	Ave		0.3654			0.1000	12.1		20.0			
Hexane	+++++ +++++ 0.3787	+++++ 0.3777	+++++ 0.3367	0.2923 0.3904	0.2935 0.3963	Lin1	-0.029	0.3832				9.2			0.9990		0.9900
1,1-Dichloroethane	+++++ +++++ 0.4680	0.5176 0.5059	0.4981 0.5096	0.4889 0.5165	0.5009 0.5056	Ave		0.5012			0.2000	3.1		20.0			
Vinyl acetate	+++++ +++++ 0.0354	+++++ 0.0261	+++++ 0.0271	0.0167 0.0292	0.0160 0.0330	Qua2	-0.005	0.0255	0.0000450			11.7			0.9910		0.9900
Tert-butyl ethyl ether	+++++ +++++ 0.2607	+++++ 0.2189	+++++ 0.2231	0.1625 0.2403	0.1620 0.2569	Qua2	-0.017	0.2184	0.0004115			8.2			0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2,2-Dichloropropane	+++++ +++++ 0.3445	+++++ 0.3206	0.2708 0.3415	0.2569 0.3551	0.2598 0.3625	Lin1	-0.017	0.3501				12.7			0.9990		0.9900
cis-1,2-Dichloroethene	+++++ +++++ 0.3082	+++++ 0.2972	0.2701 0.3016	0.2672 0.3123	0.2670 0.3150	Ave		0.2923			0.1000	7.1		20.0			
2-Butanone (MEK)	+++++ +++++ 0.0138	+++++ 0.0125	+++++ 0.0116	0.0099 0.0125	0.0091 0.0131	Qua1	-0.004	0.0121	0.0000035	*	0.0200	9.5			1.0000		0.9900
Chlorobromomethane	+++++ +++++ 0.1647	+++++ 0.1539	0.1588 0.1510	0.1447 0.1555	0.1471 0.1612	Ave		0.1546				4.4		20.0			
Chloroform	+++++ +++++ 0.4525	0.5421 0.5138	0.5212 0.5121	0.5028 0.5194	0.5046 0.5081	Ave		0.5085			0.2000	4.7		20.0			
1,1,1-Trichloroethane	0.5298 +++++ 0.4300	0.3941 0.4297	0.3759 0.4391	0.3736 0.4572	0.3891 0.4598	Ave		0.4278			0.1000	11.2		20.0			
Carbon tetrachloride	+++++ +++++ 0.4109	+++++ 0.3945	0.3565 0.3956	0.3532 0.4260	0.3634 0.4353	Ave		0.3919			0.1000	8.1		20.0			
1,1-Dichloropropene	+++++ +++++ 0.3753	+++++ 0.3942	0.3320 0.3944	0.3285 0.4135	0.3435 0.4159	Lin1	-0.008	0.3921				6.0			0.9980		0.9900
Benzene	+++++ +++++ +++++	1.2178 1.1227	1.1285 1.1222	1.0726 1.1156	1.1164 0.9647	Ave		1.1076			0.5000	6.4		20.0			
1,2-Dichloroethane	+++++ +++++ 0.2718	+++++ 0.3094	0.4152 0.2926	0.3532 0.2949	0.3314 0.2910	Ave		0.3199			0.1000	14.4		20.0			
Tert-amyl methyl ether	+++++ +++++ +++++	+++++ 0.4369	+++++ 0.4350	0.3071 0.4735	0.3187 0.4998	Lin1	-0.075	0.4851				14.7			0.9980		0.9900
Trichloroethene	+++++ +++++ 0.2920	0.3326 0.2760	0.2772 0.2836	0.2520 0.2937	0.2598 0.3030	Ave		0.2855			0.2000	8.4		20.0			
1,2-Dichloropropane	+++++ +++++ 0.2538	+++++ 0.2623	0.2916 0.2612	0.2474 0.2672	0.2486 0.2694	Ave		0.2627			0.1000	5.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Dibromomethane	+++++ +++++ 0.1354	+++++ 0.1204	0.1199 0.1181	0.1102 0.1223	0.1156 0.1299	Ave		0.1215				6.5		20.0			
Dichlorobromomethane	+++++ +++++ 0.3131	+++++ 0.3062	0.2752 0.3096	0.2493 0.3298	0.2573 0.3403	Qua1	-0.015	0.3357	-0.000193		0.2000	15.0			0.9990		0.9900
2-Chloroethyl vinyl ether	+++++ +++++ 0.1167	+++++ 0.0941	+++++ 0.0990	0.0745 0.1057	0.0704 0.1120	Qua1	-0.010	0.1024	0.0001498			12.6			1.0000		0.9900
cis-1,3-Dichloropropene	+++++ +++++ 0.4008	+++++ 0.4212	0.3279 0.4460	0.3068 0.4685	0.3191 0.4574	Lin1	-0.015	0.4266			0.2000	11.6			0.9950		0.9900
4-Methyl-2-pentanone (MIBK)	+++++ +++++ 0.0494	+++++ 0.0500	+++++ 0.0474	0.0304 0.0500	0.0328 0.0510	Lin1	-0.026	0.0499		*	0.0600	8.8			1.0000		0.9900
Toluene	+++++ +++++ +++++	1.9563 1.4730	1.6830 1.5162	1.5408 1.4572	1.5356 +++++	Ave		1.5946			0.4000	11.0		20.0			
trans-1,3-Dichloropropene	+++++ +++++ 0.3350	+++++ 0.3161	0.2537 0.3284	0.2419 0.3554	0.2273 0.3634	Lin1	-0.019	0.3444			0.1000	15.9			0.9980		0.9900
1,1,2-Trichloroethane	+++++ +++++ 0.1837	+++++ 0.1893	0.1953 0.1795	0.1893 0.1805	0.1882 0.1820	Ave		0.1860			0.1000	2.9		20.0			
Tetrachloroethene	+++++ +++++ 0.3011	+++++ 0.2973	0.3052 0.3048	0.3037 0.3139	0.3086 0.3145	Ave		0.3061			0.2000	1.9		20.0			
1,3-Dichloropropane	+++++ +++++ 0.3089	+++++ 0.3500	0.3433 0.3343	0.3325 0.3348	0.3352 0.3300	Ave		0.3336				3.6		20.0			
2-Hexanone	+++++ +++++ 0.0448	+++++ 0.0451	+++++ 0.0409	0.0267 0.0437	0.0310 0.0440	Lin1	-0.023	0.0444		*	0.0600	7.9			1.0000		0.9900
Chlorodibromomethane	+++++ +++++ 0.2502	+++++ 0.2175	0.1854 0.2236	0.1684 0.2390	0.1709 0.2503	Qua1	-0.012	0.2349	0.0001703		0.1000	15.8			0.9990		0.9900
Ethylene Dibromide	+++++ +++++ 0.1766	0.2027 0.1764	0.1783 0.1688	0.1606 0.1732	0.1566 0.1742	Ave		0.1742			0.1000	7.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorobenzene	+++++ +++++ +++++	+++++ 0.9479	1.1952 0.9406	1.0479 0.9374	1.0088 0.8044	Ave		0.9832			0.5000	12.2		20.0			
1,1,1,2-Tetrachloroethane	+++++ +++++ 0.3025	+++++ 0.3275	0.2743 0.3437	0.2811 0.3587	0.2747 0.3646	Ave		0.3159				11.9		20.0			
Ethylbenzene	+++++ +++++ +++++	1.7187 1.6931	1.5393 1.7515	1.4807 1.6415	1.5380 +++++	Ave		1.6233			0.1000	6.4		20.0			
m-Xylene & p-Xylene	+++++ +++++ +++++	+++++ 1.2834	1.0980 1.3338	1.0716 1.3009	1.1314 1.0374	Ave		1.1795			0.1000	10.4		20.0			
o-Xylene	+++++ +++++ +++++	+++++ 1.3416	+++++ 1.4145	0.9798 1.3663	1.0698 +++++	Lin1	-0.102	1.3843			0.3000	6.7			1.0000		0.9900
Styrene	+++++ +++++ +++++	+++++ 0.9024	+++++ 0.9211	0.5806 0.9338	0.6672 0.8012	Qua1	-0.106	0.9819	-0.003504		0.3000	10.3			0.9990		0.9900
Bromoform	+++++ +++++ 0.1397	+++++ 0.1038	0.0923 0.1017	0.0784 0.1144	0.0832 0.1285	Qua1	-0.005	0.1079	0.0003286		0.1000	15.4			0.9990		0.9900
Isopropylbenzene	+++++ +++++ +++++	+++++ 1.6407	+++++ 1.7184	1.1233 1.6292	1.2661 +++++	Lin1	-0.130	1.6660			0.1000	6.6			0.9990		0.9900
1,1,2,2-Tetrachloroethane	+++++ +++++ +++++	+++++ 0.4030	0.4205 0.3723	0.3970 0.3965	0.3804 0.4108	Ave		0.3972			0.3000	4.2		20.0			
Bromobenzene	+++++ +++++ 0.7037	+++++ 0.6771	+++++ 0.6954	0.6950 0.7317	0.6783 0.7687	Ave		0.7071				4.6		20.0			
trans-1,4-Dichloro-2-butene	+++++ +++++ 0.1072	+++++ 0.0953	+++++ 0.0893	0.0877 0.1003	0.0862 0.1058	Qua1	-0.004	0.0977	0.0001024			7.6			0.9990		0.9900
1,2,3-Trichloropropane	+++++ +++++ 0.1196	+++++ 0.1189	0.1248 0.1097	0.1140 0.1139	0.1162 0.1176	Ave		0.1168				3.9		20.0			
N-Propylbenzene	+++++ +++++ +++++	+++++ 3.8098	+++++ 4.0157	3.2013 3.7116	3.3306 +++++	Ave		3.6138				9.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Chlorotoluene	+++++ +++++ 0.7074	+++++ 0.7450	0.7096 0.7952	0.6616 0.8223	0.6892 0.8309	Ave		0.7452				8.6		20.0			
1,3,5-Trimethylbenzene	+++++ +++++ +++++	+++++ 2.7054	1.9547 2.9128	1.9860 2.8738	2.1967 +++++	Lin2	-0.095	2.7116				9.7			0.9900		0.9900
4-Chlorotoluene	+++++ +++++ 0.7023	+++++ 0.7540	0.6856 0.7797	0.6596 0.8117	0.7008 0.8251	Ave		0.7399				8.3		20.0			
tert-Butylbenzene	+++++ +++++ +++++	+++++ 2.2505	+++++ 2.4873	1.5971 2.5851	1.7489 2.0157	Qua1	-0.328	2.7065	-0.013278			15.6			0.9970		0.9900
sec-Butylbenzene	+++++ +++++ +++++	+++++ 3.4668	+++++ 3.6990	2.4521 3.5619	2.8322 +++++	Lin1	-0.277	3.6093				5.6			0.9990		0.9900
1,3-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.5080	1.6523 1.5412	1.4784 1.6075	1.4691 1.4709	Ave		1.5325			0.6000	4.7		20.0			
4-Isopropyltoluene	+++++ +++++ +++++	+++++ 3.0231	1.9208 3.2613	1.9922 3.2166	2.3625 +++++	Qua1	-0.181	3.1137	0.0065645			14.3			0.9990		0.9900
1,4-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.4982	1.9021 1.4943	1.6424 1.5563	1.5943 1.4352	Ave		1.5890			0.5000	9.7		20.0			
1,2,4-Trimethylbenzene	+++++ +++++ +++++	+++++ 2.8021	2.6326 2.9298	2.6031 2.9118	2.6519 +++++	Ave		2.7552				5.3		20.0			
n-Butylbenzene	+++++ +++++ 0.6986	+++++ 0.7461	+++++ 0.8006	0.5317 0.8487	0.5764 0.8582	Lin1	-0.040	0.7655				10.9			0.9900		0.9900
1,2-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.3583	1.4556 1.3354	1.3698 1.3845	1.3728 1.2977	Ave		1.3677			0.4000	3.5		20.0			
1,2-Dibromo-3-Chloropropane	+++++ +++++ 0.0721	+++++ 0.0540	+++++ 0.0517	+++++ 0.0605	0.0453 0.0672	Qua2	-0.005	0.0542	0.0001967		0.0500	5.4			0.9980		0.9900
1,3,5-Trichlorobenzene	+++++ +++++ +++++	+++++ 1.2123	1.4607 1.2730	1.2064 1.3442	1.1486 1.2733	Ave		1.2741				8.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,2,4-Trichlorobenzene	+++++ +++++ 0.8291	+++++ 0.9063	1.0908 0.9387	0.9121 1.0196	0.7766 1.0116	Ave		0.9356			0.2000	11.1		20.0			
Hexachlorobutadiene	+++++ +++++ +++++	+++++ 0.5941	0.7083 0.6200	0.6296 0.6554	0.5974 0.6675	Ave		0.6389				6.4		20.0			
Naphthalene	+++++ +++++ +++++	+++++ 1.2155	+++++ 1.2198	+++++ 1.3277	0.8274 1.2492	Lin1	-0.221	1.2726				3.5			0.9990		0.9900
1,2,3-Trichlorobenzene	+++++ +++++ 0.7141	+++++ 0.7559	+++++ 0.7592	0.7612 0.8038	0.6411 0.7951	Ave		0.7472				7.4		20.0			
Dibromofluoromethane (Surr)	0.2532 +++++ 0.2652	0.2518 0.2614	0.2562 0.2536	0.2552 0.2595	0.2535 0.2614	Ave		0.2571				1.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2461 +++++ 0.2442	0.2527 0.2554	0.2578 0.2433	0.2590 0.2463	0.2503 0.2443	Ave		0.2499				2.4		20.0			
Trifluorotoluene (Surr)	1.3734 +++++ 1.3549	1.2625 1.1669	1.2466 1.2521	1.2966 1.2773	1.2245 1.2933	Ave		1.2748				4.7		20.0			
Toluene-d8 (Surr)	1.3362 +++++ 1.1630	1.2935 1.2808	1.3166 1.2893	1.3344 1.2477	1.3232 1.1705	Ave		1.2755				5.0		20.0			
4-Bromofluorobenzene (Surr)	0.3756 +++++ 0.3678	0.3882 0.3936	0.3832 0.3807	0.3790 0.3693	0.3858 0.3592	Ave		0.3782				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Dichlorodifluoromethane	FB	Ave	+++++ +++++ 11427499	4217 500118	8190 917927	15467 2154093	38067 5683623	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloromethane	FB	Qua2	+++++ +++++ 11085841	+++++ 576188	+++++ 1203396	23596 2318538	51682 5596144	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Vinyl chloride	FB	Qua2	3821 +++++ 10693189	6003 571279	10187 1150574	19796 2340803	48335 5676367	0.0200 +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromomethane	FB	Ave	+++++ +++++ +++++	+++++ 408874	7658 845368	15335 1671331	36133 3851250	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroethane	FB	Lin2	+++++ +++++ +++++	+++++ 112910	+++++ 230690	5045 446772	10772 1037168	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Trichlorofluoromethane	FB	Ave	+++++ +++++ 20315333	+++++ 832258	16630 1613405	31801 3691530	77033 9687427	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acrolein	FB	Lin2	+++++ +++++ 5201700	+++++ 195515	+++++ 353625	5984 843005	16062 2372458	+++++ +++++ 600	+++++ 30.0	+++++ 60.0	1.20 120	3.00 300
1,1-Dichloroethene	FB	Ave	+++++ +++++ 10321388	+++++ 388311	6990 812158	13822 1791629	33520 4856917	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ +++++ 9113674	+++++ 353138	7041 663935	13611 1579766	33482 4294347	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acetone	FB	Lin2	+++++ +++++ 7812376	+++++ 373530	+++++ 724993	38860 1532343	55951 3672356	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Iodomethane	FB	Ave	+++++ +++++ 17943428	+++++ 668829	12176 1452575	24005 3114048	58625 8460698	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon disulfide	FB	Ave	+++++ +++++ 31218970	+++++ 1247884	23025 2765407	38350 6057351	91673 16209139	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methylene Chloride	FB	Lin2	+++++ +++++ 11024367	+++++ 449067	+++++ 925378	21919 1945994	48155 5209033	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
2-Methyl-2-propanol	FB	Ave	+++++ +++++ 3264463	+++++ 109713	1667 188597	4010 429791	8918 1342301	+++++ +++++ 1000	+++++ 50.0	1.00 100	2.00 200	5.00 500
Acrylonitrile	FB	Ave	+++++ +++++ 17358347	+++++ 712781	+++++ 1393334	24401 3032818	59684 8360503	+++++ +++++ 1000	+++++ 50.0	+++++ 100	2.00 200	5.00 500
trans-1,2-Dichloroethene	FB	Ave	+++++ +++++ 12368496	+++++ 475195	9827 1007177	17210 2156160	41902 5850198	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methyl tert-butyl ether	FB	Ave	+++++ +++++ 18585573	5210 652017	10631 1308695	20582 2954011	49504 8545672	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Hexane	FB	Lin1	+++++ +++++ 16513912	+++++ 635074	+++++ 1192829	18432 2919380	45979 8064331	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1-Dichloroethane	FB	Ave	+++++ +++++ 20409591	8618 850672	15812 1805133	30827 3862088	78474 10289001	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Vinyl acetate	FB	Qua2	+++++ +++++ 3861294	+++++ 109624	+++++ 239641	2631 545365	6257 1677857	+++++ +++++ 250	+++++ 12.5	+++++ 25.0	0.500 50.0	1.25 125
Tert-butyl ethyl ether	FB	Qua2	+++++ +++++ 14209285	+++++ 460029	+++++ 987636	12805 2246071	31734 6535006	+++++ +++++ 125	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2,2-Dichloropropane	FB	Lin1	+++++ +++++ 15025247	+++++ 539042	8596 1209781	16201 2655637	40699 7377087	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
cis-1,2-Dichloroethene	FB	Ave	+++++ +++++ 13439022	+++++ 499697	8574 1068234	16850 2335430	41834 6409271	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Butanone (MEK)	FB	Qua1	+++++ +++++ 3012798	+++++ 105120	+++++ 205170	3108 466072	7092 1329374	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Chlorobromomethane	FB	Ave	+++++ +++++ 7181487	+++++ 258704	5041 534932	9122 1162566	23050 3279534	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroform	FB	Ave	+++++ +++++ 19732590	9026 864021	16544 1813866	31706 3884025	79064 10338887	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1-Trichloroethane	FB	Ave	3665 +++++ 18752913	6561 722543	11934 1555366	23556 3419295	60967 9355984	0.0200 +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon tetrachloride	FB	Ave	+++++ +++++ 17920869	+++++ 663348	11317 1401218	22272 3185986	56932 8858070	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1-Dichloropropene	FB	Lin1	+++++ +++++ 16367666	+++++ 662878	10540 1397207	20717 3092249	53818 8463342	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Benzene	FB	Ave	+++++ +++++ +++++	20274 1887742	35824 3975128	67636 8342339	174922 19630354	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloroethane	FB	Ave	+++++ +++++ 11854011	+++++ 520200	13181 1036631	22271 2205003	51924 5921783	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tert-amyl methyl ether	FB	Lin1	+++++ +++++ +++++	+++++ 918364	+++++ 1926066	24209 4426291	62419 12711689	+++++ +++++ +++++	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5
Trichloroethene	FB	Ave	+++++ +++++ 12734586	5537 464175	8800 1004414	15888 2196451	40702 6166022	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloropropane	FB	Ave	+++++ +++++ 11066918	+++++ 440991	9255 925222	15599 1997905	38944 5481897	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Dibromomethane	FB	Ave	+++++ +++++ 5906404	+++++ 202453	3806 418435	6948 914238	18117 2642938	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dichlorobromomethane	FB	Qual	+++++ +++++ 13652313	+++++ 514908	8737 1096680	15723 2466186	40320 6924371	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Chloroethyl vinyl ether	CBNZ d5	Qual	+++++ +++++ 4258582	+++++ 121850	+++++ 266295	3408 621128	7925 1892532	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
cis-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ +++++ 14623804	+++++ 545643	7542 1200036	14033 2752689	35907 7725714	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Lin1	+++++ +++++ 9017497	+++++ 323909	+++++ 638010	6946 1467761	18430 4304049	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Toluene	CBNZ d5	Ave	+++++ +++++ +++++	24857 1908098	38710 4079726	70470 8561770	172818 +++++	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 +++++
trans-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ +++++ 12223531	+++++ 409411	5836 883631	11061 2087828	25579 6137879	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,2-Trichloroethane	CBNZ d5	Ave	+++++ +++++ 6703896	+++++ 245252	4493 483074	8657 1060659	21177 3074418	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tetrachloroethene	CBNZ d5	Ave	+++++ +++++ 10984353	+++++ 385111	7019 820189	13889 1844320	34732 5311367	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3-Dichloropropane	CBNZ d5	Ave	+++++ +++++ 11270510	+++++ 453345	7897 899528	15208 1966946	37718 5573930	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Hexanone	CBNZ d5	Lin1	+++++ +++++ 8165453	+++++ 291872	+++++ 549612	6100 1284248	17423 3715479	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Chlorodibromomethane	CBNZ d5	Qual	+++++ +++++ 9128428	+++++ 281787	4264 601592	7704 1404485	19234 4227550	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Ethylene Dibromide	CBNZ d5	Ave	+++++ +++++ 6444202	2576 228571	4102 454225	7347 1017554	17619 2942237	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorobenzene	CBNZ d5	Ave	+++++ +++++ +++++	+++++ 1227910	27489 2530886	47924 5507861	113528 13586763	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ +++++ 11038263	+++++ 424284	6308 924731	12856 2107370	30919 6157482	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Ethylbenzene	CBNZ d5	Ave	+++++ +++++ +++++	21839 2193213	35405 4713008	67721 9644311	173083 +++++	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 +++++
m-Xylene & p-Xylene	CBNZ d5	Ave	+++++ +++++ +++++	+++++ 1662476	25253 3588859	49008 7643049	127327 17521446	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
o-Xylene	CBNZ d5	Lin1	+++++ +++++ +++++	+++++ 1737940	+++++ 3806183	44810 8027834	120390 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
Styrene	CBNZ d5	Qua1	+++++ +++++ +++++	+++++ 1168924	+++++ 2478563	26554 5486190	75081 13533183	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Bromoform	CBNZ d5	Qua1	+++++ +++++ 5098128	+++++ 134472	2123 273661	3586 671980	9367 2170757	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Isopropylbenzene	CBNZ d5	Lin1	+++++ +++++ +++++	+++++ 2125404	+++++ 4623923	51374 9572101	142484 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	+++++ +++++ +++++	+++++ 281501	5133 517490	9313 1163746	23066 3314216	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromobenzene	DCBd 4	Ave	+++++ +++++ 12313367	+++++ 472931	+++++ 966598	16304 2147302	41131 6201014	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Qua1	+++++ +++++ 1875349	+++++ 66555	+++++ 124158	2057 294378	5225 853571	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ +++++ 2093297	+++++ 83031	1524 152527	2674 334251	7048 948719	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
N-Propylbenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 2660883	+++++ 5581536	75099 10892884	201958 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	DCBd 4	Ave	+++++ +++++ 12377989	+++++ 520342	8663 1105299	15520 2413300	41793 6702831	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3,5-Trimethylbenzene	DCBd 4	Lin2	+++++ +++++ +++++	+++++ 1889580	23863 4048475	46590 8433925	133200 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
4-Chlorotoluene	DCBd 4	Ave	+++++ +++++ 12289830	+++++ 526613	8370 1083722	15474 2382243	42496 6656568	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
tert-Butylbenzene	DCBd 4	Qua1	+++++ +++++ +++++	+++++ 1571809	+++++ 3457087	37466 7586790	106045 16261421	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
sec-Butylbenzene	DCBd 4	Lin1	+++++ +++++ +++++	+++++ 2421380	+++++ 5141276	57523 10453568	171735 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
1,3-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1053241	20171 2142107	34682 4717729	89083 11865836	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Isopropyltoluene	DCBd 4	Qua1	+++++ +++++ +++++	+++++ 2111415	23449 4532877	46735 9440089	143255 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
1,4-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1046393	23221 2076957	38528 4567510	96673 11577748	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1957111	32139 4072132	61067 8545619	160801 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
n-Butylbenzene	DCBd 4	Lin1	+++++ +++++ 12224022	+++++ 521088	+++++ 1112750	12472 2490739	34950 6923199	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 948713	17770 1856048	32135 4063236	83245 10469072	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Qua2	+++++ +++++ 1261845	+++++ 37746	+++++ 71891	+++++ 177596	2749 542109	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 846694	17832 1769349	28300 3945059	69649 10271681	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ 14508327	+++++ 632978	13316 1304746	21396 2992367	47091 8161166	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Hexachlorobutadiene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 414917	8647 861734	14770 1923542	36224 5385224	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Naphthalene	DCBd 4	Lin1	+++++ +++++ +++++	+++++ 848967	+++++ 1695386	+++++ 3896461	50168 10077980	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ 12495636	+++++ 527926	+++++ 1055206	17857 2358924	38874 6414139	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Dibromofluoromethane (Surr)	FB	Ave	853855 +++++ 1127738	817425 857089	792987 875774	784522 945881	774666 1037220	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
1,2-Dichloroethane-d4 (Surr)	FB	Ave	830002 +++++ 1038383	820430 837584	797950 840189	796247 897881	764632 969319	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
Trifluorotoluene (Surr)	DCBd 4	Ave	1695338 +++++ 2369959	1630862 1629400	1521211 1739641	1520227 1873553	1484455 2085822	10.00 +++++ 10.00	10.00 10.00	10.00 10.00	10.00 10.00	10.00 10.00
Toluene-d8 (Surr)	CBNZ d5	Ave	3257378 +++++ 4137206	3205046 3235281	2952547 3382365	2975226 3573611	2903738 3855336	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	915545 +++++ 1308278	961775 994339	859279 998879	845052 1057687	846627 1183145	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua1 = Quadratic 1/conc ISTD
Qua2 = Quadratic 1/conc^2 ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
Dichlorodifluoromethane	+++++	-4.4				+++++		50				
Chloromethane	+++++	+++++	+++++	1.9		+++++				30		
Vinyl chloride	7.2					+++++	30					
Bromomethane	+++++	+++++	4.9		+++++	+++++			50			
Chloroethane	+++++	+++++	+++++	-0.7	+++++	+++++				30		
Trichlorofluoromethane	+++++	+++++	7.3			+++++			50			
Acrolein	+++++	+++++	+++++	1.0		+++++				30		
1,1-Dichloroethene	+++++	+++++	-3.7			+++++			50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	+++++	5.6			+++++			50			
Acetone	+++++	+++++	+++++	0.4		+++++				30		
Iodomethane	+++++	+++++	-3.8			+++++			50			
Carbon disulfide	+++++	+++++	0.7			+++++			50			
Methylene Chloride	+++++	+++++	+++++	-1.7		+++++				30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
2-Methyl-2-propanol	+++++	+++++	-14.2			+++++			50			
Acrylonitrile	+++++	+++++	+++++	-3.2		+++++				50		
trans-1,2-Dichloroethene	+++++	+++++	8.8			+++++			50			
Methyl tert-butyl ether	+++++	-14.4				+++++		50				
Hexane	+++++	+++++	+++++	14.6		+++++				30		
1,1-Dichloroethane	+++++	3.3				+++++		50				
Vinyl acetate	+++++	+++++	+++++	8.0		+++++				30		
Tert-butyl ethyl ether	+++++	+++++	+++++	5.3		+++++				30		
2,2-Dichloropropane	+++++	+++++	24.8			+++++			30			
cis-1,2-Dichloroethene	+++++	+++++	-7.6			+++++			50			
2-Butanone (MEK)	+++++	+++++	+++++	12.7		+++++				30		
Chlorobromomethane	+++++	+++++	2.7			+++++			50			
Chloroform	+++++	6.6				+++++		50				
1,1,1-Trichloroethane	23.8					+++++	50					
Carbon tetrachloride	+++++	+++++	-9.0			+++++			50			
1,1-Dichloropropene	+++++	+++++	5.1			+++++			30			
Benzene	+++++	10.0			+++++	+++++		50				
1,2-Dichloroethane	+++++	+++++	29.8			+++++			50			
Tert-amyl methyl ether	+++++	+++++	+++++	24.8	+++++	+++++				30		
Trichloroethene	+++++	16.5				+++++		50				
1,2-Dichloropropane	+++++	+++++	11.0			+++++			50			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
Dibromomethane	+++++	+++++	-1.3			+++++			50			
Dichlorobromomethane	+++++	+++++	28.1			+++++			30			
2-Chloroethyl vinyl ether	+++++	+++++	+++++	20.5		+++++				30		
cis-1,3-Dichloropropene	+++++	+++++	12.6			+++++			30			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	13.3		+++++				30		
Toluene	+++++	22.7		+++++	+++++	+++++		50				
trans-1,3-Dichloropropene	+++++	+++++	29.5			+++++			30			
1,1,2-Trichloroethane	+++++	+++++	5.0			+++++			50			
Tetrachloroethene	+++++	+++++	-0.3			+++++			50			
1,3-Dichloropropane	+++++	+++++	2.9			+++++			50			
2-Hexanone	+++++	+++++	+++++	12.8		+++++				30		
Chlorodibromomethane	+++++	+++++	29.3			+++++			30			
Ethylene Dibromide	+++++	16.4				+++++		50				
Chlorobenzene	+++++	+++++	21.6		+++++	+++++			50			
1,1,1,2-Tetrachloroethane	+++++	+++++	-13.2			+++++			50			
Ethylbenzene	+++++	5.9		+++++	+++++	+++++		50				
m-Xylene & p-Xylene	+++++	+++++	-6.9		+++++	+++++			50			
o-Xylene	+++++	+++++	+++++	7.6 +++++	+++++	+++++				30		
Styrene	+++++	+++++	+++++	13.5	+++++	+++++				30		
Bromoform	+++++	+++++	29.3			+++++			30			
Isopropylbenzene	+++++	+++++	+++++	6.3 +++++	+++++	+++++				30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
1,1,2,2-Tetrachloroethane	+++++	+++++	5.8		+++++	+++++			50			
Bromobenzene	+++++	+++++	+++++	-1.7		+++++				50		
trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	11.3		+++++				30		
1,2,3-Trichloropropane	+++++	+++++	6.8			+++++			50			
N-Propylbenzene	+++++	+++++	+++++	-11.4 +++++	+++++	+++++				50		
2-Chlorotoluene	+++++	+++++	-4.8			+++++			50			
1,3,5-Trimethylbenzene	+++++	+++++	6.9	+++++	+++++	+++++			30			
4-Chlorotoluene	+++++	+++++	-7.3			+++++			50			
tert-Butylbenzene	+++++	+++++	+++++	19.7	+++++	+++++				30		
sec-Butylbenzene	+++++	+++++	+++++	6.3 +++++	+++++	+++++				30		
1,3-Dichlorobenzene	+++++	+++++	7.8		+++++	+++++			50			
4-Isopropyltoluene	+++++	+++++	19.8	+++++	+++++	+++++			30			
1,4-Dichlorobenzene	+++++	+++++	19.7		+++++	+++++			50			
1,2,4-Trimethylbenzene	+++++	+++++	-4.5	+++++	+++++	+++++			50			
n-Butylbenzene	+++++	+++++	+++++	-4.1		+++++				30		
1,2-Dichlorobenzene	+++++	+++++	6.4		+++++	+++++			50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	0.2	+++++					30	
1,3,5-Trichlorobenzene	+++++	+++++	14.6		+++++	+++++			50			
1,2,4-Trichlorobenzene	+++++	+++++	16.6			+++++			50			
Hexachlorobutadiene	+++++	+++++	10.9		+++++	+++++			50			
Naphthalene	+++++	+++++	+++++	+++++	-0.3 +++++	+++++					30	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
1,2,3-Trichlorobenzene	+++++	+++++	+++++	1.9		+++++				50		
Dibromofluoromethane (Surr)	-1.5					+++++	50					
1,2-Dichloroethane-d4 (Surr)	-1.5					+++++	50					
Trifluorotoluene (Surr)	7.7					+++++	50					
Toluene-d8 (Surr)	4.8					+++++	50					
4-Bromofluorobenzene (Surr)	-0.7					+++++	50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2651	0.2906	0.1000	11.0	10.0	9.6	30.0
Chloromethane	Qua2		0.3015	0.1000	9.23	10.0	-7.7	30.0
Vinyl chloride	Qua2		0.3213	0.1000	10.7	10.0	6.6	30.0
Bromomethane	Ave	0.2299	0.2385	0.1000	10.4	10.0	3.7	30.0
Chloroethane	Lin2		0.0624	0.0600	10.3	10.0	2.8	30.0
Trichlorofluoromethane	Ave	0.4882	0.5299	0.1000	10.9	10.0	8.5	30.0
Acrolein	Lin2		0.0213		67.9	60.0	13.2	30.0
1,1-Dichloroethene	Ave	0.2286	0.2637	0.1000	11.5	10.0	15.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2100	0.2260	0.1000	10.8	10.0	7.6	30.0
Acetone	Lin2		0.0411	0.0200	51.5	50.0	2.9	30.0
Iodomethane	Ave	0.3987	0.4565		11.4	10.0	14.5	30.0
Carbon disulfide	Ave	0.7205	0.8398	0.1000	11.7	10.0	16.6	30.0
Methylene Chloride	Lin2		0.2719	0.1000	10.4	10.0	4.1	30.0
2-Methyl-2-propanol	Ave	0.0061	0.0065		107	100	6.7	30.0
Acrylonitrile	Ave	0.0400	0.0416		104	100	4.0	30.0
trans-1,2-Dichloroethene	Ave	0.2845	0.3052	0.1000	10.7	10.0	7.3	30.0
Methyl tert-butyl ether	Ave	0.3654	0.4104	0.1000	11.2	10.0	12.3	30.0
Hexane	Lin1		0.4090		10.8	10.0	7.5	30.0
1,1-Dichloroethane	Ave	0.5012	0.5207	0.2000	10.4	10.0	3.9	30.0
Vinyl acetate	Qua2		0.0284		26.8	25.0	7.2	30.0
Tert-butyl ethyl ether	Qua2		0.2409		13.5	12.5	8.2	30.0
2,2-Dichloropropane	Lin1		0.3595		10.3	10.0	3.2	30.0
cis-1,2-Dichloroethene	Ave	0.2923	0.3226	0.1000	11.0	10.0	10.3	30.0
2-Butanone (MEK)	Qua1		0.0128*	0.0200	52.5	50.0	4.9	30.0
Chlorobromomethane	Ave	0.1546	0.1569		10.1	10.0	1.5	30.0
Chloroform	Ave	0.5085	0.5187	0.2000	10.2	10.0	2.0	30.0
1,1,1-Trichloroethane	Ave	0.4278	0.4691	0.1000	11.0	10.0	9.6	30.0
Carbon tetrachloride	Ave	0.3919	0.4290	0.1000	10.9	10.0	9.4	30.0
1,1-Dichloropropene	Lin1		0.4033		10.3	10.0	3.1	30.0
Benzene	Ave	1.108	1.139	0.5000	10.3	10.0	2.8	30.0
1,2-Dichloroethane	Ave	0.3199	0.2914	0.1000	9.11	10.0	-8.9	30.0
Tert-amyl methyl ether	Lin1		0.4756		12.4	12.5	-0.7	30.0
Trichloroethene	Ave	0.2855	0.2956	0.2000	10.4	10.0	3.5	30.0
1,2-Dichloropropane	Ave	0.2627	0.2648	0.1000	10.1	10.0	0.8	30.0
Dibromomethane	Ave	0.1215	0.1262		10.4	10.0	3.9	30.0
Dichlorobromomethane	Qua1		0.3238	0.2000	9.75	10.0	-2.5	30.0
2-Chloroethyl vinyl ether	Qua1		0.1079		10.5	10.0	4.7	30.0
cis-1,3-Dichloropropene	Lin1		0.4620	0.2000	10.9	10.0	8.6	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.0510*	0.0600	51.6	50.0	3.1	30.0
Toluene	Ave	1.595	1.492	0.4000	9.36	10.0	-6.4	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Lin1		0.3296	0.1000	9.63	10.0	-3.7	30.0
1,1,2-Trichloroethane	Ave	0.1860	0.1850	0.1000	9.94	10.0	-0.6	30.0
Tetrachloroethene	Ave	0.3061	0.3185	0.2000	10.4	10.0	4.0	30.0
1,3-Dichloropropane	Ave	0.3336	0.3385		10.1	10.0	1.5	30.0
2-Hexanone	Lin1		0.0468*	0.0600	53.3	50.0	6.6	30.0
Chlorodibromomethane	Qua1		0.2368	0.1000	10.1	10.0	0.6	30.0
Ethylene Dibromide	Ave	0.1742	0.1785	0.1000	10.2	10.0	2.5	30.0
Chlorobenzene	Ave	0.9832	0.9480	0.5000	9.64	10.0	-3.6	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3159	0.3461		11.0	10.0	9.6	30.0
Ethylbenzene	Ave	1.623	1.693	0.1000	10.4	10.0	4.3	30.0
m-Xylene & p-Xylene	Ave	1.179	1.308	0.1000	11.1	10.0	10.9	30.0
o-Xylene	Lin1		1.390	0.3000	10.1	10.0	1.1	30.0
Styrene	Qua1		0.9611	0.3000	10.3	10.0	2.7	30.0
Bromoform	Qua1		0.1148	0.1000	10.4	10.0	3.5	30.0
Isopropylbenzene	Lin1		1.721	0.1000	10.4	10.0	4.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.3972	0.3913	0.3000	9.85	10.0	-1.5	30.0
Bromobenzene	Ave	0.7071	0.7263		10.3	10.0	2.7	30.0
trans-1,4-Dichloro-2-butene	Qua1		0.0999		10.2	10.0	1.6	30.0
1,2,3-Trichloropropane	Ave	0.1168	0.1158		9.91	10.0	-0.9	30.0
N-Propylbenzene	Ave	3.614	3.905		10.8	10.0	8.1	30.0
2-Chlorotoluene	Ave	0.7452	0.7904		10.6	10.0	6.1	30.0
1,3,5-Trimethylbenzene	Lin2		2.881		10.7	10.0	6.6	30.0
4-Chlorotoluene	Ave	0.7399	0.7951		10.7	10.0	7.5	30.0
tert-Butylbenzene	Qua1		2.483		9.76	10.0	-2.4	30.0
sec-Butylbenzene	Lin1		3.691		10.3	10.0	3.0	30.0
1,3-Dichlorobenzene	Ave	1.532	1.563	0.6000	10.2	10.0	2.0	30.0
4-Isopropyltoluene	Qua1		3.253		10.3	10.0	2.8	30.0
1,4-Dichlorobenzene	Ave	1.589	1.537	0.5000	9.68	10.0	-3.2	30.0
1,2,4-Trimethylbenzene	Ave	2.755	2.969		10.8	10.0	7.8	30.0
n-Butylbenzene	Lin1		0.8120		10.7	10.0	6.6	30.0
1,2-Dichlorobenzene	Ave	1.368	1.337	0.4000	9.77	10.0	-2.3	30.0
1,2-Dibromo-3-Chloropropane	Qua2		0.0604	0.0500	10.8	10.0	8.0	30.0
1,3,5-Trichlorobenzene	Ave	1.274	1.335		10.5	10.0	4.8	30.0
1,2,4-Trichlorobenzene	Ave	0.9356	1.027	0.2000	11.0	10.0	9.8	30.0
Hexachlorobutadiene	Ave	0.6389	0.6655		10.4	10.0	4.2	30.0
Naphthalene	Lin1		1.331		10.6	10.0	6.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7472	0.8259		11.1	10.0	10.5	30.0
Dibromofluoromethane (Surr)	Ave	0.2571	0.2609		9.89	9.75	1.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2499	0.2404		9.38	9.75	-3.8	30.0
Trifluorotoluene (Surr)	Ave	1.275	1.258		9.87	10.0	-1.3	30.0
Toluene-d8 (Surr)	Ave	1.276	1.255		9.60	9.75	-1.6	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Bromofluorobenzene (Surr)	Ave	0.3782	0.3916		10.1	9.75	3.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318341/3 Calibration Date: 12/05/2019 18:14

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12051917.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2651	0.2370	0.1000	8.94	10.0	-10.6	20.0
Chloromethane	Qua2		0.3174	0.1000	9.74	10.0	-2.6	20.0
Vinyl chloride	Qua2		0.3234	0.1000	10.7	10.0	7.3	20.0
Bromomethane	Ave	0.2299	0.2480	0.1000	10.8	10.0	7.9	20.0
Chloroethane	Lin2		0.0679	0.0600	11.2	10.0	11.8	20.0
Trichlorofluoromethane	Ave	0.4882	0.4758	0.1000	9.74	10.0	-2.6	20.0
Acrolein	Lin2		0.0222		70.9	60.0	18.1	20.0
1,1-Dichloroethene	Ave	0.2286	0.2356	0.1000	10.3	10.0	3.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2100	0.2106	0.1000	10.0	10.0	0.3	20.0
Acetone	Lin2		0.0448	0.0200	56.3	50.0	12.7	20.0
Iodomethane	Ave	0.3987	0.4084		10.2	10.0	2.4	20.0
Carbon disulfide	Ave	0.7205	0.7708	0.1000	10.7	10.0	7.0	20.0
Methylene Chloride	Lin2		0.2762	0.1000	10.6	10.0	5.8	20.0
2-Methyl-2-propanol	Ave	0.0061	0.0069		113	100	12.9	20.0
Acrylonitrile	Ave	0.0400	0.0471		118	100	17.8	20.0
trans-1,2-Dichloroethene	Ave	0.2845	0.2940	0.1000	10.3	10.0	3.3	20.0
Methyl tert-butyl ether	Ave	0.3654	0.4289	0.1000	11.7	10.0	17.4	20.0
Hexane	Lin1		0.3901		10.3	10.0	2.6	20.0
1,1-Dichloroethane	Ave	0.5012	0.5327	0.2000	10.6	10.0	6.3	20.0
Vinyl acetate	Qua2		0.0328		30.7	25.0	22.9*	20.0
Tert-butyl ethyl ether	Qua2		0.2573		14.4	12.5	15.3	20.0
2,2-Dichloropropane	Lin1		0.3711		10.6	10.0	6.5	20.0
cis-1,2-Dichloroethene	Ave	0.2923	0.3297	0.1000	11.3	10.0	12.8	20.0
2-Butanone (MEK)	Qua1		0.0144*	0.0200	58.9	50.0	17.8	20.0
Chlorobromomethane	Ave	0.1546	0.1710		11.1	10.0	10.6	20.0
Chloroform	Ave	0.5085	0.5729	0.2000	11.3	10.0	12.7	20.0
1,1,1-Trichloroethane	Ave	0.4278	0.4707	0.1000	11.0	10.0	10.0	20.0
Carbon tetrachloride	Ave	0.3919	0.4288	0.1000	10.9	10.0	9.4	20.0
1,1-Dichloropropene	Lin1		0.4246		10.9	10.0	8.5	20.0
Benzene	Ave	1.108	1.211	0.5000	10.9	10.0	9.3	20.0
1,2-Dichloroethane	Ave	0.3199	0.3400	0.1000	10.6	10.0	6.3	20.0
Tert-amyl methyl ether	Lin1		0.5245		13.7	12.5	9.4	20.0
Trichloroethene	Ave	0.2855	0.3146	0.2000	11.0	10.0	10.2	20.0
1,2-Dichloropropane	Ave	0.2627	0.3016	0.1000	11.5	10.0	14.8	20.0
Dibromomethane	Ave	0.1215	0.1421		11.7	10.0	17.0	20.0
Dichlorobromomethane	Qua1		0.3717	0.2000	11.2	10.0	11.9	20.0
2-Chloroethyl vinyl ether	Qua1		0.1205		11.7	10.0	16.6	20.0
cis-1,3-Dichloropropene	Lin1		0.5252	0.2000	12.3	10.0	23.5*	20.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.0608	0.0600	61.4	50.0	22.8*	20.0
Toluene	Ave	1.595	1.697	0.4000	10.6	10.0	6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318341/3 Calibration Date: 12/05/2019 18:14

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12051917.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Lin1		0.4015	0.1000	11.7	10.0	17.1	20.0
1,1,2-Trichloroethane	Ave	0.1860	0.2176	0.1000	11.7	10.0	17.0	20.0
Tetrachloroethene	Ave	0.3061	0.3417	0.2000	11.2	10.0	11.6	20.0
1,3-Dichloropropane	Ave	0.3336	0.4026		12.1	10.0	20.7*	20.0
2-Hexanone	Lin1		0.0513*	0.0600	58.3	50.0	16.7	20.0
Chlorodibromomethane	Qua1		0.2727	0.1000	11.6	10.0	15.6	20.0
Ethylene Dibromide	Ave	0.1742	0.2042	0.1000	11.7	10.0	17.2	20.0
Chlorobenzene	Ave	0.9832	1.099	0.5000	11.2	10.0	11.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3159	0.4115		13.0	10.0	30.3*	20.0
Ethylbenzene	Ave	1.623	1.999	0.1000	12.3	10.0	23.2*	20.0
m-Xylene & p-Xylene	Ave	1.179	1.522	0.1000	12.9	10.0	29.0*	20.0
o-Xylene	Lin1		1.634	0.3000	11.9	10.0	18.8	20.0
Styrene	Qua1		1.096	0.3000	11.8	10.0	17.6	20.0
Bromoform	Qua1		0.1283	0.1000	11.5	10.0	15.3	20.0
Isopropylbenzene	Lin1		1.974	0.1000	11.9	10.0	19.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.3972	0.4765	0.3000	12.0	10.0	20.0	20.0
Bromobenzene	Ave	0.7071	0.8224		11.6	10.0	16.3	20.0
trans-1,4-Dichloro-2-butene	Qua1		0.1150		11.7	10.0	16.7	20.0
1,2,3-Trichloropropane	Ave	0.1168	0.1367		11.7	10.0	17.0	20.0
N-Propylbenzene	Ave	3.614	4.597		12.7	10.0	27.2*	20.0
2-Chlorotoluene	Ave	0.7452	0.9146		12.3	10.0	22.7*	20.0
1,3,5-Trimethylbenzene	Lin2		3.352		12.4	10.0	24.0*	20.0
4-Chlorotoluene	Ave	0.7399	0.9106		12.3	10.0	23.1*	20.0
tert-Butylbenzene	Qua1		2.851		11.3	10.0	12.8	20.0
sec-Butylbenzene	Lin1		4.248		11.8	10.0	18.5	20.0
1,3-Dichlorobenzene	Ave	1.532	1.823	0.6000	11.9	10.0	19.0	20.0
4-Isopropyltoluene	Qua1		3.774		11.9	10.0	18.8	20.0
1,4-Dichlorobenzene	Ave	1.589	1.779	0.5000	11.2	10.0	11.9	20.0
1,2,4-Trimethylbenzene	Ave	2.755	3.438		12.5	10.0	24.8*	20.0
n-Butylbenzene	Lin1		0.9278		12.2	10.0	21.7*	20.0
1,2-Dichlorobenzene	Ave	1.368	1.609	0.4000	11.8	10.0	17.7	20.0
1,2-Dibromo-3-Chloropropane	Qua2		0.0662	0.0500	11.8	10.0	17.8	20.0
1,3,5-Trichlorobenzene	Ave	1.274	1.492		11.7	10.0	17.1	20.0
1,2,4-Trichlorobenzene	Ave	0.9356	1.137	0.2000	12.2	10.0	21.5*	20.0
Hexachlorobutadiene	Ave	0.6389	0.7104		11.1	10.0	11.2	20.0
Naphthalene	Lin1		1.514		12.1	10.0	20.7*	20.0
1,2,3-Trichlorobenzene	Ave	0.7472	0.9052		12.1	10.0	21.1*	20.0
Dibromofluoromethane (Surr)	Ave	0.2571	0.2561		9.71	9.75	-0.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2499	0.2500		9.75	9.75	0.0	20.0
Trifluorotoluene (Surr)	Ave	1.275	1.220		9.56	10.0	-4.3	20.0
Toluene-d8 (Surr)	Ave	1.276	1.268		9.69	9.75	-0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318341/3 Calibration Date: 12/05/2019 18:14

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12051917.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Bromofluorobenzene (Surr)	Ave	0.3782	0.3788		9.77	9.75	0.2	20.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318341/7

Matrix: Water Lab File ID: 12051921.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 20:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318341/7

Matrix: Water Lab File ID: 12051921.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 20:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	103		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318341/4

Matrix: Water Lab File ID: 12051918.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 18:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.21		0.30	
71-55-6	1,1,1-Trichloroethane	5.08		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.97		0.20	
79-00-5	1,1,2-Trichloroethane	5.09		0.20	
75-34-3	1,1-Dichloroethane	5.08		0.20	
75-35-4	1,1-Dichloroethene	5.04		0.20	
563-58-6	1,1-Dichloropropene	5.14		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.00		0.50	
96-18-4	1,2,3-Trichloropropane	5.06		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.89		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.29		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.65		2.0	
95-50-1	1,2-Dichlorobenzene	5.03		0.30	
107-06-2	1,2-Dichloroethane	4.75		0.20	
78-87-5	1,2-Dichloropropane	5.03		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.34		0.50	
541-73-1	1,3-Dichlorobenzene	5.16		0.30	
142-28-9	1,3-Dichloropropane	5.19		0.20	
106-46-7	1,4-Dichlorobenzene	4.91		0.30	
594-20-7	2,2-Dichloropropane	4.66		0.50	
95-49-8	2-Chlorotoluene	5.32		0.50	
106-43-4	4-Chlorotoluene	5.43		0.30	
99-87-6	4-Isopropyltoluene	5.15		0.30	
71-43-2	Benzene	5.12		0.20	
108-86-1	Bromobenzene	5.05		0.20	
75-25-2	Bromoform	4.62		0.50	
74-83-9	Bromomethane	5.29		0.50	
56-23-5	Carbon tetrachloride	5.04		0.20	
108-90-7	Chlorobenzene	4.89		0.20	
74-97-5	Chlorobromomethane	4.96		0.20	
124-48-1	Chlorodibromomethane	4.57		0.20	
75-00-3	Chloroethane	5.29		0.50	
67-66-3	Chloroform	5.07		0.20	
74-87-3	Chloromethane	4.59		0.50	
156-59-2	cis-1,2-Dichloroethene	5.12		0.20	
10061-01-5	cis-1,3-Dichloropropene	5.13		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318341/4

Matrix: Water Lab File ID: 12051918.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 18:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.94		0.20	
75-27-4	Dichlorobromomethane	4.55		0.20	
75-71-8	Dichlorodifluoromethane	4.70		0.40	
100-41-4	Ethylbenzene	5.34		0.20	
106-93-4	Ethylene Dibromide	5.07		0.10	
87-68-3	Hexachlorobutadiene	4.84		0.50	
98-82-8	Isopropylbenzene	5.16		1.0	
1634-04-4	Methyl tert-butyl ether	5.03		0.30	
75-09-2	Methylene Chloride	5.10		5.0	
179601-23-1	m-Xylene & p-Xylene	5.62		0.50	
91-20-3	Naphthalene	4.72		1.0	
104-51-8	n-Butylbenzene	5.27		0.50	
103-65-1	N-Propylbenzene	5.63		0.30	
95-47-6	o-Xylene	5.04		0.50	
135-98-8	sec-Butylbenzene	5.22		1.0	
100-42-5	Styrene	4.88		0.50	
98-06-6	tert-Butylbenzene	4.74		0.50	
127-18-4	Tetrachloroethene	5.10		0.50	
108-88-3	Toluene	4.83		0.20	
156-60-5	trans-1,2-Dichloroethene	4.98		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.71		0.20	
79-01-6	Trichloroethene	4.98		0.20	
75-69-4	Trichlorofluoromethane	4.96		0.50	
75-01-4	Vinyl chloride	5.12		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	97		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318341/5

Matrix: Water Lab File ID: 12051919.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 19:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.17		0.30	
71-55-6	1,1,1-Trichloroethane	5.05		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.98		0.20	
79-00-5	1,1,2-Trichloroethane	5.01		0.20	
75-34-3	1,1-Dichloroethane	5.10		0.20	
75-35-4	1,1-Dichloroethene	5.09		0.20	
563-58-6	1,1-Dichloropropene	5.06		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.18		0.50	
96-18-4	1,2,3-Trichloropropane	5.13		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.97		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.13		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.83		2.0	
95-50-1	1,2-Dichlorobenzene	4.98		0.30	
107-06-2	1,2-Dichloroethane	4.75		0.20	
78-87-5	1,2-Dichloropropane	4.90		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.12		0.50	
541-73-1	1,3-Dichlorobenzene	4.96		0.30	
142-28-9	1,3-Dichloropropane	5.11		0.20	
106-46-7	1,4-Dichlorobenzene	4.70		0.30	
594-20-7	2,2-Dichloropropane	4.71		0.50	
95-49-8	2-Chlorotoluene	5.09		0.50	
106-43-4	4-Chlorotoluene	5.19		0.30	
99-87-6	4-Isopropyltoluene	4.96		0.30	
71-43-2	Benzene	5.04		0.20	
108-86-1	Bromobenzene	4.89		0.20	
75-25-2	Bromoform	4.57		0.50	
74-83-9	Bromomethane	5.18		0.50	
56-23-5	Carbon tetrachloride	5.02		0.20	
108-90-7	Chlorobenzene	4.80		0.20	
74-97-5	Chlorobromomethane	5.02		0.20	
124-48-1	Chlorodibromomethane	4.61		0.20	
75-00-3	Chloroethane	5.17		0.50	
67-66-3	Chloroform	5.07		0.20	
74-87-3	Chloromethane	4.42		0.50	
156-59-2	cis-1,2-Dichloroethene	5.18		0.20	
10061-01-5	cis-1,3-Dichloropropene	5.06		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318341/5

Matrix: Water Lab File ID: 12051919.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/05/2019 19:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.96		0.20	
75-27-4	Dichlorobromomethane	4.48		0.20	
75-71-8	Dichlorodifluoromethane	4.66		0.40	
100-41-4	Ethylbenzene	5.18		0.20	
106-93-4	Ethylene Dibromide	5.05		0.10	
87-68-3	Hexachlorobutadiene	4.78		0.50	
98-82-8	Isopropylbenzene	5.04		1.0	
1634-04-4	Methyl tert-butyl ether	5.25		0.30	
75-09-2	Methylene Chloride	5.14		5.0	
179601-23-1	m-Xylene & p-Xylene	5.45		0.50	
91-20-3	Naphthalene	4.93		1.0	
104-51-8	n-Butylbenzene	5.02		0.50	
103-65-1	N-Propylbenzene	5.36		0.30	
95-47-6	o-Xylene	4.95		0.50	
135-98-8	sec-Butylbenzene	5.01		1.0	
100-42-5	Styrene	4.74		0.50	
98-06-6	tert-Butylbenzene	4.51		0.50	
127-18-4	Tetrachloroethene	5.02		0.50	
108-88-3	Toluene	4.67		0.20	
156-60-5	trans-1,2-Dichloroethene	4.96		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.63		0.20	
79-01-6	Trichloroethene	4.89		0.20	
75-69-4	Trichlorofluoromethane	4.91		0.50	
75-01-4	Vinyl chloride	4.94		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	94		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS Lab Sample ID: 580-91195-1 MS

Matrix: Water Lab File ID: 12051938.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.23		0.30	
71-55-6	1,1,1-Trichloroethane	5.31		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.87		0.20	
79-00-5	1,1,2-Trichloroethane	5.20		0.20	
75-34-3	1,1-Dichloroethane	5.26		0.20	
75-35-4	1,1-Dichloroethene	5.25		0.20	
563-58-6	1,1-Dichloropropene	5.51		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.61		0.50	
96-18-4	1,2,3-Trichloropropane	4.81		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.34		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.10		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.30		2.0	
95-50-1	1,2-Dichlorobenzene	4.87		0.30	
107-06-2	1,2-Dichloroethane	4.98		0.20	
78-87-5	1,2-Dichloropropane	5.28		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.14		0.50	
541-73-1	1,3-Dichlorobenzene	4.95		0.30	
142-28-9	1,3-Dichloropropane	5.30		0.20	
106-46-7	1,4-Dichlorobenzene	4.75		0.30	
594-20-7	2,2-Dichloropropane	3.84		0.50	
95-49-8	2-Chlorotoluene	5.02		0.50	
106-43-4	4-Chlorotoluene	5.23		0.30	
99-87-6	4-Isopropyltoluene	5.01		0.30	
71-43-2	Benzene	5.40		0.20	
108-86-1	Bromobenzene	4.84		0.20	
75-25-2	Bromoform	4.56		0.50	
74-83-9	Bromomethane	5.81		0.50	
56-23-5	Carbon tetrachloride	5.52		0.20	
108-90-7	Chlorobenzene	5.05		0.20	
74-97-5	Chlorobromomethane	5.20		0.20	
124-48-1	Chlorodibromomethane	4.65		0.20	
75-00-3	Chloroethane	6.03		0.50	
67-66-3	Chloroform	5.34		0.20	
74-87-3	Chloromethane	5.23		0.50	
156-59-2	cis-1,2-Dichloroethene	5.31		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.58		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS Lab Sample ID: 580-91195-1 MS

Matrix: Water Lab File ID: 12051938.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	5.15		0.20	
75-27-4	Dichlorobromomethane	4.75		0.20	
75-71-8	Dichlorodifluoromethane	4.99		0.40	
100-41-4	Ethylbenzene	5.51		0.20	
106-93-4	Ethylene Dibromide	5.01		0.10	
87-68-3	Hexachlorobutadiene	4.55		0.50	
98-82-8	Isopropylbenzene	5.22		1.0	
1634-04-4	Methyl tert-butyl ether	4.92		0.30	
75-09-2	Methylene Chloride	5.17		5.0	
179601-23-1	m-Xylene & p-Xylene	5.70		0.50	
91-20-3	Naphthalene	4.28		1.0	
104-51-8	n-Butylbenzene	4.92		0.50	
103-65-1	N-Propylbenzene	5.52		0.30	
95-47-6	o-Xylene	5.07		0.50	
135-98-8	sec-Butylbenzene	5.10		1.0	
100-42-5	Styrene	5.00		0.50	
98-06-6	tert-Butylbenzene	4.56		0.50	
127-18-4	Tetrachloroethene	5.26		0.50	
108-88-3	Toluene	4.91		0.20	
156-60-5	trans-1,2-Dichloroethene	5.25		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.36		0.20	
79-01-6	Trichloroethene	5.13		0.20	
75-69-4	Trichlorofluoromethane	5.44		0.50	
75-01-4	Vinyl chloride	5.83		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
98-08-8	Trifluorotoluene (Surr)	88		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD Lab Sample ID: 580-91195-1 MSD

Matrix: Water Lab File ID: 12051939.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.31		0.30	
71-55-6	1,1,1-Trichloroethane	5.42		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.94		0.20	
79-00-5	1,1,2-Trichloroethane	5.11		0.20	
75-34-3	1,1-Dichloroethane	5.35		0.20	
75-35-4	1,1-Dichloroethene	5.49		0.20	
563-58-6	1,1-Dichloropropene	5.54		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.02		0.50	
96-18-4	1,2,3-Trichloropropane	4.94		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.69		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.20		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.60		2.0	
95-50-1	1,2-Dichlorobenzene	5.00		0.30	
107-06-2	1,2-Dichloroethane	4.94		0.20	
78-87-5	1,2-Dichloropropane	5.13		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.21		0.50	
541-73-1	1,3-Dichlorobenzene	4.91		0.30	
142-28-9	1,3-Dichloropropane	5.27		0.20	
106-46-7	1,4-Dichlorobenzene	4.71		0.30	
594-20-7	2,2-Dichloropropane	4.05		0.50	
95-49-8	2-Chlorotoluene	5.09		0.50	
106-43-4	4-Chlorotoluene	5.15		0.30	
99-87-6	4-Isopropyltoluene	5.01		0.30	
71-43-2	Benzene	5.37		0.20	
108-86-1	Bromobenzene	4.85		0.20	
75-25-2	Bromoform	4.54		0.50	
74-83-9	Bromomethane	5.86		0.50	
56-23-5	Carbon tetrachloride	5.49		0.20	
108-90-7	Chlorobenzene	4.98		0.20	
74-97-5	Chlorobromomethane	5.23		0.20	
124-48-1	Chlorodibromomethane	4.61		0.20	
75-00-3	Chloroethane	5.84		0.50	
67-66-3	Chloroform	5.35		0.20	
74-87-3	Chloromethane	5.13		0.50	
156-59-2	cis-1,2-Dichloroethene	5.37		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.67		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD Lab Sample ID: 580-91195-1 MSD

Matrix: Water Lab File ID: 12051939.D

Analysis Method: 8260C Date Collected: 12/03/2019 11:00

Sample wt/vol: 10(mL) Date Analyzed: 12/06/2019 03:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318341 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	5.07		0.20	
75-27-4	Dichlorobromomethane	4.61		0.20	
75-71-8	Dichlorodifluoromethane	5.37		0.40	
100-41-4	Ethylbenzene	5.44		0.20	
106-93-4	Ethylene Dibromide	5.05		0.10	
87-68-3	Hexachlorobutadiene	4.65		0.50	
98-82-8	Isopropylbenzene	5.23		1.0	
1634-04-4	Methyl tert-butyl ether	5.17		0.30	
75-09-2	Methylene Chloride	5.32		5.0	
179601-23-1	m-Xylene & p-Xylene	5.67		0.50	
91-20-3	Naphthalene	4.70		1.0	
104-51-8	n-Butylbenzene	4.95		0.50	
103-65-1	N-Propylbenzene	5.51		0.30	
95-47-6	o-Xylene	5.06		0.50	
135-98-8	sec-Butylbenzene	5.15		1.0	
100-42-5	Styrene	4.87		0.50	
98-06-6	tert-Butylbenzene	4.57		0.50	
127-18-4	Tetrachloroethene	5.28		0.50	
108-88-3	Toluene	4.88		0.20	
156-60-5	trans-1,2-Dichloroethene	5.32		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.38		0.20	
79-01-6	Trichloroethene	5.12		0.20	
75-69-4	Trichlorofluoromethane	5.56		0.50	
75-01-4	Vinyl chloride	5.90		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120
98-08-8	Trifluorotoluene (Surr)	91		80-120

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Start Date: 12/04/2019 15:51

Analysis Batch Number: 318234 End Date: 12/04/2019 21:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-318234/2		12/04/2019 15:51	1	12041902b.D	DB-VRX 0.25(mm)
STD 580-318234/3 IC		12/04/2019 16:17	1	12041903b.D	DB-VRX 0.25(mm)
STD 580-318234/4 IC		12/04/2019 16:43	1	12041904b.D	DB-VRX 0.25(mm)
STD 580-318234/5 IC		12/04/2019 17:10	1	12041905b.D	DB-VRX 0.25(mm)
STD 580-318234/6 IC		12/04/2019 17:36	1	12041906b.D	DB-VRX 0.25(mm)
STD 580-318234/7 IC		12/04/2019 18:03	1	12041907b.D	DB-VRX 0.25(mm)
STD 580-318234/8 IC		12/04/2019 18:30	1	12041908b.D	DB-VRX 0.25(mm)
STD 580-318234/9 IC		12/04/2019 18:56	1	12041909b.D	DB-VRX 0.25(mm)
ICIS 580-318234/10		12/04/2019 19:23	1	12041910b.D	DB-VRX 0.25(mm)
STD 580-318234/11 IC		12/04/2019 19:49	1	12041911b.D	DB-VRX 0.25(mm)
STD 580-318234/12 IC		12/04/2019 20:16	1	12041912b.D	DB-VRX 0.25(mm)
STD 580-318234/15 IC		12/04/2019 20:42	1	12041913b.D	DB-VRX 0.25(mm)
ICV 580-318234/14		12/04/2019 21:35	1	12041915b.D	DB-VRX 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC113 Start Date: 12/05/2019 17:47

Analysis Batch Number: 318341 End Date: 12/06/2019 03:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-318341/2		12/05/2019 17:47	1	12051916.D	DB-VRX 0.25(mm)
CCVIS 580-318341/3		12/05/2019 18:14	1	12051917.D	DB-VRX 0.25(mm)
LCS 580-318341/4		12/05/2019 18:40	1	12051918.D	DB-VRX 0.25(mm)
LCSD 580-318341/5		12/05/2019 19:07	1	12051919.D	DB-VRX 0.25(mm)
CCVL 580-318341/6		12/05/2019 19:34	1		DB-VRX 0.25(mm)
MB 580-318341/7		12/05/2019 20:00	1	12051921.D	DB-VRX 0.25(mm)
580-91195-4		12/05/2019 20:27	1	12051922.D	DB-VRX 0.25(mm)
ZZZZZ		12/05/2019 21:19	1		DB-VRX 0.25(mm)
580-91195-2		12/05/2019 21:46	1	12051925.D	DB-VRX 0.25(mm)
580-91195-3		12/05/2019 22:13	1	12051926.D	DB-VRX 0.25(mm)
ZZZZZ		12/05/2019 22:39	1		DB-VRX 0.25(mm)
ZZZZZ		12/05/2019 23:06	1		DB-VRX 0.25(mm)
ZZZZZ		12/05/2019 23:32	1		DB-VRX 0.25(mm)
580-91195-1		12/06/2019 03:04	1	12051937.D	DB-VRX 0.25(mm)
580-91195-1 MS		12/06/2019 03:30	1	12051938.D	DB-VRX 0.25(mm)
580-91195-1 MSD		12/06/2019 03:57	1	12051939.D	DB-VRX 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318234 Batch Start Date: 12/04/19 15:51 Batch Analyst: Overman, Derek S

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS/TFT 00011	VOAMasterMix 00046	VOAMasterSEC 00039	
BFB 580-318234/2		8260C		10 mL	10 mL	2 uL			
STD 580-318234/3 IC		8260C		10 mL	10 mL	2 uL	0.02 uL		
STD 580-318234/4 IC		8260C		10 mL	10 mL	2 uL	0.05 uL		
STD 580-318234/5 IC		8260C		10 mL	10 mL	2 uL	0.1 uL		
STD 580-318234/6 IC		8260C		10 mL	10 mL	2 uL	0.2 uL		
STD 580-318234/7 IC		8260C		10 mL	10 mL	2 uL	0.5 uL		
STD 580-318234/8 IC		8260C		10 mL	10 mL	2 uL	1 uL		
STD 580-318234/9 IC		8260C		10 mL	10 mL	2 uL	5 uL		
ICIS 580-318234/10		8260C		10 mL	10 mL	2 uL	10 uL		
STD 580-318234/11 IC		8260C		10 mL	10 mL	2 uL	20 uL		
STD 580-318234/12 IC		8260C		10 mL	10 mL	2 uL	50 uL		
ICV 580-318234/14		8260C		10 mL	10 mL	2 uL		10 uL	
STD 580-318234/15 IC		8260C		10 mL	10 mL	2 uL	100 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318341 Batch Start Date: 12/05/19 17:47 Batch Analyst: Vaughan, Dmiitra C

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00011	VOAMasterMix 00046	
BFB 580-318341/2		8260C		10 mL	10 mL		2 uL		
CCVIS 580-318341/3		8260C		10 mL	10 mL		2 uL	10 uL	
LCS 580-318341/4		8260C		10 mL	10 mL		2 uL	5 uL	
LCSD 580-318341/5		8260C		10 mL	10 mL		2 uL	5 uL	
MB 580-318341/7		8260C		10 mL	10 mL		2 uL		
580-91195-B-4	TB120319	8260C	T	10 mL	10 mL	<2.0 SU	2 uL		
580-91195-G-2	04Q19LCMW04SW	8260C	T	10 mL	10 mL	<2.0 SU	2 uL		
580-91195-G-3	04Q19LCMW140W	8260C	T	10 mL	10 mL	<2.0 SU	2 uL		
580-91195-H-1	04Q19LCMW04DW	8260C	T	10 mL	10 mL	<2.0 SU	2 uL		
580-91195-E-1 MS	04Q19LCMW04DW	8260C	T	10 mL	10 mL	<2.0 SU	2 uL	4.3 uL	
580-91195-E-1 MSD	04Q19LCMW04DW	8260C	T	10 mL	10 mL	<2.0 SU	2 uL	4.3 uL	

Batch Notes	
Vial Lot Number	0217701E

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ZB-SV ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
04Q19LCMW04DW	580-91195-1	74	81	83	84	70	113
04Q19LCMW04DW	580-91195-1	73	75	83	89	67	99
04Q19LCMW04SW	580-91195-2	75	80	89	95	72	116
04Q19LCMW04SW	580-91195-2	82	78	88	92	70	104
04Q19LCMW140W	580-91195-3	75	80	85	97	62	123
04Q19LCMW140W	580-91195-3	84	84	85	97	76	109
	MB 580-318500/1-A	81	88	82	83	75	112
	MB 580-319850/1-A	82	87	67	94	63	94
	LCS 580-318500/2-A	62	78	80	68	72	86
	LCS 580-319850/2-A	89	90	94	92	82	91
	LCSD 580-318500/3-A	73	83	86	71	83	94
	LCSD 580-319850/3-A	87	95	92	89	91	100
04Q19LCMW04DW MS	580-91195-1 MS	75	88	88	87	83	100
04Q19LCMW04DW MSD	580-91195-1 MSD	75	84	82	80	93	104

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	36-120
PHL = Phenol-d5 (Surr)	38-120
NBZ = Nitrobenzene-d5 (Surr)	46-129
FBP = 2-Fluorobiphenyl	50-120
TBP = 2,4,6-Tribromophenol (Surr)	48-125
TPHL = Terphenyl-d14 (Surr)	61-126

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A007.D

Lab ID: LCS 580-318500/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	1.00	0.369	37	46-120	*
1,2-Dichlorobenzene	1.00	0.383	38	44-120	*
1,3-Dichlorobenzene	1.00	0.283	28	36-120	*
1,4-Dichlorobenzene	1.00	0.314	31	40-120	*
1-Methylnaphthalene	1.00	0.668	67	59-120	
2,4,5-Trichlorophenol	1.00	0.946	95	56-122	
2,4,6-Trichlorophenol	1.00	0.636	64	50-126	
2,4-Dichlorophenol	1.00	0.699 J	70	54-120	
2,4-Dimethylphenol	1.00	ND	23	20-120	
2,4-Dinitrophenol	2.00	ND	0	20-150	*
2,4-Dinitrotoluene	1.00	0.770	77	44-142	
2,6-Dinitrotoluene	1.00	0.814	81	54-137	
2-Chloronaphthalene	1.00	0.645	64	45-120	
2-Chlorophenol	1.00	0.811	81	54-120	
2-Methylnaphthalene	1.00	0.622	62	53-120	
2-Methylphenol	1.00	0.662	66	43-120	
2-Nitroaniline	1.00	0.667	67	50-137	
2-Nitrophenol	1.00	0.801	80	41-127	
3 & 4 Methylphenol	1.00	0.632	63	43-120	
3,3'-Dichlorobenzidine	2.00	ND	39	20-150	
3-Nitroaniline	1.00	0.661 J	66	34-120	
4,6-Dinitro-2-methylphenol	2.00	ND	34	20-150	
4-Bromophenyl phenyl ether	1.00	0.651	65	62-120	
4-Chloro-3-methylphenol	1.00	0.593	59	47-126	
4-Chloroaniline	1.00	ND	15	20-120	*
4-Chlorophenyl phenyl ether	1.00	0.690	69	53-125	
4-Nitroaniline	1.00	0.734 J	73	51-120	
4-Nitrophenol	2.00	1.84 J	92	33-150	
Acenaphthene	1.00	0.711	71	56-120	
Acenaphthylene	1.00	0.771	77	50-120	
Anthracene	1.00	0.615 J	62	44-120	
Benzo[a]anthracene	1.00	0.827	83	65-124	
Benzo[a]pyrene	1.00	0.494 J	49	41-120	
Benzo[b]fluoranthene	1.00	0.744	74	62-131	
Benzo[g,h,i]perylene	1.00	0.799	80	65-125	
Benzo[k]fluoranthene	1.00	0.716	72	57-128	
Benzoic acid	2.00	0.751 J	38	20-120	
Benzyl alcohol	1.00	0.565 J	56	20-150	
Bis(2-chloroethoxy)methane	1.00	0.819	82	53-120	
Bis(2-chloroethyl)ether	1.00	0.829	83	47-120	
Bis(2-ethylhexyl) phthalate	1.00	ND	119	20-150	
bis(chloroisopropyl) ether	1.00	0.793	79	32-142	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A007.D

Lab ID: LCS 580-318500/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Butyl benzyl phthalate	1.00	1.15 J	115	55-150	
Carbazole	1.00	1.48	148	67-135	*
Chrysene	1.00	0.914	91	57-126	
Dibenz(a,h)anthracene	1.00	0.796	80	62-131	
Dibenzofuran	1.00	0.754	75	60-120	
Diethyl phthalate	1.00	0.889 J	89	55-135	
Dimethyl phthalate	1.00	0.852	85	64-128	
Di-n-butyl phthalate	1.00	0.979 J	98	57-136	
Di-n-octyl phthalate	1.00	0.812	81	51-150	
Fluoranthene	1.00	0.842 J	84	64-128	
Fluorene	1.00	0.780 J	78	64-120	
Hexachlorobenzene	1.00	0.586	59	50-120	
Hexachlorobutadiene	1.00	0.0554 J	6	21-120	*
Hexachlorocyclopentadiene	1.00	0.0493 J	5	20-120	*
Hexachloroethane	1.00	0.128 J	13	30-120	*
Indeno[1,2,3-cd]pyrene	1.00	0.755	75	55-148	
Isophorone	1.00	0.876	88	56-125	
Naphthalene	1.00	0.727	73	63-120	
Nitrobenzene	1.00	0.832	83	45-139	
N-Nitrosodi-n-propylamine	1.00	0.766	77	46-120	
N-Nitrosodiphenylamine	1.00	0.423 J	42	33-120	
Pentachlorophenol	2.00	ND	13	20-135	*
Phenanthrene	1.00	0.719	72	63-120	
Phenol	1.00	0.727 J	73	41-120	
Pyrene	1.00	0.856 J	86	64-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0103C007.D

Lab ID: LCS 580-319850/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	2.00	1.69	85	46-120	
1,2-Dichlorobenzene	2.00	1.80	90	44-120	
1,3-Dichlorobenzene	2.00	1.76	88	36-120	
1,4-Dichlorobenzene	2.00	1.78	89	40-120	
Hexachlorobutadiene	2.00	1.63	82	21-120	
Hexachloroethane	2.00	1.74	87	30-120	
Pentachlorophenol	4.00	ND	30	20-135	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A008.D

Lab ID: LCSD 580-318500/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2,4-Trichlorobenzene	1.00	0.458	46	21	35	46-120	
1,2-Dichlorobenzene	1.00	0.421	42	9	35	44-120	*
1,3-Dichlorobenzene	1.00	0.324	32	13	35	36-120	*
1,4-Dichlorobenzene	1.00	0.363	36	15	35	40-120	*
1-Methylnaphthalene	1.00	0.743	74	11	25	59-120	
2,4,5-Trichlorophenol	1.00	0.831	83	13	35	56-122	
2,4,6-Trichlorophenol	1.00	0.675	68	6	20	50-126	
2,4-Dichlorophenol	1.00	0.791 J	79	12	35	54-120	
2,4-Dimethylphenol	1.00	0.505 J	51	76	35	20-120	*
2,4-Dinitrophenol	2.00	ND	20	200	35	20-150	*
2,4-Dinitrotoluene	1.00	0.810	81	5	36	44-142	
2,6-Dinitrotoluene	1.00	0.831	83	2	33	54-137	
2-Chloronaphthalene	1.00	0.661	66	3	35	45-120	
2-Chlorophenol	1.00	0.830	83	2	35	54-120	
2-Methylnaphthalene	1.00	0.688	69	10	29	53-120	
2-Methylphenol	1.00	0.722	72	9	35	43-120	
2-Nitroaniline	1.00	0.762	76	13	35	50-137	
2-Nitrophenol	1.00	0.791	79	1	35	41-127	
3 & 4 Methylphenol	1.00	0.699	70	10	35	43-120	
3,3'-Dichlorobenzidine	2.00	ND	30	26	35	20-150	
3-Nitroaniline	1.00	0.608 J	61	8	35	34-120	
4,6-Dinitro-2-methylphenol	2.00	ND	42	20	35	20-150	
4-Bromophenyl phenyl ether	1.00	0.735	74	12	20	62-120	
4-Chloro-3-methylphenol	1.00	0.709	71	18	35	47-126	
4-Chloroaniline	1.00	ND	5	103	35	20-120	*
4-Chlorophenyl phenyl ether	1.00	0.698	70	1	27	53-125	
4-Nitroaniline	1.00	1.09	109	39	35	51-120	*
4-Nitrophenol	2.00	1.63 J	81	12	35	33-150	
Acenaphthene	1.00	0.723	72	2	35	56-120	
Acenaphthylene	1.00	0.724	72	6	35	50-120	
Anthracene	1.00	0.678 J	68	10	26	44-120	
Benzo[a]anthracene	1.00	0.843	84	2	27	65-124	
Benzo[a]pyrene	1.00	0.635	63	25	29	41-120	
Benzo[b]fluoranthene	1.00	0.830	83	11	27	62-131	
Benzo[g,h,i]perylene	1.00	0.856	86	7	25	65-125	
Benzo[k]fluoranthene	1.00	0.744	74	4	26	57-128	
Benzoic acid	2.00	0.872 J	44	15	35	20-120	
Benzyl alcohol	1.00	0.671 J	67	17	35	20-150	
Bis(2-chloroethoxy)methane	1.00	0.802	80	2	27	53-120	
Bis(2-chloroethyl)ether	1.00	0.817	82	1	35	47-120	
Bis(2-ethylhexyl) phthalate	1.00	ND	102	16	35	20-150	
bis(chloroisopropyl) ether	1.00	0.758	76	4	33	32-142	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A008.D

Lab ID: LCSD 580-318500/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Butyl benzyl phthalate	1.00	1.08 J	108	6	35	55-150	
Carbazole	1.00	1.58	158	7	20	67-135	*
Chrysene	1.00	0.856	86	7	26	57-126	
Dibenz(a,h)anthracene	1.00	0.902	90	12	28	62-131	
Dibenzofuran	1.00	0.758	76	0	35	60-120	
Diethyl phthalate	1.00	0.892 J	89	0	35	55-135	
Dimethyl phthalate	1.00	0.888	89	4	24	64-128	
Di-n-butyl phthalate	1.00	1.08 J	108	10	20	57-136	
Di-n-octyl phthalate	1.00	0.886	89	9	26	51-150	
Fluoranthene	1.00	0.910 J	91	8	20	64-128	
Fluorene	1.00	0.793 J	79	2	28	64-120	
Hexachlorobenzene	1.00	0.783	78	29	26	50-120	*
Hexachlorobutadiene	1.00	0.0996 J	10	57	35	21-120	*
Hexachlorocyclopentadiene	1.00	ND	3	55	35	20-120	*
Hexachloroethane	1.00	0.156 J	16	20	35	30-120	*
Indeno[1,2,3-cd]pyrene	1.00	0.771	77	2	20	55-148	
Isophorone	1.00	0.847	85	3	20	56-125	
Naphthalene	1.00	0.769	77	6	34	63-120	
Nitrobenzene	1.00	0.817	82	2	33	45-139	
N-Nitrosodi-n-propylamine	1.00	0.766	77	0	28	46-120	
N-Nitrosodiphenylamine	1.00	0.325 J	32	26	35	33-120	*
Pentachlorophenol	2.00	ND	38	97	35	20-135	*
Phenanthrene	1.00	0.791	79	10	20	63-120	
Phenol	1.00	0.807 J	81	10	35	41-120	
Pyrene	1.00	0.921 J	92	7	20	64-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0103C008.D

Lab ID: LCSD 580-319850/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2,4-Trichlorobenzene	2.00	1.81	90	7	35	46-120	
1,2-Dichlorobenzene	2.00	1.84	92	2	35	44-120	
1,3-Dichlorobenzene	2.00	1.82	91	4	35	36-120	
1,4-Dichlorobenzene	2.00	1.84	92	3	35	40-120	
Hexachlorobutadiene	2.00	1.85	92	12	35	21-120	
Hexachloroethane	2.00	1.87	94	7	35	30-120	
Pentachlorophenol	4.00	ND	44	37	35	20-135	*

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A018.D

Lab ID: 580-91195-1 MS Client ID: 04Q19LCMW04DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	1.93	ND	1.44	75	46-120	
1,2-Dichlorobenzene	1.93	ND	1.50	78	44-120	
1,3-Dichlorobenzene	1.93	ND	1.48	77	36-120	
1,4-Dichlorobenzene	1.93	ND	1.46	76	40-120	
1-Methylnaphthalene	1.93	ND	1.61	84	59-120	
2,4,5-Trichlorophenol	1.93	ND	1.43	74	56-122	
2,4,6-Trichlorophenol	1.93	ND	1.42	74	50-126	
2,4-Dichlorophenol	1.93	ND	ND	79	54-120	
2,4-Dimethylphenol	1.93	ND	ND	43	20-120	
2,4-Dinitrophenol	3.86	ND	ND	NC	20-150	
2,4-Dinitrotoluene	1.93	ND	1.67	87	44-142	
2,6-Dinitrotoluene	1.93	ND	1.67	87	54-137	
2-Chloronaphthalene	1.93	ND	1.54	80	45-120	
2-Chlorophenol	1.93	ND	1.66	86	54-120	
2-Methylnaphthalene	1.93	ND	1.59	82	53-120	
2-Methylphenol	1.93	ND	1.47	76	43-120	
2-Nitroaniline	1.93	ND	1.62	84	50-137	
2-Nitrophenol	1.93	ND	1.56	81	41-127	
3 & 4 Methylphenol	1.93	ND	1.44	75	43-120	
3,3'-Dichlorobenzidine	3.86	ND	ND	89	20-150	
3-Nitroaniline	1.93	ND	ND	70	34-120	
4,6-Dinitro-2-methylphenol	3.86	ND	ND	0	20-150	F1
4-Bromophenyl phenyl ether	1.93	ND	1.63	84	62-120	
4-Chloro-3-methylphenol	1.93	ND	1.50	78	47-126	
4-Chloroaniline	1.93	ND	ND	NC	20-120	
4-Chlorophenyl phenyl ether	1.93	ND	1.72	89	53-125	
4-Nitroaniline	1.93	ND	ND	90	51-120	
4-Nitrophenol	3.86	ND	ND	91	33-150	
Acenaphthene	1.93	ND	1.57	81	56-120	
Acenaphthylene	1.93	ND	1.55	80	50-120	
Anthracene	1.93	ND	ND	81	44-120	
Benzo[a]anthracene	1.93	ND	1.60	83	65-124	
Benzo[a]pyrene	1.93	ND	1.46	76	41-120	
Benzo[b]fluoranthene	1.93	ND	1.75	91	62-131	
Benzo[g,h,i]perylene	1.93	ND	1.84	95	65-125	
Benzo[k]fluoranthene	1.93	ND	1.70	88	57-128	
Benzoic acid	3.86	ND	ND	47	20-120	
Benzyl alcohol	1.93	ND	ND	78	20-150	
Bis(2-chloroethoxy)methane	1.93	ND	1.62	84	53-120	
Bis(2-chloroethyl)ether	1.93	ND	1.65	86	47-120	
Bis(2-ethylhexyl) phthalate	1.93	ND	ND	NC	20-150	
bis(chloroisopropyl) ether	1.93	ND	1.53	79	32-142	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A018.D

Lab ID: 580-91195-1 MS Client ID: 04Q19LCMW04DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Butyl benzyl phthalate	1.93	ND	ND	105	55-150	
Carbazole	1.93	ND	3.12	162	67-135	F1
Chrysene	1.93	ND	1.64	85	57-126	
Dibenz(a,h)anthracene	1.93	ND	1.81	94	62-131	
Dibenzofuran	1.93	ND	1.70	88	60-120	
Diethyl phthalate	1.93	ND	ND	96	55-135	
Dimethyl phthalate	1.93	ND	1.76	91	64-128	
Di-n-butyl phthalate	1.93	ND	ND	104	57-136	
Di-n-octyl phthalate	1.93	ND	1.85	96	51-150	
Fluoranthene	1.93	ND	ND	92	64-128	
Fluorene	1.93	ND	ND	89	64-120	
Hexachlorobenzene	1.93	ND	1.54	80	50-120	
Hexachlorobutadiene	1.93	ND	1.45	75	21-120	
Hexachlorocyclopentadiene	1.93	ND	ND	39	20-120	
Hexachloroethane	1.93	ND	1.44	75	30-120	
Indeno[1,2,3-cd]pyrene	1.93	ND	1.73	90	55-148	
Isophorone	1.93	ND	1.71	89	56-125	
Naphthalene	1.93	ND	1.59	83	63-120	
Nitrobenzene	1.93	ND	1.64	85	45-139	
N-Nitrosodi-n-propylamine	1.93	ND	1.65	85	46-120	
N-Nitrosodiphenylamine	1.93	ND	ND	64	33-120	
Pentachlorophenol	3.86	ND	ND	0	20-135	F1
Phenanthrene	1.93	ND	1.62	84	63-120	
Phenol	1.93	ND	ND	81	41-120	
Pyrene	1.93	ND	ND	92	64-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A019.D

Lab ID: 580-91195-1 MSD Client ID: 04Q19LCMW04DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2,4-Trichlorobenzene	1.95	1.53	78	6	35	46-120	
1,2-Dichlorobenzene	1.95	1.54	79	3	35	44-120	
1,3-Dichlorobenzene	1.95	1.55	80	4	35	36-120	
1,4-Dichlorobenzene	1.95	1.52	78	4	35	40-120	
1-Methylnaphthalene	1.95	1.61	82	0	25	59-120	
2,4,5-Trichlorophenol	1.95	1.50	77	5	35	56-122	
2,4,6-Trichlorophenol	1.95	1.54	79	8	20	50-126	
2,4-Dichlorophenol	1.95	ND	78	0	35	54-120	
2,4-Dimethylphenol	1.95	ND	66	44	35	20-120	F2
2,4-Dinitrophenol	3.90	ND	NC	NC	35	20-150	
2,4-Dinitrotoluene	1.95	1.95	100	16	36	44-142	
2,6-Dinitrotoluene	1.95	1.89	97	13	33	54-137	
2-Chloronaphthalene	1.95	1.56	80	1	35	45-120	
2-Chlorophenol	1.95	1.78	91	7	35	54-120	
2-Methylnaphthalene	1.95	1.57	81	1	29	53-120	
2-Methylphenol	1.95	1.59	81	8	35	43-120	
2-Nitroaniline	1.95	1.79	92	10	35	50-137	
2-Nitrophenol	1.95	1.61	83	3	35	41-127	
3 & 4 Methylphenol	1.95	1.54	79	7	35	43-120	
3,3'-Dichlorobenzidine	3.90	ND	129	38	35	20-150	F2
3-Nitroaniline	1.95	ND	98	34	35	34-120	
4,6-Dinitro-2-methylphenol	3.90	ND	0	NC	35	20-150	F1
4-Bromophenyl phenyl ether	1.95	1.89	97	15	20	62-120	
4-Chloro-3-methylphenol	1.95	1.54	79	2	35	47-126	
4-Chloroaniline	1.95	ND	NC	NC	35	20-120	
4-Chlorophenyl phenyl ether	1.95	1.79	91	4	27	53-125	
4-Nitroaniline	1.95	2.20	112	23	35	51-120	
4-Nitrophenol	3.90	ND	70	25	35	33-150	
Acenaphthene	1.95	1.58	81	1	35	56-120	
Acenaphthylene	1.95	1.66	85	7	35	50-120	
Anthracene	1.95	ND	103	26	26	44-120	
Benzo[a]anthracene	1.95	1.97	101	21	27	65-124	
Benzo[a]pyrene	1.95	1.82	93	22	29	41-120	
Benzo[b]fluoranthene	1.95	2.05	105	16	27	62-131	
Benzo[g,h,i]perylene	1.95	2.10	107	13	25	65-125	
Benzo[k]fluoranthene	1.95	2.01	103	16	26	57-128	
Benzoic acid	3.90	ND	45	3	35	20-120	
Benzyl alcohol	1.95	ND	73	6	35	20-150	
Bis(2-chloroethoxy)methane	1.95	1.60	82	1	27	53-120	
Bis(2-chloroethyl)ether	1.95	1.66	85	0	35	47-120	
Bis(2-ethylhexyl) phthalate	1.95	ND	NC	NC	35	20-150	
bis(chloroisopropyl) ether	1.95	1.58	81	4	33	32-142	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 1213A019.D

Lab ID: 580-91195-1 MSD Client ID: 04Q19LCMW04DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Butyl benzyl phthalate	1.95	ND	128	21	35	55-150	
Carbazole	1.95	3.84	197	21	20	67-135	F1 F2
Chrysene	1.95	1.98	102	19	26	57-126	
Dibenz(a,h)anthracene	1.95	1.91	98	5	28	62-131	
Dibenzofuran	1.95	1.75	90	3	35	60-120	
Diethyl phthalate	1.95	ND	105	11	35	55-135	
Dimethyl phthalate	1.95	2.02	104	14	24	64-128	
Di-n-butyl phthalate	1.95	ND	123	18	20	57-136	
Di-n-octyl phthalate	1.95	2.11	108	13	26	51-150	
Fluoranthene	1.95	ND	109	18	20	64-128	
Fluorene	1.95	ND	94	7	28	64-120	
Hexachlorobenzene	1.95	1.76	90	13	26	50-120	
Hexachlorobutadiene	1.95	1.47	75	1	35	21-120	
Hexachlorocyclopentadiene	1.95	ND	33	14	35	20-120	
Hexachloroethane	1.95	1.53	78	6	35	30-120	
Indeno[1,2,3-cd]pyrene	1.95	2.00	102	14	20	55-148	
Isophorone	1.95	1.76	90	3	20	56-125	
Naphthalene	1.95	1.64	84	3	34	63-120	
Nitrobenzene	1.95	1.70	87	4	33	45-139	
N-Nitrosodi-n-propylamine	1.95	1.59	82	3	28	46-120	
N-Nitrosodiphenylamine	1.95	ND	82	26	35	33-120	
Pentachlorophenol	3.90	ND	0	NC	35	20-135	F1
Phenanthrene	1.95	1.91	98	16	20	63-120	
Phenol	1.95	ND	87	9	35	41-120	
Pyrene	1.95	2.14	109	19	20	64-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 1213A006.D Lab Sample ID: MB 580-318500/1-A

Matrix: Water Date Extracted: 12/09/2019 14:43

Instrument ID: TAC051 Date Analyzed: 12/13/2019 11:08

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-318500/2-A	1213A007.D	12/13/2019 11:31
	LCSD 580-318500/3-A	1213A008.D	12/13/2019 11:54
04Q19LCMW04DW	580-91195-1	1213A017.D	12/13/2019 15:24
04Q19LCMW04DW MS	580-91195-1 MS	1213A018.D	12/13/2019 15:47
04Q19LCMW04DW MSD	580-91195-1 MSD	1213A019.D	12/13/2019 16:11
04Q19LCMW04SW	580-91195-2	1213A020.D	12/13/2019 16:34
04Q19LCMW140W	580-91195-3	1213A021.D	12/13/2019 16:58

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 0103C006.D Lab Sample ID: MB 580-319850/1-A

Matrix: Water Date Extracted: 12/30/2019 13:18

Instrument ID: TAC051 Date Analyzed: 01/03/2020 15:46

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-319850/2-A	0103C007.D	01/03/2020 16:09
	LCSD 580-319850/3-A	0103C008.D	01/03/2020 16:33
04Q19LCMW04DW	580-91195-1	0103C012.D	01/03/2020 18:07
04Q19LCMW04SW	580-91195-2	0103C013.D	01/03/2020 18:31
04Q19LCMW140W	580-91195-3	0103C014.D	01/03/2020 18:54

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: BFB Injection Date:

Instrument ID: BFB Injection Time:

Lab File ID: DFTPP Injection Date:

Instrument ID: DFTPP Injection Time:

Analysis Batch No.:

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 580-316923/15	1114B017.D	11/14/2019	20:18

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 1213A003.D DFTPP Injection Date: 12/13/2019

Instrument ID: TAC051 DFTPP Injection Time: 09:39

Analysis Batch No.: 318784

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0 % of mass 198	25.8	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	23.6	
70	Less than 2.0 % of mass 69	0.1	(0.5) 1
127	10.0 - 80.0 % of mass 198	56.3	
197	Less than 2.0 % of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 - 9.0 % of mass 198	7.0	
275	10.0 - 60.0 % of mass 198	25.2	
365	Greater than 1.0 % of mass 198	3.9	
441	Present but less than mass 443	16.5	
442	Greater than 50.0 % of mass 198	107.1	
443	15.0 - 24.0 % of mass 442	21.5	(20.1) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-318784/3	1213A004.D	12/13/2019	10:06
	CCVL 580-318784/4	1213A005.D	12/13/2019	10:29
	MB 580-318500/1-A	1213A006.D	12/13/2019	11:08
	LCS 580-318500/2-A	1213A007.D	12/13/2019	11:31
	LCSD 580-318500/3-A	1213A008.D	12/13/2019	11:54
04Q19LCMW04DW	580-91195-1	1213A017.D	12/13/2019	15:24
04Q19LCMW04DW MS	580-91195-1 MS	1213A018.D	12/13/2019	15:47
04Q19LCMW04DW MSD	580-91195-1 MSD	1213A019.D	12/13/2019	16:11
04Q19LCMW04SW	580-91195-2	1213A020.D	12/13/2019	16:34
04Q19LCMW140W	580-91195-3	1213A021.D	12/13/2019	16:58

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab File ID: 0103C003.D DFTPP Injection Date: 01/03/2020

Instrument ID: TAC051 DFTPP Injection Time: 14:35

Analysis Batch No.: 319972

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10.0 - 80.0 % of mass 198	26.1	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	24.3	
70	Less than 2.0 % of mass 69	0.1	(0.6) 1
127	10.0 - 80.0 % of mass 198	56.3	
197	Less than 2.0 % of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 - 9.0 % of mass 198	7.0	
275	10.0 - 60.0 % of mass 198	24.8	
365	Greater than 1.0 % of mass 198	4.0	
441	Present but less than mass 443	15.8	
442	Greater than 50.0 % of mass 198	103.9	
443	15.0 - 24.0 % of mass 442	20.3	(19.5) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-319972/3	0103C004.D	01/03/2020	14:59
	MB 580-319850/1-A	0103C006.D	01/03/2020	15:46
	LCS 580-319850/2-A	0103C007.D	01/03/2020	16:09
	LCSD 580-319850/3-A	0103C008.D	01/03/2020	16:33
04Q19LCMW04DW	580-91195-1	0103C012.D	01/03/2020	18:07
04Q19LCMW04SW	580-91195-2	0103C013.D	01/03/2020	18:31
04Q19LCMW140W	580-91195-3	0103C014.D	01/03/2020	18:54

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: CCVIS 580-318784/3 Date Analyzed: 12/13/2019 10:06

Instrument ID: TAC051 GC Column: ZB-SV ID: 0.25(mm)

Lab File ID (Standard): 1213A004.D Heated Purge: (Y/N) N

Calibration ID: 28464

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		44212	4.50	174636	5.51	83081	6.94
UPPER LIMIT		88424	5.00	349272	6.01	166162	7.44
LOWER LIMIT		22106	4.00	87318	5.01	41541	6.44
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 580-318784/4		44813	4.50	169770	5.52	64407	6.94
MB 580-318500/1-A		37862	4.50	148086	5.52	64837	6.94
LCS 580-318500/2-A		35783	4.50	145056	5.52	67522	6.94
LCSD 580-318500/3-A		43444	4.50	163006	5.52	83312	6.94
580-91195-1	04Q19LCMW04DW	44874	4.50	171629	5.52	72600	6.94
580-91195-1 MS	04Q19LCMW04DW MS	44131	4.50	177473	5.52	83119	6.94
580-91195-1 MSD	04Q19LCMW04DW MSD	44624	4.50	182263	5.52	84042	6.94
580-91195-2	04Q19LCMW04SW	47103	4.50	179014	5.51	71352	6.94
580-91195-3	04Q19LCMW140W	45705	4.50	175685	5.52	68143	6.94

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: CCVIS 580-318784/3 Date Analyzed: 12/13/2019 10:06

Instrument ID: TAC051 GC Column: ZB-SV ID: 0.25(mm)

Lab File ID (Standard): 1213A004.D Heated Purge: (Y/N) N

Calibration ID: 28464

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		148497	8.15	117245	10.34	108511	11.86
UPPER LIMIT		296994	8.65	234490	10.84	217022	12.36
LOWER LIMIT		74249	7.65	58623	9.84	54256	11.36
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 580-318784/4		117959	8.15	95728	10.34	92252	11.86
MB 580-318500/1-A		114380	8.15	87197	10.34	88428	11.86
LCS 580-318500/2-A		125284	8.15	95583	10.34	111328	11.86
LCSD 580-318500/3-A		142971	8.15	119456	10.34	123559	11.86
580-91195-1	04Q19LCMW04DW	128528	8.15	106646	10.34	101394	11.86
580-91195-1 MS	04Q19LCMW04DW MS	149773	8.15	122632	10.34	115559	11.86
580-91195-1 MSD	04Q19LCMW04DW MSD	148492	8.15	122889	10.34	117054	11.86
580-91195-2	04Q19LCMW04SW	131267	8.15	112163	10.34	106629	11.87
580-91195-3	04Q19LCMW140W	119175	8.15	102694	10.34	101773	11.87

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: CCVIS 580-319972/3 Date Analyzed: 01/03/2020 14:59

Instrument ID: TAC051 GC Column: ZB-SV ID: 0.25(mm)

Lab File ID (Standard): 0103C004.D Heated Purge: (Y/N) N

Calibration ID: 28464

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		37018	4.49	152789	5.50	73375	6.92
UPPER LIMIT		74036	4.99	305578	6.00	146750	7.42
LOWER LIMIT		18509	3.99	76395	5.00	36688	6.42
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 580-319850/1-A		37324	4.48	133327	5.50	69269	6.92
LCS 580-319850/2-A		36500	4.48	154805	5.50	73523	6.93
LCSD 580-319850/3-A		36311	4.48	144871	5.50	73994	6.93
580-91195-1	04Q19LCMW04DW	40604	4.48	132438	5.50	68595	6.92
580-91195-2	04Q19LCMW04SW	35556	4.48	135556	5.50	63656	6.92
580-91195-3	04Q19LCMW140W	36422	4.48	135910	5.50	64199	6.92

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Sample No.: CCVIS 580-319972/3 Date Analyzed: 01/03/2020 14:59

Instrument ID: TAC051 GC Column: ZB-SV ID: 0.25(mm)

Lab File ID (Standard): 0103C004.D Heated Purge: (Y/N) N

Calibration ID: 28464

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		119850	8.13	92924	10.32	87909	11.84
UPPER LIMIT		239700	8.63	185848	10.82	175818	12.34
LOWER LIMIT		59925	7.63	46462	9.82	43955	11.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 580-319850/1-A		120353	8.13	75227	10.32	75392	11.84
LCS 580-319850/2-A		138072	8.13	100014	10.32	90846	11.83
LCSD 580-319850/3-A		125832	8.13	97817	10.32	92941	11.83
580-91195-1	04Q19LCMW04DW	117107	8.14	78049	10.33	64637	11.84
580-91195-2	04Q19LCMW04SW	108776	8.14	72854	10.33	66538	11.84
580-91195-3	04Q19LCMW140W	109452	8.14	78788	10.33	70278	11.84

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 1213A017.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1043.5(mL) Date Analyzed: 12/13/2019 15:24

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.38	
95-50-1	1,2-Dichlorobenzene	ND	*	0.57	
541-73-1	1,3-Dichlorobenzene	ND	*	0.38	
106-46-7	1,4-Dichlorobenzene	ND	*	0.38	
90-12-0	1-Methylnaphthalene	ND		0.96	
95-95-4	2,4,5-Trichlorophenol	ND		0.38	
88-06-2	2,4,6-Trichlorophenol	ND		0.57	
120-83-2	2,4-Dichlorophenol	ND		3.8	
105-67-9	2,4-Dimethylphenol	ND	F2 *	3.8	
51-28-5	2,4-Dinitrophenol	ND	*	19	
121-14-2	2,4-Dinitrotoluene	ND		0.96	
606-20-2	2,6-Dinitrotoluene	ND		0.57	
91-58-7	2-Chloronaphthalene	ND		0.96	
95-57-8	2-Chlorophenol	ND		0.57	
91-57-6	2-Methylnaphthalene	ND		0.38	
95-48-7	2-Methylphenol	ND		0.57	
88-74-4	2-Nitroaniline	ND		0.57	
88-75-5	2-Nitrophenol	ND		0.96	
15831-10-4	3 & 4 Methylphenol	ND		0.77	
91-94-1	3,3'-Dichlorobenzidine	ND	F2	14	
99-09-2	3-Nitroaniline	ND		2.9	
534-52-1	4,6-Dinitro-2-methylphenol	ND	F1	9.6	
101-55-3	4-Bromophenyl phenyl ether	ND		0.57	
59-50-7	4-Chloro-3-methylphenol	ND		0.57	
106-47-8	4-Chloroaniline	ND	*	9.6	
7005-72-3	4-Chlorophenyl phenyl ether	ND		0.57	
100-01-6	4-Nitroaniline	ND	*	1.9	
100-02-7	4-Nitrophenol	ND		14	
83-32-9	Acenaphthene	ND		0.38	
208-96-8	Acenaphthylene	ND		0.96	
120-12-7	Anthracene	ND		14	
56-55-3	Benzo[a]anthracene	ND		0.96	
50-32-8	Benzo[a]pyrene	ND		0.96	
205-99-2	Benzo[b]fluoranthene	ND		0.96	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 1213A017.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1043.5(mL) Date Analyzed: 12/13/2019 15:24

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	ND		0.96	
207-08-9	Benzo[k]fluoranthene	ND		0.96	
65-85-0	Benzoic acid	ND		3.8	
100-51-6	Benzyl alcohol	ND		2.9	
111-91-1	Bis(2-chloroethoxy)methane	ND		0.57	
111-44-4	Bis(2-chloroethyl)ether	ND		0.57	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		14	
108-60-1	bis(chloroisopropyl) ether	ND		0.57	
85-68-7	Butyl benzyl phthalate	ND		9.6	
86-74-8	Carbazole	ND	* F2 F1	0.57	
218-01-9	Chrysene	ND		0.57	
53-70-3	Dibenz(a,h)anthracene	ND		0.57	
132-64-9	Dibenzofuran	ND		0.38	
84-66-2	Diethyl phthalate	ND		11	
131-11-3	Dimethyl phthalate	ND		0.57	
84-74-2	Di-n-butyl phthalate	ND		2.9	
117-84-0	Di-n-octyl phthalate	ND		0.96	
206-44-0	Fluoranthene	ND		2.9	
86-73-7	Fluorene	ND		1.9	
118-74-1	Hexachlorobenzene	ND	*	0.57	
87-68-3	Hexachlorobutadiene	ND	*	0.96	
77-47-4	Hexachlorocyclopentadiene	ND	*	2.9	
67-72-1	Hexachloroethane	ND	*	0.96	
193-39-5	Indeno[1,2,3-cd]pyrene	ND		0.96	
78-59-1	Isophorone	ND		0.38	
91-20-3	Naphthalene	ND		0.38	
98-95-3	Nitrobenzene	ND		0.57	
621-64-7	N-Nitrosodi-n-propylamine	ND		0.57	
86-30-6	N-Nitrosodiphenylamine	ND	*	2.9	
87-86-5	Pentachlorophenol	ND	F1 *	9.6	
85-01-8	Phenanthrene	ND		0.96	
108-95-2	Phenol	ND		3.8	
129-00-0	Pyrene	ND		1.9	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 1213A017.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1043.5(mL) Date Analyzed: 12/13/2019 15:24

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	70		48-125
321-60-8	2-Fluorobiphenyl	84		50-120
367-12-4	2-Fluorophenol (Surr)	74		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		46-129
4165-62-2	Phenol-d5 (Surr)	81		38-120
1718-51-0	Terphenyl-d14 (Surr)	113		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 0103C012.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1034.9(mL) Date Analyzed: 01/03/2020 18:07

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*ND*	*H*	*0.39*	
95-50-1	*1,2-Dichlorobenzene*	*ND*	*H*	*0.58*	
541-73-1	*1,3-Dichlorobenzene*	*ND*	*H*	*0.39*	
106-46-7	*1,4-Dichlorobenzene*	*ND*	*H*	*0.39*	
87-68-3	*Hexachlorobutadiene*	*ND*	*H*	*0.97*	
67-72-1	*Hexachloroethane*	*ND*	*H*	*0.97*	
86-30-6	*N-Nitrosodiphenylamine*	*ND*	*H **	*2.9*	
87-86-5	*Pentachlorophenol*	*ND*	*H **	*9.7*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	67		48-125
321-60-8	2-Fluorobiphenyl	89		50-120
367-12-4	2-Fluorophenol (Surr)	73		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		46-129
4165-62-2	Phenol-d5 (Surr)	75		38-120
1718-51-0	Terphenyl-d14 (Surr)	99		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW | Lab Sample ID: 580-91195-2

Matrix: Water | Lab File ID: 1213A020.D

Analysis Method: 8270D | Date Collected: 12/03/2019 12:20

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) | Date Analyzed: 12/13/2019 16:34

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.39	
95-50-1	1,2-Dichlorobenzene	ND	*	0.58	
541-73-1	1,3-Dichlorobenzene	ND	*	0.39	
106-46-7	1,4-Dichlorobenzene	ND	*	0.39	
90-12-0	1-Methylnaphthalene	ND		0.96	
95-95-4	2,4,5-Trichlorophenol	ND		0.39	
88-06-2	2,4,6-Trichlorophenol	ND		0.58	
120-83-2	2,4-Dichlorophenol	ND		3.9	
105-67-9	2,4-Dimethylphenol	ND	*	3.9	
51-28-5	2,4-Dinitrophenol	ND	*	19	
121-14-2	2,4-Dinitrotoluene	ND		0.96	
606-20-2	2,6-Dinitrotoluene	ND		0.58	
91-58-7	2-Chloronaphthalene	ND		0.96	
95-57-8	2-Chlorophenol	ND		0.58	
91-57-6	2-Methylnaphthalene	ND		0.39	
95-48-7	2-Methylphenol	ND		0.58	
88-74-4	2-Nitroaniline	ND		0.58	
88-75-5	2-Nitrophenol	ND		0.96	
15831-10-4	3 & 4 Methylphenol	ND		0.77	
91-94-1	3,3'-Dichlorobenzidine	ND		14	
99-09-2	3-Nitroaniline	ND		2.9	
534-52-1	4,6-Dinitro-2-methylphenol	ND		9.6	
101-55-3	4-Bromophenyl phenyl ether	ND		0.58	
59-50-7	4-Chloro-3-methylphenol	ND		0.58	
106-47-8	4-Chloroaniline	ND	*	9.6	
7005-72-3	4-Chlorophenyl phenyl ether	ND		0.58	
100-01-6	4-Nitroaniline	ND	*	1.9	
100-02-7	4-Nitrophenol	ND		14	
83-32-9	Acenaphthene	ND		0.39	
208-96-8	Acenaphthylene	ND		0.96	
120-12-7	Anthracene	ND		14	
56-55-3	Benzo[a]anthracene	ND		0.96	
50-32-8	Benzo[a]pyrene	ND		0.96	
205-99-2	Benzo[b]fluoranthene	ND		0.96	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW | Lab Sample ID: 580-91195-2

Matrix: Water | Lab File ID: 1213A020.D

Analysis Method: 8270D | Date Collected: 12/03/2019 12:20

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) | Date Analyzed: 12/13/2019 16:34

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	ND		0.96	
207-08-9	Benzo[k]fluoranthene	ND		0.96	
65-85-0	Benzoic acid	ND		3.9	
100-51-6	Benzyl alcohol	ND		2.9	
111-91-1	Bis(2-chloroethoxy)methane	ND		0.58	
111-44-4	Bis(2-chloroethyl)ether	ND		0.58	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		14	
108-60-1	bis(chloroisopropyl) ether	ND		0.58	
85-68-7	Butyl benzyl phthalate	ND		9.6	
86-74-8	Carbazole	ND	*	0.58	
218-01-9	Chrysene	ND		0.58	
53-70-3	Dibenz(a,h)anthracene	ND		0.58	
132-64-9	Dibenzofuran	ND		0.39	
84-66-2	Diethyl phthalate	ND		12	
131-11-3	Dimethyl phthalate	ND		0.58	
84-74-2	Di-n-butyl phthalate	ND		2.9	
117-84-0	Di-n-octyl phthalate	ND		0.96	
206-44-0	Fluoranthene	ND		2.9	
86-73-7	Fluorene	ND		1.9	
118-74-1	Hexachlorobenzene	ND	*	0.58	
87-68-3	Hexachlorobutadiene	ND	*	0.96	
77-47-4	Hexachlorocyclopentadiene	ND	*	2.9	
67-72-1	Hexachloroethane	ND	*	0.96	
193-39-5	Indeno[1,2,3-cd]pyrene	ND		0.96	
78-59-1	Isophorone	ND		0.39	
91-20-3	Naphthalene	ND		0.39	
98-95-3	Nitrobenzene	ND		0.58	
621-64-7	N-Nitrosodi-n-propylamine	ND		0.58	
86-30-6	N-Nitrosodiphenylamine	ND	*	2.9	
87-86-5	Pentachlorophenol	ND	*	9.6	
85-01-8	Phenanthrene	ND		0.96	
108-95-2	Phenol	ND		3.9	
129-00-0	Pyrene	ND		1.9	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: 1213A020.D

Analysis Method: 8270D Date Collected: 12/03/2019 12:20

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) Date Analyzed: 12/13/2019 16:34

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	72		48-125
321-60-8	2-Fluorobiphenyl	95		50-120
367-12-4	2-Fluorophenol (Surr)	75		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	89		46-129
4165-62-2	Phenol-d5 (Surr)	80		38-120
1718-51-0	Terphenyl-d14 (Surr)	116		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: 0103C013.D

Analysis Method: 8270D Date Collected: 12/03/2019 12:20

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1034.1(mL) Date Analyzed: 01/03/2020 18:31

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*ND*	*H*	*0.39*	
95-50-1	*1,2-Dichlorobenzene*	*ND*	*H*	*0.58*	
541-73-1	*1,3-Dichlorobenzene*	*ND*	*H*	*0.39*	
106-46-7	*1,4-Dichlorobenzene*	*ND*	*H*	*0.39*	
87-68-3	*Hexachlorobutadiene*	*ND*	*H*	*0.97*	
67-72-1	*Hexachloroethane*	*ND*	*H*	*0.97*	
86-30-6	*N-Nitrosodiphenylamine*	*ND*	*H **	*2.9*	
87-86-5	*Pentachlorophenol*	*ND*	*H **	*9.7*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	70		48-125
321-60-8	2-Fluorobiphenyl	92		50-120
367-12-4	2-Fluorophenol (Surr)	82		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	88		46-129
4165-62-2	Phenol-d5 (Surr)	78		38-120
1718-51-0	Terphenyl-d14 (Surr)	104		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W | Lab Sample ID: 580-91195-3

Matrix: Water | Lab File ID: 1213A021.D

Analysis Method: 8270D | Date Collected: 12/03/2019 12:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) | Date Analyzed: 12/13/2019 16:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	ND	*	0.39	
95-50-1	1,2-Dichlorobenzene	ND	*	0.58	
541-73-1	1,3-Dichlorobenzene	ND	*	0.39	
106-46-7	1,4-Dichlorobenzene	ND	*	0.39	
90-12-0	1-Methylnaphthalene	ND		0.96	
95-95-4	2,4,5-Trichlorophenol	ND		0.39	
88-06-2	2,4,6-Trichlorophenol	ND		0.58	
120-83-2	2,4-Dichlorophenol	ND		3.9	
105-67-9	2,4-Dimethylphenol	ND	*	3.9	
51-28-5	2,4-Dinitrophenol	ND	*	19	
121-14-2	2,4-Dinitrotoluene	ND		0.96	
606-20-2	2,6-Dinitrotoluene	ND		0.58	
91-58-7	2-Chloronaphthalene	ND		0.96	
95-57-8	2-Chlorophenol	ND		0.58	
91-57-6	2-Methylnaphthalene	ND		0.39	
95-48-7	2-Methylphenol	ND		0.58	
88-74-4	2-Nitroaniline	ND		0.58	
88-75-5	2-Nitrophenol	ND		0.96	
15831-10-4	3 & 4 Methylphenol	ND		0.77	
91-94-1	3,3'-Dichlorobenzidine	ND		14	
99-09-2	3-Nitroaniline	ND		2.9	
534-52-1	4,6-Dinitro-2-methylphenol	ND		9.6	
101-55-3	4-Bromophenyl phenyl ether	ND		0.58	
59-50-7	4-Chloro-3-methylphenol	ND		0.58	
106-47-8	4-Chloroaniline	ND	*	9.6	
7005-72-3	4-Chlorophenyl phenyl ether	ND		0.58	
100-01-6	4-Nitroaniline	ND	*	1.9	
100-02-7	4-Nitrophenol	ND		14	
83-32-9	Acenaphthene	ND		0.39	
208-96-8	Acenaphthylene	ND		0.96	
120-12-7	Anthracene	ND		14	
56-55-3	Benzo[a]anthracene	ND		0.96	
50-32-8	Benzo[a]pyrene	ND		0.96	
205-99-2	Benzo[b]fluoranthene	ND		0.96	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W | Lab Sample ID: 580-91195-3

Matrix: Water | Lab File ID: 1213A021.D

Analysis Method: 8270D | Date Collected: 12/03/2019 12:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) | Date Analyzed: 12/13/2019 16:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	ND		0.96	
207-08-9	Benzo[k]fluoranthene	ND		0.96	
65-85-0	Benzoic acid	ND		3.9	
100-51-6	Benzyl alcohol	ND		2.9	
111-91-1	Bis(2-chloroethoxy)methane	ND		0.58	
111-44-4	Bis(2-chloroethyl)ether	ND		0.58	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		14	
108-60-1	bis(chloroisopropyl) ether	ND		0.58	
85-68-7	Butyl benzyl phthalate	ND		9.6	
86-74-8	Carbazole	ND	*	0.58	
218-01-9	Chrysene	ND		0.58	
53-70-3	Dibenz(a,h)anthracene	ND		0.58	
132-64-9	Dibenzofuran	ND		0.39	
84-66-2	Diethyl phthalate	ND		12	
131-11-3	Dimethyl phthalate	ND		0.58	
84-74-2	Di-n-butyl phthalate	ND		2.9	
117-84-0	Di-n-octyl phthalate	ND		0.96	
206-44-0	Fluoranthene	ND		2.9	
86-73-7	Fluorene	ND		1.9	
118-74-1	Hexachlorobenzene	ND	*	0.58	
87-68-3	Hexachlorobutadiene	ND	*	0.96	
77-47-4	Hexachlorocyclopentadiene	ND	*	2.9	
67-72-1	Hexachloroethane	ND	*	0.96	
193-39-5	Indeno[1,2,3-cd]pyrene	ND		0.96	
78-59-1	Isophorone	ND		0.39	
91-20-3	Naphthalene	ND		0.39	
98-95-3	Nitrobenzene	ND		0.58	
621-64-7	N-Nitrosodi-n-propylamine	ND		0.58	
86-30-6	N-Nitrosodiphenylamine	ND	*	2.9	
87-86-5	Pentachlorophenol	ND	*	9.6	
85-01-8	Phenanthrene	ND		0.96	
108-95-2	Phenol	ND		3.9	
129-00-0	Pyrene	ND		1.9	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: 1213A021.D

Analysis Method: 8270D Date Collected: 12/03/2019 12:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1036.7(mL) Date Analyzed: 12/13/2019 16:58

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	62		48-125
321-60-8	2-Fluorobiphenyl	97		50-120
367-12-4	2-Fluorophenol (Surr)	75		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	85		46-129
4165-62-2	Phenol-d5 (Surr)	80		38-120
1718-51-0	Terphenyl-d14 (Surr)	123		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: 0103C014.D

Analysis Method: 8270D Date Collected: 12/03/2019 12:00

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1039.3(mL) Date Analyzed: 01/03/2020 18:54

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*ND*	*H*	*0.38*	
95-50-1	*1,2-Dichlorobenzene*	*ND*	*H*	*0.58*	
541-73-1	*1,3-Dichlorobenzene*	*ND*	*H*	*0.38*	
106-46-7	*1,4-Dichlorobenzene*	*ND*	*H*	*0.38*	
87-68-3	*Hexachlorobutadiene*	*ND*	*H*	*0.96*	
67-72-1	*Hexachloroethane*	*ND*	*H*	*0.96*	
86-30-6	*N-Nitrosodiphenylamine*	*ND*	*H **	*2.9*	
87-86-5	*Pentachlorophenol*	*ND*	*H **	*9.6*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	76		48-125
321-60-8	2-Fluorobiphenyl	97		50-120
367-12-4	2-Fluorophenol (Surr)	84		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	85		46-129
4165-62-2	Phenol-d5 (Surr)	84		38-120
1718-51-0	Terphenyl-d14 (Surr)	109		61-126

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID (1): CCVIS 580-318784/3 Instrument ID (1): TAC051

GC Column (1): ZB-SV ID: 0.25(mm) Date Analyzed (1): 12/13/2019 10:06

ANALYTE	RT	RESOLUTION (%)
Benzo[b]fluoranthene	11.43	56.00

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-316923/15 Calibration Date: 11/14/2019 20:18

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1114B017.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodimethylamine	Lin2		0.4060	0.0100		1000	2.6	30.0
Pyridine	Lin2		0.6645	0.0100		2000	-1.0	30.0
Phenol	Lin2		1.133	0.8000		1000	4.4	30.0
Aniline	Lin1		1.284	0.0100		1000	3.9	30.0
Bis(2-chloroethyl)ether	Ave	0.8607	0.8969	0.7000	1040	1000	4.2	30.0
2-Chlorophenol	Ave	1.341	1.424	0.8000	1060	1000	6.2	30.0
n-Decane	Lin1		0.7818			1000	16.0	30.0
1,3-Dichlorobenzene	Qua2		1.643	0.0100	1040	1000	3.7	30.0
1,4-Dichlorobenzene	Qua2		1.688	0.0100	1030	1000	3.3	30.0
Benzyl alcohol	Lin1		0.5988	0.0100		1000	4.7	30.0
1,2-Dichlorobenzene	Qua2		1.597	0.0100	1020	1000	2.0	30.0
2-Methylphenol	Qua2		1.066	0.7000	1100	1000	9.7	30.0
bis(chloroisopropyl) ether	Ave	1.022	1.072	0.0100	1050	1000	4.9	30.0
Acetophenone	Lin2		1.432	0.0100	1050	1000	5.2	30.0
3 & 4 Methylphenol	Lin2		1.086	0.6000	1090	1000	8.7	30.0
N-Nitrosodi-n-propylamine	Lin2		0.4603*	0.5000	1060	1000	6.0	30.0
Hexachloroethane	Lin2		0.5569	0.3000	1070	1000	6.8	30.0
Nitrobenzene	Lin2		0.7745	0.2000	1070	1000	6.8	30.0
Isophorone	Lin2		1.424	0.4000	1060	1000	5.8	30.0
2-Nitrophenol	Lin2		0.1850	0.1000	1000	1000	0.2	30.0
2,4-Dimethylphenol	Lin2		1.036	0.2000		1000	6.8	30.0
Benzoic acid	Lin2		0.1398	0.0100	2120	2000	5.8	30.0
Bis(2-chloroethoxy)methane	Lin2		1.097	0.3000	1110	1000	11.3	30.0
2,4-Dichlorophenol	Lin2		0.2694	0.2000		1000	3.9	30.0
1,2,4-Trichlorobenzene	Ave	0.2968	0.2931	0.0100	988	1000	-1.2	30.0
Naphthalene	Qua2		1.013	0.7000	1020	1000	1.9	30.0
4-Chloroaniline	Lin1		0.3315	0.0100		1000	-0.3	30.0
2,6-Dichlorophenol	Lin2		0.5679	0.0100	1030	1000	3.5	30.0
Hexachlorobutadiene	Lin2		0.1460	0.0100	1050	1000	5.3	30.0
4-Chloro-3-methylphenol	Lin2		0.4359	0.2000	980	1000	-2.0	30.0
2-Methylnaphthalene	Qua2		0.6924	0.4000	1020	1000	2.3	30.0
1-Methylnaphthalene	Qua2		0.6305	0.0100	1010	1000	1.3	30.0
Hexachlorocyclopentadiene	Lin2		0.2996	0.0500		1000	-0.2	30.0
1,2,4,5-Tetrachlorobenzene	Lin2		0.5331	0.0100	1020	1000	1.8	30.0
2,4,6-Trichlorophenol	Lin2		0.3708	0.2000	1020	1000	1.9	30.0
2,4,5-Trichlorophenol	Lin2		0.3719	0.2000	985	1000	-1.5	30.0
1,1'-Biphenyl	Qua1		1.678	0.0100	1010	1000	0.8	30.0
2-Chloronaphthalene	Lin2		1.255	0.8000	1000	1000	0.0	30.0
2-Nitroaniline	Lin2		0.4119	0.0100	943	1000	-5.7	30.0
Dimethyl phthalate	Qua2		1.373	0.0100	995	1000	-0.5	30.0
1,3-Dinitrobenzene	Qua2		0.2060		971	1000	-2.9	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-316923/15 Calibration Date: 11/14/2019 20:18

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1114B017.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,6-Dinitrotoluene	Lin2		0.3262	0.2000	998	1000	-0.2	30.0
Acenaphthylene	Qua2		2.042	0.9000	1100	1000	10.1	30.0
3-Nitroaniline	Qua2		0.2039	0.0100		1000	-14.0	30.0
Acenaphthene	Qua2		1.317	0.9000	999	1000	-0.0	30.0
2,4-Dinitrophenol	Qua2		0.1095	0.0100		2000	-6.9	30.0
4-Nitrophenol	Lin2		0.1223	0.0100		2000	-5.9	30.0
2,4-Dinitrotoluene	Qua2		0.4133	0.2000	996	1000	-0.4	30.0
Dibenzofuran	Qua2		1.791	0.8000	1010	1000	1.5	30.0
2,3,4,6-Tetrachlorophenol	Lin2		0.2733	0.0100	967	1000	-3.3	30.0
Diethyl phthalate	Qua2		1.455	0.0100		1000	-0.3	30.0
Fluorene	Qua2		1.477	0.9000	1050	1000	5.1	30.0
4-Chlorophenyl phenyl ether	Lin2		0.6223	0.4000	1040	1000	4.4	30.0
4-Nitroaniline	Qua2		0.2127	0.0100		1000	-11.7	30.0
4,6-Dinitro-2-methylphenol	Lin2		0.1032	0.0100		2000	-8.9	30.0
N-Nitrosodiphenylamine	Lin2		0.5787	0.0100		1000	3.7	30.0
Azobenzene	Ave	0.4436	0.4870		1100	1000	9.8	30.0
4-Bromophenyl phenyl ether	Ave	0.2026	0.1993	0.1000	983	1000	-1.7	30.0
Hexachlorobenzene	Ave	0.2441	0.2380	0.1000	975	1000	-2.5	30.0
Atrazine	Lin2		0.2736	0.0100	906	1000	-9.4	30.0
Pentachlorophenol	Qua2		0.1308	0.0500		2000	2.1	30.0
n-Octadecane	Ave	0.2479	0.2772		1120	1000	11.8	30.0
Phenanthrene	Qua2		1.121	0.7000	972	1000	-2.8	30.0
Anthracene	Qua2		1.131	0.7000		1000	3.7	30.0
Carbazole	Qua1		0.4353	0.0100	805	1000	-19.5	30.0
Di-n-butyl phthalate	Qua2		1.293	0.0100		1000	1.5	30.0
Fluoranthene	Qua2		1.070	0.6000		1000	1.5	30.0
Benzidine	Qua2		0.1079	0.0100		2000	-18.7	30.0
Pyrene	Qua2		1.104	0.6000	1050	1000	5.5	30.0
Butyl benzyl phthalate	Lin1		0.7383	0.0100		1000	9.0	30.0
3,3'-Dichlorobenzidine	Qua2		0.2684	0.0100		2000	0.4	30.0
Benzo[a]anthracene	Qua2		1.155	0.8000	1050	1000	4.6	30.0
Chrysene	Qua2		1.290	0.7000	1060	1000	5.9	30.0
Bis(2-ethylhexyl) phthalate	Qua2		1.055	0.0100		1000	-3.1	30.0
Di-n-octyl phthalate	Qua2		1.652	0.0100	989	1000	-1.1	30.0
Benzo[b]fluoranthene	Ave	1.181	1.313	0.7000	1110	1000	11.1	30.0
Benzo[k]fluoranthene	Qua2		1.480	0.7000	1050	1000	4.8	30.0
Benzofluoranthene	Ave	1.219	1.365		2240	2000	12.0	30.0
Benzo[a]pyrene	Qua2		1.234	0.7000	1110	1000	10.6	30.0
Indeno[1,2,3-cd]pyrene	Ave	0.9932	0.9852	0.5000	992	1000	-0.8	30.0
Dibenz(a,h)anthracene	Lin2		1.115	0.4000	1070	1000	6.6	30.0
Benzo[g,h,i]perylene	Ave	1.098	1.170	0.5000	1070	1000	6.6	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 580-316923/15 Calibration Date: 11/14/2019 20:18

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1114B017.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Fluorophenol (Surr)	Ave	1.036	1.073		1040	1000	3.6	30.0
Phenol-d5 (Surr)	Ave	1.065	1.210		1140	1000	13.5	30.0
Nitrobenzene-d5 (Surr)	Ave	0.1910	0.2028		1060	1000	6.2	30.0
2-methylnaphthalene-d10	Lin2		0.6187		1060	1000	6.1	30.0
2-Fluorobiphenyl	Ave	1.425	1.508		1060	1000	5.9	30.0
2,4,6-Tribromophenol (Surr)	Lin2		0.1258	0.0100	1010	1000	1.3	30.0
Fluoranthene-d10 (Surr)	Ave	0.8108	0.9270		1140	1000	14.3	30.0
Terphenyl-d14 (Surr)	Lin2		0.6969		1030	1000	3.3	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318784/3 Calibration Date: 12/13/2019 10:06

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodimethylamine	Lin2		0.3788	0.0100		1000	-4.3	20.0
Pyridine	Lin2		0.7075	0.0100		2000	5.3	20.0
Phenol	Lin2		1.076	0.8000		1000	-0.9	20.0
Aniline	Lin1		1.177	0.0100		1000	-4.8	20.0
Bis(2-chloroethyl)ether	Ave	0.8607	0.8274	0.7000	961	1000	-3.9	20.0
2-Chlorophenol	Ave	1.341	1.356	0.8000	1010	1000	1.2	20.0
n-Decane	Lin1		0.6931			1000	2.8	20.0
1,3-Dichlorobenzene	Qua2		1.592	0.0100	1000	1000	0.3	20.0
1,4-Dichlorobenzene	Qua2		1.623	0.0100	992	1000	-0.8	20.0
Benzyl alcohol	Lin1		0.4610	0.0100		1000	-19.3	20.0
1,2-Dichlorobenzene	Qua2		1.545	0.0100	986	1000	-1.4	20.0
2-Methylphenol	Qua2		0.9191	0.7000	944	1000	-5.6	20.0
bis(chloroisopropyl) ether	Ave	1.022	0.9296	0.0100	909	1000	-9.1	20.0
Acetophenone	Lin2		1.320	0.0100	970	1000	-3.0	20.0
3 & 4 Methylphenol	Lin2		0.9229	0.6000	924	1000	-7.6	20.0
N-Nitrosodi-n-propylamine	Lin2		0.4096*	0.5000	943	1000	-5.7	20.0
Hexachloroethane	Lin2		0.5403	0.3000	1040	1000	3.6	20.0
Nitrobenzene	Lin2		0.6939	0.2000	957	1000	-4.3	20.0
Isophorone	Lin2		1.326	0.4000	986	1000	-1.4	20.0
2-Nitrophenol	Lin2		0.1870	0.1000	1010	1000	1.2	20.0
2,4-Dimethylphenol	Lin2		0.9692	0.2000		1000	-0.0	20.0
Benzoic acid	Lin2		0.1378	0.0100	2090	2000	4.7	20.0
Bis(2-chloroethoxy)methane	Lin2		0.9563	0.3000	971	1000	-2.9	20.0
2,4-Dichlorophenol	Lin2		0.2473	0.2000		1000	-4.6	20.0
1,2,4-Trichlorobenzene	Ave	0.2968	0.3036	0.0100	1020	1000	2.3	20.0
Naphthalene	Qua2		1.010	0.7000	1020	1000	1.6	20.0
4-Chloroaniline	Lin1		0.2707	0.0100		1000	-18.1	20.0
2,6-Dichlorophenol	Lin2		0.5404	0.0100		1000	-1.5	20.0
Hexachlorobutadiene	Lin2		0.1455	0.0100	1050	1000	4.9	20.0
4-Chloro-3-methylphenol	Lin2		0.3791	0.2000	854	1000	-14.6	20.0
2-Methylnaphthalene	Qua2		0.6653	0.4000	982	1000	-1.8	20.0
1-Methylnaphthalene	Qua2		0.6229	0.0100	1000	1000	0.0	20.0
Hexachlorocyclopentadiene	Lin2		0.3293	0.0500		1000	9.6	20.0
1,2,4,5-Tetrachlorobenzene	Lin2		0.5253	0.0100	1000	1000	0.4	20.0
2,4,6-Trichlorophenol	Lin2		0.3135	0.2000	864	1000	-13.6	20.0
2,4,5-Trichlorophenol	Lin2		0.3742	0.2000	990	1000	-1.0	20.0
1,1'-Biphenyl	Qua1		1.614	0.0100		1000	-3.2	20.0
2-Chloronaphthalene	Lin2		1.223	0.8000	975	1000	-2.5	20.0
2-Nitroaniline	Lin2		0.4093	0.0100	937	1000	-6.3	20.0
Dimethyl phthalate	Qua2		1.391	0.0100	1010	1000	0.8	20.0
1,3-Dinitrobenzene	Qua2		0.2130		1000	1000	0.3	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318784/3 Calibration Date: 12/13/2019 10:06

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,6-Dinitrotoluene	Lin2		0.3259	0.2000	997	1000	-0.3	20.0
Acenaphthylene	Qua2		1.975	0.9000	1060	1000	6.3	20.0
3-Nitroaniline	Qua2		0.2253	0.0100		1000	-5.5	20.0
Acenaphthene	Qua2		1.285	0.9000	974	1000	-2.6	20.0
2,4-Dinitrophenol	Qua2		0.0929	0.0100		2000	-18.7	20.0
4-Nitrophenol	Lin2		0.1125	0.0100		2000	-12.6	20.0
2,4-Dinitrotoluene	Qua2		0.4165	0.2000	1000	1000	0.4	20.0
Dibenzofuran	Qua2		1.810	0.8000	1030	1000	2.6	20.0
2,3,4,6-Tetrachlorophenol	Lin2		0.2640	0.0100	935	1000	-6.5	20.0
Diethyl phthalate	Qua2		1.453	0.0100		1000	-0.5	20.0
Fluorene	Qua2		1.464	0.9000	1040	1000	4.2	20.0
4-Chlorophenyl phenyl ether	Lin2		0.6207	0.4000	1040	1000	4.1	20.0
4-Nitroaniline	Qua2		0.3061	0.0100	1240	1000	24.4*	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.0968	0.0100		2000	-14.1	20.0
N-Nitrosodiphenylamine	Lin2		0.5708	0.0100		1000	2.3	20.0
Azobenzene	Ave	0.4436	0.4301			1000	-3.0	20.0
4-Bromophenyl phenyl ether	Ave	0.2026	0.1961	0.1000	968	1000	-3.2	20.0
Hexachlorobenzene	Ave	0.2441	0.2318	0.1000	949	1000	-5.1	20.0
Atrazine	Lin2		0.3087	0.0100	1020	1000	2.0	20.0
Pentachlorophenol	Qua2		0.0485*	0.0500		2000	-58.0*	20.0
n-Octadecane	Ave	0.2479	0.2452		989	1000	-1.1	20.0
Phenanthrene	Qua2		1.114	0.7000	966	1000	-3.4	20.0
Anthracene	Qua2		1.157	0.7000		1000	6.3	20.0
Carbazole	Qua1		0.8186	0.0100	1580	1000	58.3*	20.0
Di-n-butyl phthalate	Qua2		1.353	0.0100		1000	6.4	20.0
Fluoranthene	Qua2		1.097	0.6000		1000	4.1	20.0
Benzidine	Qua2		0.1855	0.0100		2000	19.9	20.0
Pyrene	Qua2		1.128	0.6000	1080	1000	7.9	20.0
Butyl benzyl phthalate	Lin1		0.7255	0.0100		1000	7.1	20.0
3,3'-Dichlorobenzidine	Qua2		0.3789	0.0100		2000	40.9*	20.0
Benzo[a]anthracene	Qua2		1.083	0.8000	980	1000	-2.0	20.0
Chrysene	Qua2		1.292	0.7000	1060	1000	6.0	20.0
Bis(2-ethylhexyl) phthalate	Qua2		1.034	0.0100		1000	-5.0	20.0
Di-n-octyl phthalate	Qua2		1.682	0.0100	1010	1000	0.7	20.0
Benzo[b]fluoranthene	Ave	1.181	1.237	0.7000	1050	1000	4.7	20.0
Benzofluoranthene	Ave	1.219	1.334		2190	2000	9.4	20.0
Benzo[k]fluoranthene	Qua2		1.491	0.7000	1060	1000	5.7	20.0
Benzo[a]pyrene	Qua2		1.144	0.7000	1020	1000	2.5	20.0
Indeno[1,2,3-cd]pyrene	Ave	0.9932	1.028	0.5000	1030	1000	3.5	20.0
Dibenz(a,h)anthracene	Lin2		1.188	0.4000	1140	1000	13.6	20.0
Benzo[g,h,i]perylene	Ave	1.098	1.251	0.5000	1140	1000	13.9	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-318784/3 Calibration Date: 12/13/2019 10:06

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Fluorophenol (Surr)	Ave	1.036	1.006		971	1000	-2.9	20.0
Phenol-d5 (Surr)	Ave	1.065	1.073		1010	1000	0.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.1910	0.1949		1020	1000	2.0	20.0
2-Fluorobiphenyl	Ave	1.425	1.448		1020	1000	1.6	20.0
2,4,6-Tribromophenol (Surr)	Lin2		0.1234	0.0100	994	1000	-0.6	20.0
Terphenyl-d14 (Surr)	Lin2		0.7250		1070	1000	7.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVL 580-318784/4 Calibration Date: 12/13/2019 10:29

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A005.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodimethylamine	Lin2		0.3566	0.0100		50.0	-4.7	
Pyridine	Lin2		0.3800	0.0100		100	-37.0	
Phenol	Lin2		0.9279	0.8000		50.0	-12.6	
Aniline	Lin1		1.046	0.0100		50.0	-8.2	
Bis(2-chloroethyl)ether	Ave	0.8607	0.8122	0.7000		50.0	-5.6	
2-Chlorophenol	Ave	1.341	1.291	0.8000		50.0	-3.7	
n-Decane	Lin1		0.6762			50.0	-13.2	
1,3-Dichlorobenzene	Qua2		1.568	0.0100		50.0	-4.2	
1,4-Dichlorobenzene	Qua2		1.609	0.0100	47.5	50.0	-5.0	
Benzyl alcohol	Lin1		0.3171	0.0100		50.0	-37.6	
1,2-Dichlorobenzene	Qua2		1.610	0.0100	50.6	50.0	1.1	
2-Methylphenol	Qua2		0.7652	0.7000		50.0	-19.8	
bis(chloroisopropyl) ether	Ave	1.022	1.029	0.0100	50.4	50.0	0.7	
Acetophenone	Lin2		1.185	0.0100		50.0	-10.7	
N-Nitrosodi-n-propylamine	Lin2		0.2767*	0.5000		50.0	-39.7	
3 & 4 Methylphenol	Lin2		0.6759	0.6000		50.0	-28.9	
Hexachloroethane	Lin2		0.5162	0.3000		50.0	-4.2	
Nitrobenzene	Lin2		0.6751	0.2000		50.0	-8.0	
Isophorone	Lin2		1.088	0.4000		50.0	-18.9	
2-Nitrophenol	Lin2		0.1303	0.1000		50.0	-0.4	
2,4-Dimethylphenol	Lin2		0.6084	0.2000		50.0	-32.1	
Bis(2-chloroethoxy)methane	Lin2		0.6490	0.3000		50.0	-35.6	
2,4-Dichlorophenol	Lin2		0.1050*	0.2000		50.0	-54.2	
1,2,4-Trichlorobenzene	Ave	0.2968	0.2710	0.0100	45.6	50.0	-8.7	
Naphthalene	Qua2		0.9570	0.7000		50.0	-10.9	
2,6-Dichlorophenol	Lin2		0.5078	0.0100		50.0	-7.0	
4-Chloroaniline	Lin1		0.1401	0.0100		50.0	-0.3	
Hexachlorobutadiene	Lin2		0.1421	0.0100		50.0	-4.5	
2-Methylnaphthalene	Qua2		0.5611	0.4000	40.8	50.0	-18.5	
1-Methylnaphthalene	Qua2		0.5927	0.0100	46.2	50.0	-7.7	
Hexachlorocyclopentadiene	Lin2		0.2771	0.0500		50.0	-6.5	
1,2,4,5-Tetrachlorobenzene	Lin2		0.5498	0.0100		50.0	-1.5	
2,4,6-Trichlorophenol	Lin2		0.1213*	0.2000		50.0	-36.7	
2,4,5-Trichlorophenol	Lin2		0.2547	0.2000		50.0	-17.7	
1,1'-Biphenyl	Qua1		1.692	0.0100		50.0	-4.8	
2-Chloronaphthalene	Lin2		1.308	0.8000		50.0	3.7	
2-Nitroaniline	Lin2		0.1351	0.0100		50.0	-22.2	
Dimethyl phthalate	Qua2		1.009	0.0100		50.0	-26.8	
1,3-Dinitrobenzene	Qua2		0.0584			50.0	-18.6	
2,6-Dinitrotoluene	Lin2		0.1601*	0.2000		50.0	-12.3	
Acenaphthylene	Qua2		1.798	0.9000		50.0	-5.7	

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVL 580-318784/4 Calibration Date: 12/13/2019 10:29

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A005.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
3-Nitroaniline	Qua2		0.2270	0.0100		50.0	36.9	
Acenaphthene	Qua2		1.307	0.9000	49.6	50.0	-0.8	
Dibenzofuran	Qua2		1.492	0.8000	41.1	50.0	-17.8	
2,4-Dinitrotoluene	Qua2		0.2334	0.2000		50.0	32.3	
2,3,4,6-Tetrachlorophenol	Lin2		0.0741	0.0100		50.0	-15.2	
Diethyl phthalate	Qua2		1.302	0.0100		50.0	-18.3	
Fluorene	Qua2		1.219	0.9000		50.0	-13.2	
4-Chlorophenyl phenyl ether	Lin2		0.4137	0.4000		50.0	-28.9	
4-Nitroaniline	Qua2		0.2507	0.0100		50.0	51.3	
N-Nitrosodiphenylamine	Lin2		0.3674	0.0100		50.0	-31.6	
Azobenzene	Ave	0.4436	0.2688			50.0	-39.4	
4-Bromophenyl phenyl ether	Ave	0.2026	0.1509	0.1000		50.0	-25.6	
Hexachlorobenzene	Ave	0.2441	0.2166	0.1000		50.0	-11.3	
Atrazine	Lin2		0.2304	0.0100		50.0	0.7	
n-Octadecane	Ave	0.2479	0.2099			50.0	-15.3	
Phenanthrene	Qua2		1.038	0.7000		50.0	-14.1	
Anthracene	Qua2		1.369	0.7000	61.9	50.0	23.8	
Carbazole	Qua1		1.055	0.0100		50.0	-42.1	
Di-n-butyl phthalate	Qua2		1.119	0.0100		50.0	-10.0	
Fluoranthene	Qua2		1.027	0.6000		50.0	-1.8	
Benzidine	Qua2		0.1920	0.0100		100	-23.1	
Pyrene	Qua2		1.081	0.6000		50.0	2.5	
Butyl benzyl phthalate	Lin1		0.5358	0.0100		50.0	-13.7	
Benzo[a]anthracene	Qua2		0.8309	0.8000	40.7	50.0	-18.6	
3,3'-Dichlorobenzidine	Qua2		0.2074	0.0100		100	-15.7	
Chrysene	Qua2		1.048	0.7000		50.0	-17.6	
Bis(2-ethylhexyl) phthalate	Qua2		0.7621	0.0100		50.0	51.8	
Di-n-octyl phthalate	Qua2		1.062	0.0100		50.0	36.2	
Benzo[b]fluoranthene	Ave	1.181	0.9193	0.7000	38.9	50.0	-22.2	
Benzo[k]fluoranthene	Qua2		1.673	0.7000	59.8	50.0	19.6	
Benzofluoranthene	Ave	1.219	1.241		102	100	1.8	
Benzo[a]pyrene	Qua2		0.8650	0.7000	44.7	50.0	-10.6	
Indeno[1,2,3-cd]pyrene	Ave	0.9932	0.6804	0.5000	34.3	50.0	-31.5	
Dibenz(a,h)anthracene	Lin2		1.048	0.4000	55.1	50.0	10.3	
Benzo[g,h,i]perylene	Ave	1.098	1.193	0.5000	54.3	50.0	8.6	
2,4-Dinitrophenol	Qua2					100	-100.0	
4,6-Dinitro-2-methylphenol	Lin2					100	-100.0	
4-Chloro-3-methylphenol	Lin2					50.0	-100.0	
4-Nitrophenol	Lin2					100	-100.0	
Benzoic acid	Lin2					100	-100.0	
Pentachlorophenol	Qua2					100	-100.0	

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVL 580-318784/4 Calibration Date: 12/13/2019 10:29

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 1213A005.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Fluorophenol (Surr)	Ave	1.036	0.8545		41.2	50.0	-17.6	
Phenol-d5 (Surr)	Ave	1.065	0.9382		44.0	50.0	-11.9	
Nitrobenzene-d5 (Surr)	Ave	0.1910	0.1676		43.9	50.0	-12.3	
2-Fluorobiphenyl	Ave	1.425	1.416		49.7	50.0	-0.6	
2,4,6-Tribromophenol (Surr)	Lin2		0.0511	0.0100	49.8	50.0	-0.3	
Terphenyl-d14 (Surr)	Lin2		0.7328		56.5	50.0	13.0	

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-319972/3 Calibration Date: 01/03/2020 14:59

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 0103C004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
N-Nitrosodimethylamine	Lin2		0.3757	0.0100		1000	-5.1	20.0
Pyridine	Lin2		0.6897	0.0100		2000	2.7	20.0
Phenol	Lin2		1.120	0.8000		1000	3.1	20.0
Aniline	Lin1		1.227	0.0100		1000	-0.8	20.0
Bis(2-chloroethyl)ether	Ave	0.8607	0.8690	0.7000	1010	1000	1.0	20.0
2-Chlorophenol	Ave	1.341	1.385	0.8000	1030	1000	3.3	20.0
n-Decane	Lin1		0.7075			1000	4.9	20.0
1,3-Dichlorobenzene	Qua2		1.659	0.0100	1050	1000	4.7	20.0
1,4-Dichlorobenzene	Qua2		1.670	0.0100	1020	1000	2.1	20.0
Benzyl alcohol	Lin1		0.5192	0.0100		1000	-9.1	20.0
1,2-Dichlorobenzene	Qua2		1.602	0.0100	1020	1000	2.3	20.0
2-Methylphenol	Qua2		0.9657	0.7000	992	1000	-0.8	20.0
bis(chloroisopropyl) ether	Ave	1.022	0.9823	0.0100	961	1000	-3.9	20.0
Acetophenone	Lin2		1.385	0.0100	1020	1000	1.8	20.0
N-Nitrosodi-n-propylamine	Lin2		0.4424*	0.5000	1020	1000	1.9	20.0
3 & 4 Methylphenol	Lin2		0.9840	0.6000	985	1000	-1.5	20.0
Hexachloroethane	Lin2		0.5555	0.3000	1060	1000	6.5	20.0
Nitrobenzene	Lin2		0.7211	0.2000	994	1000	-0.6	20.0
Isophorone	Lin2		1.414	0.4000	1050	1000	5.2	20.0
2-Nitrophenol	Lin2		0.1821	0.1000	986	1000	-1.4	20.0
2,4-Dimethylphenol	Lin2		1.005	0.2000		1000	3.6	20.0
Benzoic acid	Lin2		0.1354	0.0100	2070	2000	3.3	20.0
Bis(2-chloroethoxy)methane	Lin2		0.9849	0.3000	999	1000	-0.0	20.0
2,4-Dichlorophenol	Lin2		0.2547	0.2000		1000	-1.8	20.0
1,2,4-Trichlorobenzene	Ave	0.2968	0.2968	0.0100	1000	1000	-0.0	20.0
Naphthalene	Qua2		1.000	0.7000	1010	1000	0.6	20.0
4-Chloroaniline	Lin1		0.2628	0.0100		1000	-20.4*	20.0
2,6-Dichlorophenol	Lin2		0.5385	0.0100		1000	-1.9	20.0
Hexachlorobutadiene	Lin2		0.1456	0.0100	1050	1000	4.9	20.0
4-Chloro-3-methylphenol	Lin2		0.4395	0.2000	988	1000	-1.2	20.0
2-Methylnaphthalene	Qua2		0.6897	0.4000	1020	1000	1.9	20.0
1-Methylnaphthalene	Qua2		0.6430	0.0100	1030	1000	3.4	20.0
Hexachlorocyclopentadiene	Lin2		0.2830	0.0500		1000	-5.8	20.0
1,2,4,5-Tetrachlorobenzene	Lin2		0.5210	0.0100	995	1000	-0.5	20.0
2,4,6-Trichlorophenol	Lin2		0.3458	0.2000	951	1000	-4.9	20.0
2,4,5-Trichlorophenol	Lin2		0.3458	0.2000	916	1000	-8.4	20.0
1,1'-Biphenyl	Qua1		1.628	0.0100		1000	-2.3	20.0
2-Chloronaphthalene	Lin2		1.246	0.8000	993	1000	-0.7	20.0
2-Nitroaniline	Lin2		0.3831	0.0100	879	1000	-12.1	20.0
Dimethyl phthalate	Qua2		1.375	0.0100	996	1000	-0.4	20.0
1,3-Dinitrobenzene	Qua2		0.1992		940	1000	-6.0	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-319972/3 Calibration Date: 01/03/2020 14:59

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 0103C004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,6-Dinitrotoluene	Lin2		0.3174	0.2000	972	1000	-2.8	20.0
Acenaphthylene	Qua2		1.940	0.9000	1040	1000	4.4	20.0
3-Nitroaniline	Qua2		0.2563	0.0100		1000	6.7	20.0
Acenaphthene	Qua2		1.276	0.9000	967	1000	-3.3	20.0
2,4-Dinitrophenol	Qua2		0.1217	0.0100		2000	1.5	20.0
4-Nitrophenol	Lin2		0.1170	0.0100		2000	-9.5	20.0
2,4-Dinitrotoluene	Qua2		0.4060	0.2000	980	1000	-2.0	20.0
Dibenzofuran	Qua2		1.758	0.8000	995	1000	-0.5	20.0
2,3,4,6-Tetrachlorophenol	Lin2		0.2713	0.0100	960	1000	-4.0	20.0
Diethyl phthalate	Qua2		1.419	0.0100		1000	-2.9	20.0
Fluorene	Qua2		1.423	0.9000	1010	1000	1.2	20.0
4-Chlorophenyl phenyl ether	Lin2		0.5925	0.4000	994	1000	-0.6	20.0
4-Nitroaniline	Qua2		0.1313	0.0100		1000	-43.9*	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1146	0.0100		2000	0.4	20.0
N-Nitrosodiphenylamine	Lin2		0.6129	0.0100		1000	9.8	20.0
Azobenzene	Ave	0.4436	0.4601		1040	1000	3.7	20.0
4-Bromophenyl phenyl ether	Ave	0.2026	0.2086	0.1000	1030	1000	2.9	20.0
Hexachlorobenzene	Ave	0.2441	0.2462	0.1000	1010	1000	0.8	20.0
Atrazine	Lin2		0.2846	0.0100	942	1000	-5.8	20.0
Pentachlorophenol	Qua2		0.1213	0.0500		2000	-4.9	20.0
n-Octadecane	Ave	0.2479	0.2639		1060	1000	6.5	20.0
Phenanthrene	Qua2		1.176	0.7000	1020	1000	2.3	20.0
Anthracene	Qua2		1.193	0.7000		1000	9.8	20.0
Carbazole	Qua1		0.7748	0.0100	1490	1000	49.4*	20.0
Di-n-butyl phthalate	Qua2		1.382	0.0100		1000	8.8	20.0
Fluoranthene	Qua2		1.105	0.6000		1000	4.9	20.0
Benzidine	Qua2		0.1623	0.0100		2000	9.3	20.0
Pyrene	Qua2		1.118	0.6000	1070	1000	6.9	20.0
Butyl benzyl phthalate	Lin1		0.7139	0.0100		1000	5.4	20.0
3,3'-Dichlorobenzidine	Qua2		0.2474	0.0100		2000	-7.4	20.0
Benzo[a]anthracene	Qua2		1.056	0.8000	956	1000	-4.4	20.0
Chrysene	Qua2		1.252	0.7000	1030	1000	2.5	20.0
Bis(2-ethylhexyl) phthalate	Qua2		1.017	0.0100		1000	-6.6	20.0
Di-n-octyl phthalate	Qua2		1.603	0.0100	961	1000	-3.9	20.0
Benzo[b]fluoranthene	Ave	1.181	1.205	0.7000	1020	1000	2.0	20.0
Benzo[k]fluoranthene	Qua2		1.402	0.7000	991	1000	-0.9	20.0
Benzofluoranthene	Ave	1.219	1.306		2140	2000	7.2	20.0
Benzo[a]pyrene	Qua2		1.126	0.7000	1010	1000	0.9	20.0
Indeno[1,2,3-cd]pyrene	Ave	0.9932	1.038	0.5000	1040	1000	4.5	20.0
Dibenz(a,h)anthracene	Lin2		1.083	0.4000	1040	1000	3.6	20.0
Benzo[g,h,i]perylene	Ave	1.098	1.180	0.5000	1070	1000	7.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVIS 580-319972/3 Calibration Date: 01/03/2020 14:59

Instrument ID: TAC051 Calib Start Date: 11/14/2019 16:00

GC Column: ZB-SV ID: 0.25(mm) Calib End Date: 11/14/2019 19:31

Lab File ID: 0103C004.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Fluorophenol (Surr)	Ave	1.036	1.069		1030	1000	3.2	20.0
Phenol-d5 (Surr)	Ave	1.065	1.122		1050	1000	5.3	20.0
Nitrobenzene-d5 (Surr)	Ave	0.1910	0.1933		1010	1000	1.2	20.0
2-methylnaphthalene-d10	Lin2		0.5931		1020	1000	1.7	20.0
2-Fluorobiphenyl	Ave	1.425	1.462		1030	1000	2.6	20.0
2,4,6-Tribromophenol (Surr)	Lin2		0.1291	0.0100	1040	1000	3.9	20.0
Fluoranthene-d10 (Surr)	Ave	0.8108	0.9590		1180	1000	18.3	20.0
Terphenyl-d14 (Surr)	Lin2		0.7330		1090	1000	8.6	20.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318500/1-A

Matrix: Water Lab File ID: 1213A006.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:08

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
90-12-0	1-Methylnaphthalene	ND		0.50	
95-95-4	2,4,5-Trichlorophenol	ND		0.20	
88-06-2	2,4,6-Trichlorophenol	ND		0.30	
120-83-2	2,4-Dichlorophenol	ND		2.0	
105-67-9	2,4-Dimethylphenol	ND		2.0	
51-28-5	2,4-Dinitrophenol	ND		10	
121-14-2	2,4-Dinitrotoluene	ND		0.50	
606-20-2	2,6-Dinitrotoluene	ND		0.30	
91-58-7	2-Chloronaphthalene	ND		0.50	
95-57-8	2-Chlorophenol	ND		0.30	
91-57-6	2-Methylnaphthalene	ND		0.20	
95-48-7	2-Methylphenol	ND		0.30	
88-74-4	2-Nitroaniline	ND		0.30	
88-75-5	2-Nitrophenol	ND		0.50	
15831-10-4	3 & 4 Methylphenol	ND		0.40	
91-94-1	3,3'-Dichlorobenzidine	ND		7.5	
99-09-2	3-Nitroaniline	ND		1.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND		5.0	
101-55-3	4-Bromophenyl phenyl ether	ND		0.30	
59-50-7	4-Chloro-3-methylphenol	ND		0.30	
106-47-8	4-Chloroaniline	ND		5.0	
7005-72-3	4-Chlorophenyl phenyl ether	ND		0.30	
100-01-6	4-Nitroaniline	ND		1.0	
100-02-7	4-Nitrophenol	ND		7.5	
83-32-9	Acenaphthene	ND		0.20	
208-96-8	Acenaphthylene	ND		0.50	
120-12-7	Anthracene	ND		7.5	
56-55-3	Benzo[a]anthracene	ND		0.50	
50-32-8	Benzo[a]pyrene	ND		0.50	
205-99-2	Benzo[b]fluoranthene	ND		0.50	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318500/1-A

Matrix: Water Lab File ID: 1213A006.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:08

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	ND		0.50	
207-08-9	Benzo[k]fluoranthene	ND		0.50	
65-85-0	Benzoic acid	ND		2.0	
100-51-6	Benzyl alcohol	ND		1.5	
111-91-1	Bis(2-chloroethoxy)methane	ND		0.30	
111-44-4	Bis(2-chloroethyl)ether	ND		0.30	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		7.5	
108-60-1	bis(chloroisopropyl) ether	ND		0.30	
85-68-7	Butyl benzyl phthalate	ND		5.0	
86-74-8	Carbazole	ND		0.30	
218-01-9	Chrysene	ND		0.30	
53-70-3	Dibenz(a,h)anthracene	ND		0.30	
132-64-9	Dibenzofuran	ND		0.20	
84-66-2	Diethyl phthalate	ND		6.0	
131-11-3	Dimethyl phthalate	ND		0.30	
84-74-2	Di-n-butyl phthalate	ND		1.5	
117-84-0	Di-n-octyl phthalate	ND		0.50	
206-44-0	Fluoranthene	ND		1.5	
86-73-7	Fluorene	ND		1.0	
118-74-1	Hexachlorobenzene	ND		0.30	
87-68-3	Hexachlorobutadiene	ND		0.50	
77-47-4	Hexachlorocyclopentadiene	ND		1.5	
67-72-1	Hexachloroethane	ND		0.50	
193-39-5	Indeno[1,2,3-cd]pyrene	ND		0.50	
78-59-1	Isophorone	ND		0.20	
91-20-3	Naphthalene	ND		0.20	
98-95-3	Nitrobenzene	ND		0.30	
621-64-7	N-Nitrosodi-n-propylamine	ND		0.30	
86-30-6	N-Nitrosodiphenylamine	ND		1.5	
87-86-5	Pentachlorophenol	ND		5.0	
85-01-8	Phenanthrene	ND		0.50	
108-95-2	Phenol	ND		2.0	
129-00-0	Pyrene	ND		1.0	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318500/1-A

Matrix: Water Lab File ID: 1213A006.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:08

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	75		48-125
321-60-8	2-Fluorobiphenyl	83		50-120
367-12-4	2-Fluorophenol (Surr)	81		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	82		46-129
4165-62-2	Phenol-d5 (Surr)	88		38-120
1718-51-0	Terphenyl-d14 (Surr)	112		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-319850/1-A

Matrix: Water Lab File ID: 0103C006.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1000(mL) Date Analyzed: 01/03/2020 15:46

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*ND*		*0.40*	
95-50-1	*1,2-Dichlorobenzene*	*ND*		*0.60*	
541-73-1	*1,3-Dichlorobenzene*	*ND*		*0.40*	
106-46-7	*1,4-Dichlorobenzene*	*ND*		*0.40*	
120-12-7	Anthracene	ND		15	
87-68-3	*Hexachlorobutadiene*	*ND*		*1.0*	
67-72-1	*Hexachloroethane*	*ND*		*1.0*	
87-86-5	*Pentachlorophenol*	*ND*		*10*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	63		48-125
321-60-8	2-Fluorobiphenyl	94		50-120
367-12-4	2-Fluorophenol (Surr)	82		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	67		46-129
4165-62-2	Phenol-d5 (Surr)	87		38-120
1718-51-0	Terphenyl-d14 (Surr)	94		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318500/2-A

Matrix: Water Lab File ID: 1213A007.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:31

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	0.369		0.20	
95-50-1	1,2-Dichlorobenzene	0.383		0.30	
541-73-1	1,3-Dichlorobenzene	0.283		0.20	
106-46-7	1,4-Dichlorobenzene	0.314		0.20	
90-12-0	1-Methylnaphthalene	0.668		0.50	
95-95-4	2,4,5-Trichlorophenol	0.946		0.20	
88-06-2	2,4,6-Trichlorophenol	0.636		0.30	
120-83-2	2,4-Dichlorophenol	0.699	J	2.0	
105-67-9	2,4-Dimethylphenol	ND		2.0	
51-28-5	2,4-Dinitrophenol	ND		10	
121-14-2	2,4-Dinitrotoluene	0.770		0.50	
606-20-2	2,6-Dinitrotoluene	0.814		0.30	
91-58-7	2-Chloronaphthalene	0.645		0.50	
95-57-8	2-Chlorophenol	0.811		0.30	
91-57-6	2-Methylnaphthalene	0.622		0.20	
95-48-7	2-Methylphenol	0.662		0.30	
88-74-4	2-Nitroaniline	0.667		0.30	
88-75-5	2-Nitrophenol	0.801		0.50	
15831-10-4	3 & 4 Methylphenol	0.632		0.40	
91-94-1	3,3'-Dichlorobenzidine	ND		7.5	
99-09-2	3-Nitroaniline	0.661	J	1.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND		5.0	
101-55-3	4-Bromophenyl phenyl ether	0.651		0.30	
59-50-7	4-Chloro-3-methylphenol	0.593		0.30	
106-47-8	4-Chloroaniline	ND		5.0	
7005-72-3	4-Chlorophenyl phenyl ether	0.690		0.30	
100-01-6	4-Nitroaniline	0.734	J	1.0	
100-02-7	4-Nitrophenol	1.84	J	7.5	
83-32-9	Acenaphthene	0.711		0.20	
208-96-8	Acenaphthylene	0.771		0.50	
120-12-7	Anthracene	0.615	J	7.5	
56-55-3	Benzo[a]anthracene	0.827		0.50	
50-32-8	Benzo[a]pyrene	0.494	J	0.50	
205-99-2	Benzo[b]fluoranthene	0.744		0.50	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318500/2-A

Matrix: Water Lab File ID: 1213A007.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:31

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	0.799		0.50	
207-08-9	Benzo[k]fluoranthene	0.716		0.50	
65-85-0	Benzoic acid	0.751	J	2.0	
100-51-6	Benzyl alcohol	0.565	J	1.5	
111-91-1	Bis(2-chloroethoxy)methane	0.819		0.30	
111-44-4	Bis(2-chloroethyl)ether	0.829		0.30	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		7.5	
108-60-1	bis(chloroisopropyl) ether	0.793		0.30	
85-68-7	Butyl benzyl phthalate	1.15	J	5.0	
86-74-8	Carbazole	1.48		0.30	
218-01-9	Chrysene	0.914		0.30	
53-70-3	Dibenz(a,h)anthracene	0.796		0.30	
132-64-9	Dibenzofuran	0.754		0.20	
84-66-2	Diethyl phthalate	0.889	J	6.0	
131-11-3	Dimethyl phthalate	0.852		0.30	
84-74-2	Di-n-butyl phthalate	0.979	J	1.5	
117-84-0	Di-n-octyl phthalate	0.812		0.50	
206-44-0	Fluoranthene	0.842	J	1.5	
86-73-7	Fluorene	0.780	J	1.0	
118-74-1	Hexachlorobenzene	0.586		0.30	
87-68-3	Hexachlorobutadiene	0.0554	J	0.50	
77-47-4	Hexachlorocyclopentadiene	0.0493	J	1.5	
67-72-1	Hexachloroethane	0.128	J	0.50	
193-39-5	Indeno[1,2,3-cd]pyrene	0.755		0.50	
78-59-1	Isophorone	0.876		0.20	
91-20-3	Naphthalene	0.727		0.20	
98-95-3	Nitrobenzene	0.832		0.30	
621-64-7	N-Nitrosodi-n-propylamine	0.766		0.30	
86-30-6	N-Nitrosodiphenylamine	0.423	J	1.5	
87-86-5	Pentachlorophenol	ND		5.0	
85-01-8	Phenanthrene	0.719		0.50	
108-95-2	Phenol	0.727	J	2.0	
129-00-0	Pyrene	0.856	J	1.0	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318500/2-A

Matrix: Water Lab File ID: 1213A007.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:31

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	72		48-125
321-60-8	2-Fluorobiphenyl	68		50-120
367-12-4	2-Fluorophenol (Surr)	62		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	80		46-129
4165-62-2	Phenol-d5 (Surr)	78		38-120
1718-51-0	Terphenyl-d14 (Surr)	86		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-319850/2-A

Matrix: Water Lab File ID: 0103C007.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1000(mL) Date Analyzed: 01/03/2020 16:09

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*1.69*		*0.40*	
95-50-1	*1,2-Dichlorobenzene*	*1.80*		*0.60*	
541-73-1	*1,3-Dichlorobenzene*	*1.76*		*0.40*	
106-46-7	*1,4-Dichlorobenzene*	*1.78*		*0.40*	
87-68-3	*Hexachlorobutadiene*	*1.63*		*1.0*	
67-72-1	*Hexachloroethane*	*1.74*		*1.0*	
87-86-5	*Pentachlorophenol*	*ND*		*10*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	82		48-125
321-60-8	2-Fluorobiphenyl	92		50-120
367-12-4	2-Fluorophenol (Surr)	89		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	94		46-129
4165-62-2	Phenol-d5 (Surr)	90		38-120
1718-51-0	Terphenyl-d14 (Surr)	91		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318500/3-A

Matrix: Water Lab File ID: 1213A008.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:54

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	0.458		0.20	
95-50-1	1,2-Dichlorobenzene	0.421		0.30	
541-73-1	1,3-Dichlorobenzene	0.324		0.20	
106-46-7	1,4-Dichlorobenzene	0.363		0.20	
90-12-0	1-Methylnaphthalene	0.743		0.50	
95-95-4	2,4,5-Trichlorophenol	0.831		0.20	
88-06-2	2,4,6-Trichlorophenol	0.675		0.30	
120-83-2	2,4-Dichlorophenol	0.791	J	2.0	
105-67-9	2,4-Dimethylphenol	0.505	J	2.0	
51-28-5	2,4-Dinitrophenol	ND		10	
121-14-2	2,4-Dinitrotoluene	0.810		0.50	
606-20-2	2,6-Dinitrotoluene	0.831		0.30	
91-58-7	2-Chloronaphthalene	0.661		0.50	
95-57-8	2-Chlorophenol	0.830		0.30	
91-57-6	2-Methylnaphthalene	0.688		0.20	
95-48-7	2-Methylphenol	0.722		0.30	
88-74-4	2-Nitroaniline	0.762		0.30	
88-75-5	2-Nitrophenol	0.791		0.50	
15831-10-4	3 & 4 Methylphenol	0.699		0.40	
91-94-1	3,3'-Dichlorobenzidine	ND		7.5	
99-09-2	3-Nitroaniline	0.608	J	1.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND		5.0	
101-55-3	4-Bromophenyl phenyl ether	0.735		0.30	
59-50-7	4-Chloro-3-methylphenol	0.709		0.30	
106-47-8	4-Chloroaniline	ND		5.0	
7005-72-3	4-Chlorophenyl phenyl ether	0.698		0.30	
100-01-6	4-Nitroaniline	1.09		1.0	
100-02-7	4-Nitrophenol	1.63	J	7.5	
83-32-9	Acenaphthene	0.723		0.20	
208-96-8	Acenaphthylene	0.724		0.50	
120-12-7	Anthracene	0.678	J	7.5	
56-55-3	Benzo[a]anthracene	0.843		0.50	
50-32-8	Benzo[a]pyrene	0.635		0.50	
205-99-2	Benzo[b]fluoranthene	0.830		0.50	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318500/3-A

Matrix: Water Lab File ID: 1213A008.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:54

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	0.856		0.50	
207-08-9	Benzo[k]fluoranthene	0.744		0.50	
65-85-0	Benzoic acid	0.872	J	2.0	
100-51-6	Benzyl alcohol	0.671	J	1.5	
111-91-1	Bis(2-chloroethoxy)methane	0.802		0.30	
111-44-4	Bis(2-chloroethyl)ether	0.817		0.30	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		7.5	
108-60-1	bis(chloroisopropyl) ether	0.758		0.30	
85-68-7	Butyl benzyl phthalate	1.08	J	5.0	
86-74-8	Carbazole	1.58		0.30	
218-01-9	Chrysene	0.856		0.30	
53-70-3	Dibenz(a,h)anthracene	0.902		0.30	
132-64-9	Dibenzofuran	0.758		0.20	
84-66-2	Diethyl phthalate	0.892	J	6.0	
131-11-3	Dimethyl phthalate	0.888		0.30	
84-74-2	Di-n-butyl phthalate	1.08	J	1.5	
117-84-0	Di-n-octyl phthalate	0.886		0.50	
206-44-0	Fluoranthene	0.910	J	1.5	
86-73-7	Fluorene	0.793	J	1.0	
118-74-1	Hexachlorobenzene	0.783		0.30	
87-68-3	Hexachlorobutadiene	0.0996	J	0.50	
77-47-4	Hexachlorocyclopentadiene	ND		1.5	
67-72-1	Hexachloroethane	0.156	J	0.50	
193-39-5	Indeno[1,2,3-cd]pyrene	0.771		0.50	
78-59-1	Isophorone	0.847		0.20	
91-20-3	Naphthalene	0.769		0.20	
98-95-3	Nitrobenzene	0.817		0.30	
621-64-7	N-Nitrosodi-n-propylamine	0.766		0.30	
86-30-6	N-Nitrosodiphenylamine	0.325	J	1.5	
87-86-5	Pentachlorophenol	ND		5.0	
85-01-8	Phenanthrene	0.791		0.50	
108-95-2	Phenol	0.807	J	2.0	
129-00-0	Pyrene	0.921	J	1.0	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318500/3-A

Matrix: Water Lab File ID: 1213A008.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1000(mL) Date Analyzed: 12/13/2019 11:54

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	83		48-125
321-60-8	2-Fluorobiphenyl	71		50-120
367-12-4	2-Fluorophenol (Surr)	73		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	86		46-129
4165-62-2	Phenol-d5 (Surr)	83		38-120
1718-51-0	Terphenyl-d14 (Surr)	94		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-319850/3-A

Matrix: Water Lab File ID: 0103C008.D

Analysis Method: 8270D Date Collected:

Extract. Method: 3520C Date Extracted: 12/30/2019 13:18

Sample wt/vol: 1000(mL) Date Analyzed: 01/03/2020 16:33

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 319972 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	*1,2,4-Trichlorobenzene*	*1.81*		*0.40*	
95-50-1	*1,2-Dichlorobenzene*	*1.84*		*0.60*	
541-73-1	*1,3-Dichlorobenzene*	*1.82*		*0.40*	
106-46-7	*1,4-Dichlorobenzene*	*1.84*		*0.40*	
87-68-3	*Hexachlorobutadiene*	*1.85*		*1.0*	
67-72-1	*Hexachloroethane*	*1.87*		*1.0*	
87-86-5	*Pentachlorophenol*	*ND*		*10*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	91		48-125
321-60-8	2-Fluorobiphenyl	89		50-120
367-12-4	2-Fluorophenol (Surr)	87		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	92		46-129
4165-62-2	Phenol-d5 (Surr)	95		38-120
1718-51-0	Terphenyl-d14 (Surr)	100		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS | Lab Sample ID: 580-91195-1 MS

Matrix: Water | Lab File ID: 1213A018.D

Analysis Method: 8270D | Date Collected: 12/03/2019 11:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1037.3(mL) | Date Analyzed: 12/13/2019 15:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	1.44		0.39	
95-50-1	1,2-Dichlorobenzene	1.50		0.58	
541-73-1	1,3-Dichlorobenzene	1.48		0.39	
106-46-7	1,4-Dichlorobenzene	1.46		0.39	
90-12-0	1-Methylnaphthalene	1.61		0.96	
95-95-4	2,4,5-Trichlorophenol	1.43		0.39	
88-06-2	2,4,6-Trichlorophenol	1.42		0.58	
120-83-2	2,4-Dichlorophenol	ND		3.9	
105-67-9	2,4-Dimethylphenol	ND		3.9	
51-28-5	2,4-Dinitrophenol	ND		19	
121-14-2	2,4-Dinitrotoluene	1.67		0.96	
606-20-2	2,6-Dinitrotoluene	1.67		0.58	
91-58-7	2-Chloronaphthalene	1.54		0.96	
95-57-8	2-Chlorophenol	1.66		0.58	
91-57-6	2-Methylnaphthalene	1.59		0.39	
95-48-7	2-Methylphenol	1.47		0.58	
88-74-4	2-Nitroaniline	1.62		0.58	
88-75-5	2-Nitrophenol	1.56		0.96	
15831-10-4	3 & 4 Methylphenol	1.44		0.77	
91-94-1	3,3'-Dichlorobenzidine	ND		14	
99-09-2	3-Nitroaniline	ND		2.9	
534-52-1	4,6-Dinitro-2-methylphenol	ND		9.6	
101-55-3	4-Bromophenyl phenyl ether	1.63		0.58	
59-50-7	4-Chloro-3-methylphenol	1.50		0.58	
106-47-8	4-Chloroaniline	ND		9.6	
7005-72-3	4-Chlorophenyl phenyl ether	1.72		0.58	
100-01-6	4-Nitroaniline	ND		1.9	
100-02-7	4-Nitrophenol	ND		14	
83-32-9	Acenaphthene	1.57		0.39	
208-96-8	Acenaphthylene	1.55		0.96	
120-12-7	Anthracene	ND		14	
56-55-3	Benzo[a]anthracene	1.60		0.96	
50-32-8	Benzo[a]pyrene	1.46		0.96	
205-99-2	Benzo[b]fluoranthene	1.75		0.96	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS | Lab Sample ID: 580-91195-1 MS

Matrix: Water | Lab File ID: 1213A018.D

Analysis Method: 8270D | Date Collected: 12/03/2019 11:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1037.3(mL) | Date Analyzed: 12/13/2019 15:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	1.84		0.96	
207-08-9	Benzo[k]fluoranthene	1.70		0.96	
65-85-0	Benzoic acid	ND		3.9	
100-51-6	Benzyl alcohol	ND		2.9	
111-91-1	Bis(2-chloroethoxy)methane	1.62		0.58	
111-44-4	Bis(2-chloroethyl)ether	1.65		0.58	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		14	
108-60-1	bis(chloroisopropyl) ether	1.53		0.58	
85-68-7	Butyl benzyl phthalate	ND		9.6	
86-74-8	Carbazole	3.12		0.58	
218-01-9	Chrysene	1.64		0.58	
53-70-3	Dibenz(a,h)anthracene	1.81		0.58	
132-64-9	Dibenzofuran	1.70		0.39	
84-66-2	Diethyl phthalate	ND		12	
131-11-3	Dimethyl phthalate	1.76		0.58	
84-74-2	Di-n-butyl phthalate	ND		2.9	
117-84-0	Di-n-octyl phthalate	1.85		0.96	
206-44-0	Fluoranthene	ND		2.9	
86-73-7	Fluorene	ND		1.9	
118-74-1	Hexachlorobenzene	1.54		0.58	
87-68-3	Hexachlorobutadiene	1.45		0.96	
77-47-4	Hexachlorocyclopentadiene	ND		2.9	
67-72-1	Hexachloroethane	1.44		0.96	
193-39-5	Indeno[1,2,3-cd]pyrene	1.73		0.96	
78-59-1	Isophorone	1.71		0.39	
91-20-3	Naphthalene	1.59		0.39	
98-95-3	Nitrobenzene	1.64		0.58	
621-64-7	N-Nitrosodi-n-propylamine	1.65		0.58	
86-30-6	N-Nitrosodiphenylamine	ND		2.9	
87-86-5	Pentachlorophenol	ND		9.6	
85-01-8	Phenanthrene	1.62		0.96	
108-95-2	Phenol	ND		3.9	
129-00-0	Pyrene	ND		1.9	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS Lab Sample ID: 580-91195-1 MS

Matrix: Water Lab File ID: 1213A018.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1037.3(mL) Date Analyzed: 12/13/2019 15:47

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	83		48-125
321-60-8	2-Fluorobiphenyl	87		50-120
367-12-4	2-Fluorophenol (Surr)	75		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	88		46-129
4165-62-2	Phenol-d5 (Surr)	88		38-120
1718-51-0	Terphenyl-d14 (Surr)	100		61-126

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD | Lab Sample ID: 580-91195-1 MSD

Matrix: Water | Lab File ID: 1213A019.D

Analysis Method: 8270D | Date Collected: 12/03/2019 11:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1024.4(mL) | Date Analyzed: 12/13/2019 16:11

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
120-82-1	1,2,4-Trichlorobenzene	1.53		0.39	
95-50-1	1,2-Dichlorobenzene	1.54		0.59	
541-73-1	1,3-Dichlorobenzene	1.55		0.39	
106-46-7	1,4-Dichlorobenzene	1.52		0.39	
90-12-0	1-Methylnaphthalene	1.61		0.98	
95-95-4	2,4,5-Trichlorophenol	1.50		0.39	
88-06-2	2,4,6-Trichlorophenol	1.54		0.59	
120-83-2	2,4-Dichlorophenol	ND		3.9	
105-67-9	2,4-Dimethylphenol	ND		3.9	
51-28-5	2,4-Dinitrophenol	ND		20	
121-14-2	2,4-Dinitrotoluene	1.95		0.98	
606-20-2	2,6-Dinitrotoluene	1.89		0.59	
91-58-7	2-Chloronaphthalene	1.56		0.98	
95-57-8	2-Chlorophenol	1.78		0.59	
91-57-6	2-Methylnaphthalene	1.57		0.39	
95-48-7	2-Methylphenol	1.59		0.59	
88-74-4	2-Nitroaniline	1.79		0.59	
88-75-5	2-Nitrophenol	1.61		0.98	
15831-10-4	3 & 4 Methylphenol	1.54		0.78	
91-94-1	3,3'-Dichlorobenzidine	ND		15	
99-09-2	3-Nitroaniline	ND		2.9	
534-52-1	4,6-Dinitro-2-methylphenol	ND		9.8	
101-55-3	4-Bromophenyl phenyl ether	1.89		0.59	
59-50-7	4-Chloro-3-methylphenol	1.54		0.59	
106-47-8	4-Chloroaniline	ND		9.8	
7005-72-3	4-Chlorophenyl phenyl ether	1.79		0.59	
100-01-6	4-Nitroaniline	2.20		2.0	
100-02-7	4-Nitrophenol	ND		15	
83-32-9	Acenaphthene	1.58		0.39	
208-96-8	Acenaphthylene	1.66		0.98	
120-12-7	Anthracene	ND		15	
56-55-3	Benzo[a]anthracene	1.97		0.98	
50-32-8	Benzo[a]pyrene	1.82		0.98	
205-99-2	Benzo[b]fluoranthene	2.05		0.98	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD | Lab Sample ID: 580-91195-1 MSD

Matrix: Water | Lab File ID: 1213A019.D

Analysis Method: 8270D | Date Collected: 12/03/2019 11:00

Extract. Method: 3520C | Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1024.4(mL) | Date Analyzed: 12/13/2019 16:11

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
191-24-2	Benzo[g,h,i]perylene	2.10		0.98	
207-08-9	Benzo[k]fluoranthene	2.01		0.98	
65-85-0	Benzoic acid	ND		3.9	
100-51-6	Benzyl alcohol	ND		2.9	
111-91-1	Bis(2-chloroethoxy)methane	1.60		0.59	
111-44-4	Bis(2-chloroethyl)ether	1.66		0.59	
117-81-7	Bis(2-ethylhexyl) phthalate	ND		15	
108-60-1	bis(chloroisopropyl) ether	1.58		0.59	
85-68-7	Butyl benzyl phthalate	ND		9.8	
86-74-8	Carbazole	3.84		0.59	
218-01-9	Chrysene	1.98		0.59	
53-70-3	Dibenz(a,h)anthracene	1.91		0.59	
132-64-9	Dibenzofuran	1.75		0.39	
84-66-2	Diethyl phthalate	ND		12	
131-11-3	Dimethyl phthalate	2.02		0.59	
84-74-2	Di-n-butyl phthalate	ND		2.9	
117-84-0	Di-n-octyl phthalate	2.11		0.98	
206-44-0	Fluoranthene	ND		2.9	
86-73-7	Fluorene	ND		2.0	
118-74-1	Hexachlorobenzene	1.76		0.59	
87-68-3	Hexachlorobutadiene	1.47		0.98	
77-47-4	Hexachlorocyclopentadiene	ND		2.9	
67-72-1	Hexachloroethane	1.53		0.98	
193-39-5	Indeno[1,2,3-cd]pyrene	2.00		0.98	
78-59-1	Isophorone	1.76		0.39	
91-20-3	Naphthalene	1.64		0.39	
98-95-3	Nitrobenzene	1.70		0.59	
621-64-7	N-Nitrosodi-n-propylamine	1.59		0.59	
86-30-6	N-Nitrosodiphenylamine	ND		2.9	
87-86-5	Pentachlorophenol	ND		9.8	
85-01-8	Phenanthrene	1.91		0.98	
108-95-2	Phenol	ND		3.9	
129-00-0	Pyrene	2.14		2.0	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD Lab Sample ID: 580-91195-1 MSD

Matrix: Water Lab File ID: 1213A019.D

Analysis Method: 8270D Date Collected: 12/03/2019 11:00

Extract. Method: 3520C Date Extracted: 12/09/2019 14:43

Sample wt/vol: 1024.4(mL) Date Analyzed: 12/13/2019 16:11

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 318784 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	93		48-125
321-60-8	2-Fluorobiphenyl	80		50-120
367-12-4	2-Fluorophenol (Surr)	75		36-120
4165-60-0	Nitrobenzene-d5 (Surr)	82		46-129
4165-62-2	Phenol-d5 (Surr)	84		38-120
1718-51-0	Terphenyl-d14 (Surr)	104		61-126

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Start Date: 11/14/2019 14:50

Analysis Batch Number: 316923 End Date: 11/14/2019 20:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 580-316923/2		11/14/2019 14:50	1		ZB-SV 0.25(mm)
CCVRT 580-316923/3		11/14/2019 15:37	1		ZB-SV 0.25(mm)
IC 580-316923/4		11/14/2019 16:00	1		ZB-SV 0.25(mm)
IC 580-316923/5		11/14/2019 16:24	1		ZB-SV 0.25(mm)
IC 580-316923/6		11/14/2019 16:48	1		ZB-SV 0.25(mm)
ICIS 580-316923/7		11/14/2019 17:11	1		ZB-SV 0.25(mm)
IC 580-316923/8		11/14/2019 17:34	1		ZB-SV 0.25(mm)
IC 580-316923/9		11/14/2019 17:58	1		ZB-SV 0.25(mm)
IC 580-316923/10		11/14/2019 18:21	1		ZB-SV 0.25(mm)
IC 580-316923/11		11/14/2019 18:45	1		ZB-SV 0.25(mm)
IC 580-316923/12		11/14/2019 19:08	1		ZB-SV 0.25(mm)
IC 580-316923/13		11/14/2019 19:31	1		ZB-SV 0.25(mm)
ICB 580-316923/14		11/14/2019 19:55	1		ZB-SV 0.25(mm)
ICV 580-316923/15		11/14/2019 20:18	1	1114B017.D	ZB-SV 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Start Date: 12/13/2019 09:39

Analysis Batch Number: 318784 End Date: 12/13/2019 19:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 580-318784/2		12/13/2019 09:39	1	1213A003.D	ZB-SV 0.25(mm)
CCVIS 580-318784/3		12/13/2019 10:06	1	1213A004.D	ZB-SV 0.25(mm)
CCVL 580-318784/4		12/13/2019 10:29	1	1213A005.D	ZB-SV 0.25(mm)
MB 580-318500/1-A		12/13/2019 11:08	1	1213A006.D	ZB-SV 0.25(mm)
LCS 580-318500/2-A		12/13/2019 11:31	1	1213A007.D	ZB-SV 0.25(mm)
LCSD 580-318500/3-A		12/13/2019 11:54	1	1213A008.D	ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 12:18	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 12:41	50		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 13:04	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 13:28	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 13:51	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 14:14	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 14:37	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 15:01	1		ZB-SV 0.25(mm)
580-91195-1		12/13/2019 15:24	1	1213A017.D	ZB-SV 0.25(mm)
580-91195-1 MS		12/13/2019 15:47	1	1213A018.D	ZB-SV 0.25(mm)
580-91195-1 MSD		12/13/2019 16:11	1	1213A019.D	ZB-SV 0.25(mm)
580-91195-2		12/13/2019 16:34	1	1213A020.D	ZB-SV 0.25(mm)
580-91195-3		12/13/2019 16:58	1	1213A021.D	ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 17:21	10		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 17:44	1		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 18:08	100		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 18:31	100		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 18:54	100		ZB-SV 0.25(mm)
ZZZZZ		12/13/2019 19:18	100		ZB-SV 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC051 Start Date: 01/03/2020 14:35

Analysis Batch Number: 319972 End Date: 01/03/2020 21:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 580-319972/2		01/03/2020 14:35	1	0103C003.D	ZB-SV 0.25(mm)
CCVIS 580-319972/3		01/03/2020 14:59	1	0103C004.D	ZB-SV 0.25(mm)
CCVL 580-319972/4		01/03/2020 15:22	1		ZB-SV 0.25(mm)
MB 580-319850/1-A		01/03/2020 15:46	1	0103C006.D	ZB-SV 0.25(mm)
LCS 580-319850/2-A		01/03/2020 16:09	1	0103C007.D	ZB-SV 0.25(mm)
LCSD 580-319850/3-A		01/03/2020 16:33	1	0103C008.D	ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 16:56	10		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 17:20	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 17:43	10		ZB-SV 0.25(mm)
580-91195-1		01/03/2020 18:07	1	0103C012.D	ZB-SV 0.25(mm)
580-91195-2		01/03/2020 18:31	1	0103C013.D	ZB-SV 0.25(mm)
580-91195-3		01/03/2020 18:54	1	0103C014.D	ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 19:18	50		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 19:41	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 20:05	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 20:28	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 20:52	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 21:15	1		ZB-SV 0.25(mm)
ZZZZZ		01/03/2020 21:39	1		ZB-SV 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318500 Batch Start Date: 12/09/19 14:42 Batch Analyst: Guerra, Fernando C

Batch Method: 3520C Batch End Date: 12/12/19 15:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 580-318500/1		3520C, 8270D		1000 g	0 g	1000 mL	1 mL	7 SU	<2 SU
LCS 580-318500/2		3520C, 8270D		1000 g	0 g	1000 mL	1 mL	7 SU	<2 SU
LCSD 580-318500/3		3520C, 8270D		1000 g	0 g	1000 mL	1 mL	7 SU	<2 SU
580-91195-A-1	04Q19LCMW04DW	3520C, 8270D	T	01556.80 g	00513.32 g	1043.5 mL	2 mL	7 SU	<2 SU
580-91195-A-1 MS	04Q19LCMW04DW	3520C, 8270D	T	01545.90 g	00508.61 g	1037.3 mL	2 mL	7 SU	<2 SU
580-91195-A-1 MSD	04Q19LCMW04DW	3520C, 8270D	T	01533.73 g	00509.36 g	1024.4 mL	2 mL	7 SU	<2 SU
580-91195-A-2	04Q19LCMW04SW	3520C, 8270D	T	01549.62 g	00512.91 g	1036.7 mL	2 mL	7 SU	<2 SU
580-91195-B-3	04Q19LCMW140W	3520C, 8270D	T	01550.19 g	00513.46 g	1036.7 mL	2 mL	7 SU	<2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270flspk 00258	8270waterSurr 00084	AnalysisComment		
MB 580-318500/1		3520C, 8270D		>11 SU		50 uL	AB		
LCS 580-318500/2		3520C, 8270D		>11 SU	50 uL	50 uL	AB		
LCSD 580-318500/3		3520C, 8270D		>11 SU	50 uL	50 uL	AB		
580-91195-A-1	04Q19LCMW04DW	3520C, 8270D	T	>11 SU		100 uL	AB		
580-91195-A-1 MS	04Q19LCMW04DW	3520C, 8270D	T	>11 SU	100 uL	100 uL	AB		
580-91195-A-1 MSD	04Q19LCMW04DW	3520C, 8270D	T	>11 SU	100 uL	100 uL	AB		
580-91195-A-2	04Q19LCMW04SW	3520C, 8270D	T	>11 SU		100 uL	AB		
580-91195-B-3	04Q19LCMW140W	3520C, 8270D	T	>11 SU		100 uL	AB		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318500 Batch Start Date: 12/09/19 14:42 Batch Analyst: Guerra, Fernando C

Batch Method: 3520C Batch End Date: 12/12/19 15:04

Batch Notes	
Acid Used for pH Adjustment ID	2525978
Balance ID	SEA225
Batch Comment	Vialed by: FCG MT
Boiling Chips ID	901800
Concentration 1 Thermometer ID	61013-040-1
Concentration 2 Thermometer ID	Digital Readout
Analyst ID - Concentration	FCG
Concentration 1 Corrected Temperature	70-75 Degrees C
Concentration 2 Corrected Temperature	18.1 Degrees C
Equipment ID - Concentration 1	Steam Bath 1
Equipment ID - Concentration 2	Turbovap 5
Analyst ID - Extraction	FCG
Extraction 1 End Time	12/10/2019 16:00
Extraction 1 Start Time	12/09/2019 18:11
Method/Fraction	580-3520C_IVWT/8270C_SIM, 8270D, 8270D_SIM_DOD5
pH Indicator ID	pH 0-6 (6901002), pH 4.5-10 (6901003), pH 7-14 (6807003)
Pipette/Syringe/Dispenser ID	WP1, 50uL syringe
Prep Solvent ID	DCM 2529121
Extraction 2 End Time	12/11/2019 13:12
Extraction 2 Start Time	12/10/2019 18:53
Analyst ID - Spike Analyst	FCG
Sufficient Volume for Batch QC	MB, LCS, LCSD, MS, MSD
Extraction 3 Start Time	12/27/2000 00:00
Concentration 1 Uncorrected Temperature	70-75 Degrees C
Concentration 2 Uncorrected Temperature	20 Degrees C
Vial Lot Number	19133790 , 19201719

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 319850 Batch Start Date: 12/30/19 13:18 Batch Analyst: O'Shaughnessy, Patrick R

Batch Method: 3520C Batch End Date: 01/02/20 17:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 580-319850/1		3520C, 8270D		1000 g	0 g	1000 mL	2 mL	7 SU	<2 SU
LCS 580-319850/2		3520C, 8270D		1000 g	0 g	1000 mL	2 mL	7 SU	<2 SU
LCSD 580-319850/3		3520C, 8270D		1000 g	0 g	1000 mL	2 mL	7 SU	<2 SU
580-91195-B-1	04Q19LCMW04DW	3520C, 8270D	T	1549.25 g	00514.34 g	1034.9 mL	2 mL	7 SU	<2 SU
580-91195-B-2	04Q19LCMW04SW	3520C, 8270D	T	1549.90 g	00515.85 g	1034.1 mL	2 mL	7 SU	<2 SU
580-91195-A-3	04Q19LCMW140W	3520C, 8270D	T	1552.05 g	00512.75 g	1039.3 mL	2 mL	7 SU	<2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270flspk 00258	8270waterSurr 00087	AnalysisComment		
MB 580-319850/1		3520C, 8270D		>11 SU		100 uL	AB		
LCS 580-319850/2		3520C, 8270D		>11 SU	100 uL	100 uL	AB		
LCSD 580-319850/3		3520C, 8270D		>11 SU	100 uL	100 uL	AB. Extraction 3 time is for LCSD.		
580-91195-B-1	04Q19LCMW04DW	3520C, 8270D	T	>11 SU		100 uL	AB		
580-91195-B-2	04Q19LCMW04SW	3520C, 8270D	T	>11 SU		100 uL	AB		
580-91195-A-3	04Q19LCMW140W	3520C, 8270D	T	>11 SU		100 uL	AB		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 319850 Batch Start Date: 12/30/19 13:18 Batch Analyst: O'Shaughnessy, Patrick R

Batch Method: 3520C Batch End Date: 01/02/20 17:50

Batch Notes	
Acid Used for pH Adjustment ID	2525978
Balance ID	SEA225
Base Used to Adjust pH ID	2499576
Batch Comment	Vialed by: FCG
Boiling Chips ID	901800
Concentration 1 Thermometer ID	61013-040-1
Concentration 2 Thermometer ID	Digital Readout
Analyst ID - Concentration	FCG/MT
Concentration 1 Corrected Temperature	70-75 Degrees C
Concentration 2 Corrected Temperature	18.1 Degrees C
Equipment ID - Concentration 1	Steam Bath 1
Equipment ID - Concentration 2	Turbovap 5
Analyst ID - Extraction	PRO
Filter ID	17005216
Extraction 1 End Time	12/31/2019 15:50
Extraction 1 Start Time	12/30/2019 18:20
Method/Fraction	580-3520C_IVWT/ 8270D
Na2SO4 ID	2528231
pH Indicator ID	pH 0-6 (6901002), pH 4.5-10 (6901003), pH 7-14 (6807003)
Pipette/Syringe/Dispenser ID	WP1
Prep Solvent ID	DCM 2544838
Extraction 2 End Time	01/01/2020 15:13
Extraction 2 Start Time	12/31/2019 18:21
Analyst ID - Spike Analyst	PRO
Sufficient Volume for Batch QC	MB, LCS, LCSD
Extraction 3 End Time	01/01/2020 15:13
Extraction 3 Start Time	12/31/2019 20:03
Concentration 1 Uncorrected Temperature	70-75 Degrees C
Concentration 2 Uncorrected Temperature	20 Degrees C
Vial Lot Number	19133790

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 319850 Batch Start Date: 12/30/19 13:18 Batch Analyst: O'Shaughnessy, Patrick R

Batch Method: 3520C Batch End Date: 01/02/20 17:50

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8330B

Nitroaromatics and Nitramines (HPLC) by Method 8330B

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Synergi C18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	DNT1 #
04Q19LCMW04DW	580-91195-1	84
04Q19LCMW04SW	580-91195-2	85
04Q19LCMW140W	580-91195-3	85
	MB 320-343665/1-A	82
	LCS 320-343665/2-A	84
04Q19LCMW04DW MS	580-91195-1 MS	88
04Q19LCMW04DW MSD	580-91195-1 MSD	86

	QC LIMITS
DNT = 3,4-Dinitrotoluene	79-111

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X0000042.D

Lab ID: LCS 320-343665/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.936	94	74-120	
1,3-Dinitrobenzene	1.00	0.977	98	72-123	
2,4,6-Trinitrotoluene	1.00	0.849	85	69-111	
2,4-Dinitrotoluene	1.00	0.929	93	70-119	
2,6-Dinitrotoluene	1.00	0.924	92	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.01	101	77-123	
2-Nitrotoluene	1.00	0.849	85	64-120	
3-Nitrotoluene	1.00	0.928	93	67-114	
4-Nitrotoluene	1.00	0.920	92	67-115	
4-Amino-2,6-dinitrotoluene	1.00	0.913	91	68-113	
HMX	1.00	1.06	106	67-115	
RDX	1.00	1.08	108	68-122	
Nitrobenzene	1.00	0.978	98	69-119	
Tetryl	1.00	0.856	86	66-105	
Nitroglycerin	5.00	4.57	91	85-115	
PETN	5.00	4.37	87	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X0000046.D

Lab ID: 580-91195-1 MS Client ID: 04Q19LCMW04DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.05	ND	1.00	96	74-120	
1,3-Dinitrobenzene	1.05	ND	1.07	102	72-123	
2,4,6-Trinitrotoluene	1.05	ND	0.923	88	69-111	
2,4-Dinitrotoluene	1.05	ND	1.03	98	70-119	
2,6-Dinitrotoluene	1.05	ND	1.02	97	71-119	
2-Amino-4,6-dinitrotoluene	1.05	ND	1.13	108	77-123	
2-Nitrotoluene	1.05	ND	0.973	93	64-120	
3-Nitrotoluene	1.05	ND	0.994	95	67-114	
4-Nitrotoluene	1.05	ND	1.00	96	67-115	
4-Amino-2,6-dinitrotoluene	1.05	ND	0.990	95	68-113	
HMX	1.05	ND	1.13	108	67-115	
RDX	1.05	ND	1.15	110	68-122	
Nitrobenzene	1.05	ND	1.07	102	69-119	
Tetryl	1.05	ND	0.930	89	66-105	
Nitroglycerin	5.23	ND	4.92	94	85-115	
PETN	5.23	ND	4.86	93	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: X0000047.D

Lab ID: 580-91195-1 MSD Client ID: 04Q19LCMW04DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.06	0.976	92	2	29	74-120	
1,3-Dinitrobenzene	1.06	1.01	95	6	29	72-123	
2,4,6-Trinitrotoluene	1.06	0.885	83	4	28	69-111	
2,4-Dinitrotoluene	1.06	0.976	92	5	30	70-119	
2,6-Dinitrotoluene	1.06	0.951	89	7	29	71-119	
2-Amino-4,6-dinitrotoluene	1.06	1.10	103	3	27	77-123	
2-Nitrotoluene	1.06	0.919	86	6	36	64-120	
3-Nitrotoluene	1.06	0.944	89	5	31	67-114	
4-Nitrotoluene	1.06	0.923	87	8	32	67-115	
4-Amino-2,6-dinitrotoluene	1.06	0.951	89	4	30	68-113	
HMX	1.06	1.09	102	3	32	67-115	
RDX	1.06	1.12	105	3	32	68-122	
Nitrobenzene	1.06	0.991	93	7	31	69-119	
Tetryl	1.06	0.885	83	5	26	66-105	
Nitroglycerin	5.32	4.96	93	1	15	85-115	
PETN	5.32	4.84	91	0	15	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: MB 320-343665/1-A

Matrix: Water Date Extracted: 12/06/2019 12:05

Lab File ID:(1) X0000041.D Lab File ID:(2)

Date Analyzed:(1) 12/26/2019 05:59 Date Analyzed:(2)

Instrument ID:(1) LC11 Instrument ID:(2)

GC Column:(1) Synergi C18 ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 320-343665/2-A	12/26/2019 06:53	
04Q19LCMW04DW	580-91195-1	12/26/2019 09:34	
04Q19LCMW04DW MS	580-91195-1 MS	12/26/2019 10:28	
04Q19LCMW04DW MSD	580-91195-1 MSD	12/26/2019 11:21	
04Q19LCMW04SW	580-91195-2	12/26/2019 13:08	
04Q19LCMW140W	580-91195-3	12/26/2019 15:49	

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Sample No.: CCVRT 320-347605/3 Date Analyzed: 12/24/2019 20:03

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): X0000003.D Heated Purge: (Y/N) N

Calibration ID: 48472

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				29.14		
UPPER LIMIT				29.39		
LOWER LIMIT				28.89		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-347605/3		12/24/2019 20:03	X0000003.D	29.14		
CCV 320-347605/37		12/26/2019 02:25	X0000037.D	29.11		
MB 320-343665/1-A		12/26/2019 05:59	X0000041.D	29.13		
LCS 320-343665/2-A		12/26/2019 06:53	X0000042.D	29.12		
580-91195-1	04Q19LCMW04DW	12/26/2019 09:34	X0000045.D	29.10		
580-91195-1 MS	04Q19LCMW04DW MS	12/26/2019 10:28	X0000046.D	29.10		
580-91195-1 MSD	04Q19LCMW04DW MSD	12/26/2019 11:21	X0000047.D	29.08		
CCV 320-347605/48		12/26/2019 12:15	X0000048.D	29.12		
580-91195-2	04Q19LCMW04SW	12/26/2019 13:08	X0000049.D	29.11		
580-91195-3	04Q19LCMW140W	12/26/2019 15:49	X0000052.D	29.10		
CCV 320-347605/60		12/26/2019 22:58	X0000060.D	29.10		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330B

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: X0000045.D

Analysis Method: 8330B Date Collected: 12/03/2019 11:00

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 962.8(mL) Date Analyzed: 12/26/2019 09:34

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.10	
99-65-0	1,3-Dinitrobenzene	ND		0.10	
118-96-7	2,4,6-Trinitrotoluene	ND		0.10	
121-14-2	2,4-Dinitrotoluene	ND		0.10	
606-20-2	2,6-Dinitrotoluene	ND		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.21	
88-72-2	2-Nitrotoluene	ND		0.52	
99-08-1	3-Nitrotoluene	ND		0.52	
99-99-0	4-Nitrotoluene	ND		0.52	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.10	
2691-41-0	HMX	ND		0.10	
121-82-4	RDX	ND		0.10	
98-95-3	Nitrobenzene	ND		0.10	
479-45-8	Tetryl	ND		0.10	
55-63-0	Nitroglycerin	ND		0.68	
78-11-5	PETN	ND		0.68	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: X0000049.D

Analysis Method: 8330B Date Collected: 12/03/2019 12:20

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 947.5(mL) Date Analyzed: 12/26/2019 13:08

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	ND		0.11	
121-14-2	2,4-Dinitrotoluene	ND		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.21	
88-72-2	2-Nitrotoluene	ND		0.53	
99-08-1	3-Nitrotoluene	ND		0.53	
99-99-0	4-Nitrotoluene	ND		0.53	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	ND		0.11	
121-82-4	RDX	ND		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.69	
78-11-5	PETN	ND		0.69	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	85		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: X0000052.D

Analysis Method: 8330B Date Collected: 12/03/2019 12:00

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 940.4(mL) Date Analyzed: 12/26/2019 15:49

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	ND		0.11	
121-14-2	2,4-Dinitrotoluene	ND		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.21	
88-72-2	2-Nitrotoluene	ND		0.53	
99-08-1	3-Nitrotoluene	ND		0.53	
99-99-0	4-Nitrotoluene	ND		0.53	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	ND		0.11	
121-82-4	RDX	ND		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.69	
78-11-5	PETN	ND		0.69	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	85		79-111

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
HMX	17.595	17.566	17.592	17.577	17.581	17.597	17.580				17.331 - 17.831	17.584
RDX	20.265	20.246	20.248	20.250	20.241	20.247	20.230				19.991 - 20.491	20.247
1,3,5-Trinitrobenzene	21.995	21.993	21.992	21.987	21.984	21.984	21.970				21.734 - 22.234	21.986
1,3-Dinitrobenzene	24.288	24.280	24.265	24.270	24.261	24.267	24.247				24.011 - 24.511	24.268
3,5-Dinitroaniline	25.215	25.193	25.192	25.197	25.181	25.194	25.173				24.931 - 25.431	25.192
Nitrobenzene	25.945	25.943	25.932	25.937	25.914	25.920	25.903				25.664 - 26.164	25.928
Tetryl	26.271	26.270	26.245	26.250	26.237	26.247	26.240				25.987 - 26.487	26.251
Nitroglycerin		26.916	26.922	26.910	26.894	26.904	26.900				26.644 - 27.144	26.908
2,4,6-Trinitrotoluene	27.505	27.490	27.488	27.497	27.474	27.484	+++++				27.224 - 27.724	27.490
4-Amino-2,6-dinitrotoluene	28.411	28.436	28.415	28.423	28.387	28.390	28.397				28.047 - 28.727	28.408
2-Amino-4,6-dinitrotoluene	29.048	29.050	29.028	29.053	29.007	29.010	29.017				28.627 - 29.387	29.030
2,6-Dinitrotoluene	30.405	30.413	30.385	30.410	30.367	30.364	30.387				30.067 - 30.667	30.390
2,4-Dinitrotoluene	30.805	30.810	30.792	30.813	30.767	30.770	30.790				30.457 - 31.077	30.792
2-Nitrotoluene	33.995	33.996	33.978	33.980	33.937	33.940	33.980				33.607 - 34.267	33.972
4-Nitrotoluene	35.338	35.316	35.338	35.353	35.301	35.307	35.350				34.941 - 35.661	35.329
3-Nitrotoluene	36.944	36.920	36.875	36.920	36.877	36.887	36.930				36.477 - 37.277	36.908
PETN	37.444	37.496	37.485	37.533	37.494	37.507	37.570				37.084 - 37.904	37.504
3,4-Dinitrotoluene	28.831	28.830	28.825	28.827	28.837	28.807	+++++				28.587 - 29.087	28.826

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
HMX	71.000 64.560	67.100 65.105	66.400 58.170	65.560	Ave		65.4135714				5.9		20.0			
RDX	79.800 79.530	80.800 79.630	80.500 71.512	80.000	Lin2	15.6911495	77.9570750							0.9980		0.9900
1,3,5-Trinitrobenzene	213.20 209.79	209.90 211.78	208.85 196.57	209.62	Lin2	35.2040066	206.584007							0.9990		0.9900
1,3-Dinitrobenzene	204.40 200.08	202.00 201.87	201.00 187.35	200.34	Lin2	40.6376708	197.329889							0.9990		0.9900
3,5-Dinitroaniline	149.00 145.62	143.60 146.94	144.70 136.01	145.50	Lin2	26.9889177	142.988898							0.9990		0.9900
Nitrobenzene	112.00 111.22	111.80 112.64	111.55 104.16	110.36	Lin2	14.9319617	109.706904							0.9990		0.9900
Tetryl	82.000 78.380	77.300 79.920	78.350 75.118	77.520	Lin2	19.0449344	77.3168015							0.9990		0.9900
Nitroglycerin	 91.960	92.000 92.915	90.600 85.922	90.980	Lin2	19.3314431	90.1270034							0.9990		0.9900
2,4,6-Trinitrotoluene	96.200 92.380	93.500 94.190	92.700 +++++	92.520	Ave		93.5816667				1.6		20.0			
4-Amino-2,6-dinitrotoluene	81.200 83.560	80.500 85.055	84.050 79.508	83.120	Lin2	-10.263799	82.9950129							0.9990		0.9900
2-Amino-4,6-dinitrotoluene	114.00 116.43	112.40 118.03	115.95 111.09	115.02	Lin2	-8.6970565	115.182680							0.9990		0.9900
2,6-Dinitrotoluene	76.400 71.180	73.800 72.405	72.900 67.682	71.100	Lin2	31.3303016	70.4774533							0.9990		0.9900
2,4-Dinitrotoluene	137.20 130.42	131.50 132.75	132.10 124.59	130.24	Lin2	38.5811483	129.124014							0.9990		0.9900
2-Nitrotoluene	1273.8 1187.9	1234.2 1205.9	1243.7 1147.0	1181.5	Lin2	496.648627	1183.09400							0.9990		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
4-Nitrotoluene	1635.2 1592.6	1587.7 1620.6	1539.1 1536.9	1549.7	Lin2	294.034611	1563.99766							0.9990		0.9900
3-Nitrotoluene	72.000 65.020	67.100 65.855	65.350 62.138	64.660	Lin2	38.7454320	63.8755025							1.0000		0.9900
PETN	62.800 54.110	57.700 54.155	46.250 52.304	53.880	Lin2	49.3694193	51.7275764							0.9930		0.9900
3,4-Dinitrotoluene	74.000 75.830	69.900 76.610	76.300 +++++	74.900	Lin2	-16.694424	75.6612255							0.9990		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
HMX	Ave	355 13021	671 29085	1328	3278	6456	5.00 200	10.0 500	20.0	50.0	100
RDX	Lin2	399 15926	808 35756	1610	4000	7953	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Lin2	1066 42356	2099 98286	4177	10481	20979	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Lin2	1022 40374	2020 93673	4020	10017	20008	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Lin2	745 29387	1436 68006	2894	7275	14562	5.00 200	10.0 500	20.0	50.0	100
Nitrobenzene	Lin2	560 22527	1118 52081	2231	5518	11122	5.00 200	10.0 500	20.0	50.0	100
Tetryl	Lin2	410 15984	773 37559	1567	3876	7838	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Lin2	 18583	920 42961	1812	4549	9196	 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	481 18838	935 +++++	1854	4626	9238	5.00 200	10.0 +++++	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Lin2	406 17011	805 39754	1681	4156	8356	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Lin2	570 23605	1124 55544	2319	5751	11643	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Lin2	382 14481	738 33841	1458	3555	7118	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Lin2	686 26549	1315 62297	2642	6512	13042	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Lin2	6369 241181	12342 573483	24873	59074	118786	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Lin2	8176 324119	15877 768470	30781	77486	159257	5.00 200	10.0 500	20.0	50.0	100

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Nitrotoluene	Lin2	360 13171	671 31069	1307	3233	6502	5.00 200	10.0 500	20.0	50.0	100
PETN	Lin2	314 10831	577 26152	925	2694	5411	5.00 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Lin2	370 15322	699 +++++	1526	3745	7583	5.00 200	10.0 +++++	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 320-346162/12 Calibration Date: 12/18/2019 05:13

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: O0000030.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	60.15		184	200	-8.1	20.0
RDX	Lin2		74.01		190	200	-5.2	20.0
1,3,5-Trinitrobenzene	Lin2		202.2		196	200	-2.2	20.0
1,3-Dinitrobenzene	Lin2		187.6		190	200	-5.0	20.0
3,5-Dinitroaniline	Lin2		138.7		194	200	-3.1	20.0
Nitrobenzene	Lin2		102.3		186	200	-6.8	20.0
Tetryl	Lin2		69.56		180	200	-10.2	20.0
Nitroglycerin	Lin2		93.80		208	200	4.0	20.0
2,4,6-Trinitrotoluene	Ave	93.58	79.75		170	200	-14.8	20.0
4-Amino-2,6-dinitrotoluene	Lin2		78.64		190	200	-5.2	20.0
2-Amino-4,6-dinitrotoluene	Lin2		100.8		175	200	-12.4	20.0
2,6-Dinitrotoluene	Lin2		66.09		187	200	-6.5	20.0
2,4-Dinitrotoluene	Lin2		124.2		192	200	-4.0	20.0
2-Nitrotoluene	Lin2		1091		184	200	-8.0	20.0
4-Nitrotoluene	Lin2		1431		183	200	-8.6	20.0
3-Nitrotoluene	Lin2		63.29		198	200	-1.2	20.0
PETN	Lin2		49.13		189	200	-5.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 320-346162/12 Calibration Date: 12/18/2019 05:13

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: O0000030.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.60	17.33	17.83
RDX	20.24	19.99	20.49
1,3,5-Trinitrobenzene	21.98	21.73	22.23
1,3-Dinitrobenzene	24.25	24.01	24.51
3,5-Dinitroaniline	25.17	24.93	25.43
Nitrobenzene	25.90	25.66	26.16
Tetryl	26.23	25.99	26.49
Nitroglycerin	26.88	26.64	27.14
2,4,6-Trinitrotoluene	27.46	27.22	27.72
4-Amino-2,6-dinitrotoluene	28.37	28.05	28.73
2-Amino-4,6-dinitrotoluene	29.00	28.63	29.39
2,6-Dinitrotoluene	30.35	30.07	30.67
2,4-Dinitrotoluene	30.75	30.46	31.08
2-Nitrotoluene	33.92	33.61	34.27
4-Nitrotoluene	35.28	34.94	35.66
3-Nitrotoluene	36.86	36.48	37.28
PETN	37.50	37.08	37.90

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVRT 320-347605/3 Calibration Date: 12/24/2019 20:03

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		97.74		48.5	50.0	-3.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVRT 320-347605/3 Calibration Date: 12/24/2019 20:03

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.66	19.41	19.91

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVRT 320-347605/3 Calibration Date: 12/24/2019 20:03

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	64.70		49.5	50.0	-1.1	20.0
RDX	Lin2		77.20		49.3	50.0	-1.4	20.0
1,3,5-Trinitrobenzene	Lin2		193.6		46.7	50.0	-6.6	20.0
1,3-Dinitrobenzene	Lin2		194.4		49.0	50.0	-1.9	20.0
3,5-Dinitroaniline	Lin2		144.4		50.3	50.0	0.6	20.0
Nitrobenzene	Lin2		109.4		49.7	50.0	-0.5	20.0
Tetryl	Lin2		76.70		49.4	50.0	-1.3	20.0
Nitroglycerin	Lin2		90.60		50.0	50.0	0.1	20.0
2,4,6-Trinitrotoluene	Ave	93.58	90.28		48.2	50.0	-3.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		80.76		48.8	50.0	-2.4	20.0
2-Amino-4,6-dinitrotoluene	Lin2		113.3		49.2	50.0	-1.5	20.0
2,6-Dinitrotoluene	Lin2		69.92		49.2	50.0	-1.7	20.0
2,4-Dinitrotoluene	Lin2		128.6		49.5	50.0	-1.0	20.0
2-Nitrotoluene	Lin2		1175		49.2	50.0	-1.5	20.0
4-Nitrotoluene	Lin2		1582		50.4	50.0	0.8	20.0
3-Nitrotoluene	Lin2		63.70		49.3	50.0	-1.5	20.0
PETN	Lin2		54.04		51.3	50.0	2.6	20.0
3,4-Dinitrotoluene	Lin2		72.50		48.1	50.0	-3.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVRT 320-347605/3 Calibration Date: 12/24/2019 20:03

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.75	17.50	18.00
RDX	20.38	20.13	20.63
1,3,5-Trinitrobenzene	22.15	21.90	22.40
1,3-Dinitrobenzene	24.56	24.31	24.81
3,5-Dinitroaniline	25.50	25.25	25.75
Nitrobenzene	26.22	25.97	26.47
Tetryl	26.56	26.31	26.81
Nitroglycerin	27.22	26.97	27.47
2,4,6-Trinitrotoluene	27.78	27.53	28.03
4-Amino-2,6-dinitrotoluene	28.75	28.41	29.09
2-Amino-4,6-dinitrotoluene	29.37	28.99	29.75
2,6-Dinitrotoluene	30.72	30.42	31.02
2,4-Dinitrotoluene	31.12	30.81	31.43
2-Nitrotoluene	34.29	33.96	34.62
4-Nitrotoluene	35.66	35.30	36.02
3-Nitrotoluene	37.22	36.82	37.62
PETN	37.84	37.43	38.25
3,4-Dinitrotoluene	29.14	28.89	29.39

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/37 Calibration Date: 12/26/2019 02:25

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000037.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		96.98		48.1	50.0	-3.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/37 Calibration Date: 12/26/2019 02:25

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000037.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.64	19.39	19.89

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/37 Calibration Date: 12/26/2019 02:25

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000037.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	65.58		50.1	50.0	0.3	20.0
RDX	Lin2		78.28		50.0	50.0	0.0	20.0
1,3,5-Trinitrobenzene	Lin2		194.8		47.0	50.0	-6.0	20.0
1,3-Dinitrobenzene	Lin2		196.0		49.4	50.0	-1.1	20.0
3,5-Dinitroaniline	Lin2		144.6		50.4	50.0	0.7	20.0
Nitrobenzene	Lin2		109.0		49.5	50.0	-1.0	20.0
Tetryl	Lin2		77.34		49.8	50.0	-0.5	20.0
Nitroglycerin	Lin2		90.56		50.0	50.0	0.0	20.0
2,4,6-Trinitrotoluene	Ave	93.58	91.32		48.8	50.0	-2.4	20.0
4-Amino-2,6-dinitrotoluene	Lin2		81.00		48.9	50.0	-2.2	20.0
2-Amino-4,6-dinitrotoluene	Lin2		112.8		49.0	50.0	-1.9	20.0
2,6-Dinitrotoluene	Lin2		70.10		49.3	50.0	-1.4	20.0
2,4-Dinitrotoluene	Lin2		128.1		49.3	50.0	-1.4	20.0
2-Nitrotoluene	Lin2		1204		50.5	50.0	1.0	20.0
4-Nitrotoluene	Lin2		1603		51.1	50.0	2.1	20.0
3-Nitrotoluene	Lin2		63.24		48.9	50.0	-2.2	20.0
PETN	Lin2		55.64		52.8	50.0	5.7	20.0
3,4-Dinitrotoluene	Lin2		72.60		48.2	50.0	-3.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/37 Calibration Date: 12/26/2019 02:25

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000037.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.72	17.47	17.97
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.14	21.89	22.39
1,3-Dinitrobenzene	24.55	24.30	24.80
3,5-Dinitroaniline	25.50	25.25	25.75
Nitrobenzene	26.21	25.96	26.46
Tetryl	26.55	26.30	26.80
Nitroglycerin	27.21	26.96	27.46
2,4,6-Trinitrotoluene	27.77	27.52	28.02
4-Amino-2,6-dinitrotoluene	28.74	28.40	29.08
2-Amino-4,6-dinitrotoluene	29.37	28.99	29.75
2,6-Dinitrotoluene	30.70	30.40	31.00
2,4-Dinitrotoluene	31.10	30.79	31.41
2-Nitrotoluene	34.29	33.96	34.62
4-Nitrotoluene	35.66	35.30	36.02
3-Nitrotoluene	37.24	36.84	37.64
PETN	37.84	37.43	38.25
3,4-Dinitrotoluene	29.11	28.86	29.36

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/48 Calibration Date: 12/26/2019 12:15

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000048.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		96.92		48.1	50.0	-3.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/48 Calibration Date: 12/26/2019 12:15

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000048.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.63	19.38	19.88

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/48 Calibration Date: 12/26/2019 12:15

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000048.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	65.88		50.4	50.0	0.7	20.0
RDX	Lin2		78.38		50.1	50.0	0.1	20.0
1,3,5-Trinitrobenzene	Lin2		197.4		47.6	50.0	-4.8	20.0
1,3-Dinitrobenzene	Lin2		198.2		50.0	50.0	0.0	20.0
3,5-Dinitroaniline	Lin2		146.3		51.0	50.0	2.0	20.0
Nitrobenzene	Lin2		107.4		48.8	50.0	-2.4	20.0
Tetryl	Lin2		78.30		50.4	50.0	0.8	20.0
Nitroglycerin	Lin2		90.02		49.7	50.0	-0.5	20.0
2,4,6-Trinitrotoluene	Ave	93.58	92.22		49.3	50.0	-1.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		81.82		49.4	50.0	-1.2	20.0
2-Amino-4,6-dinitrotoluene	Lin2		115.3		50.1	50.0	0.3	20.0
2,6-Dinitrotoluene	Lin2		70.98		49.9	50.0	-0.2	20.0
2,4-Dinitrotoluene	Lin2		130.7		50.3	50.0	0.6	20.0
2-Nitrotoluene	Lin2		1139		47.7	50.0	-4.6	20.0
4-Nitrotoluene	Lin2		1555		49.5	50.0	-0.9	20.0
3-Nitrotoluene	Lin2		62.40		48.2	50.0	-3.5	20.0
PETN	Lin2		55.98		53.2	50.0	6.3	20.0
3,4-Dinitrotoluene	Lin2		74.34		49.3	50.0	-1.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/48 Calibration Date: 12/26/2019 12:15

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000048.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.71	17.46	17.96
RDX	20.36	20.11	20.61
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.53	24.28	24.78
3,5-Dinitroaniline	25.48	25.23	25.73
Nitrobenzene	26.20	25.95	26.45
Tetryl	26.53	26.28	26.78
Nitroglycerin	27.19	26.94	27.44
2,4,6-Trinitrotoluene	27.75	27.50	28.00
4-Amino-2,6-dinitrotoluene	28.71	28.37	29.05
2-Amino-4,6-dinitrotoluene	29.33	28.95	29.71
2,6-Dinitrotoluene	30.67	30.37	30.97
2,4-Dinitrotoluene	31.07	30.76	31.38
2-Nitrotoluene	34.25	33.92	34.58
4-Nitrotoluene	35.60	35.24	35.96
3-Nitrotoluene	37.17	36.77	37.57
PETN	37.78	37.37	38.19
3,4-Dinitrotoluene	29.12	28.87	29.37

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/60 Calibration Date: 12/26/2019 22:58

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000060.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		99.34		49.3	50.0	-1.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/60 Calibration Date: 12/26/2019 22:58

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: X0000060.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.61	19.36	19.86

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/60 Calibration Date: 12/26/2019 22:58

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000060.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	64.58		49.4	50.0	-1.3	20.0
RDX	Lin2		76.98		49.2	50.0	-1.7	20.0
1,3,5-Trinitrobenzene	Lin2		193.5		46.7	50.0	-6.7	20.0
1,3-Dinitrobenzene	Lin2		195.5		49.3	50.0	-1.3	20.0
3,5-Dinitroaniline	Lin2		144.6		50.4	50.0	0.7	20.0
Nitrobenzene	Lin2		109.9		49.9	50.0	-0.1	20.0
Tetryl	Lin2		77.00		49.5	50.0	-0.9	20.0
Nitroglycerin	Lin2		94.76		52.4	50.0	4.7	20.0
2,4,6-Trinitrotoluene	Ave	93.58	90.34		48.3	50.0	-3.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		80.60		48.7	50.0	-2.6	20.0
2-Amino-4,6-dinitrotoluene	Lin2		113.7		49.4	50.0	-1.1	20.0
2,6-Dinitrotoluene	Lin2		69.68		49.0	50.0	-2.0	20.0
2,4-Dinitrotoluene	Lin2		128.1		49.3	50.0	-1.4	20.0
2-Nitrotoluene	Lin2		1184		49.6	50.0	-0.8	20.0
4-Nitrotoluene	Lin2		1554		49.5	50.0	-1.0	20.0
3-Nitrotoluene	Lin2		63.86		49.4	50.0	-1.2	20.0
PETN	Lin2		52.76		50.0	50.0	0.0	20.0
3,4-Dinitrotoluene	Lin2		73.26		48.6	50.0	-2.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-347605/60 Calibration Date: 12/26/2019 22:58

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: X0000060.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.68	17.43	17.93
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.53	24.28	24.78
3,5-Dinitroaniline	25.47	25.22	25.72
Nitrobenzene	26.19	25.94	26.44
Tetryl	26.51	26.26	26.76
Nitroglycerin	27.18	26.93	27.43
2,4,6-Trinitrotoluene	27.74	27.49	27.99
4-Amino-2,6-dinitrotoluene	28.70	28.36	29.04
2-Amino-4,6-dinitrotoluene	29.32	28.94	29.70
2,6-Dinitrotoluene	30.67	30.37	30.97
2,4-Dinitrotoluene	31.07	30.76	31.38
2-Nitrotoluene	34.24	33.91	34.57
4-Nitrotoluene	35.61	35.25	35.97
3-Nitrotoluene	37.18	36.78	37.58
PETN	37.79	37.38	38.20
3,4-Dinitrotoluene	29.10	28.85	29.35

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-343665/1-A

Matrix: Water Lab File ID: X0000041.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 1000(mL) Date Analyzed: 12/26/2019 05:59

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.10	
99-65-0	1,3-Dinitrobenzene	ND		0.10	
118-96-7	2,4,6-Trinitrotoluene	ND		0.10	
121-14-2	2,4-Dinitrotoluene	ND		0.10	
606-20-2	2,6-Dinitrotoluene	ND		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.20	
88-72-2	2-Nitrotoluene	ND		0.50	
99-08-1	3-Nitrotoluene	ND		0.50	
99-99-0	4-Nitrotoluene	ND		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.10	
2691-41-0	HMX	ND		0.10	
121-82-4	RDX	ND		0.10	
98-95-3	Nitrobenzene	ND		0.10	
479-45-8	Tetryl	ND		0.10	
55-63-0	Nitroglycerin	ND		0.65	
78-11-5	PETN	ND		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	82		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-343665/2-A

Matrix: Water Lab File ID: X0000042.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 1000(mL) Date Analyzed: 12/26/2019 06:53

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.936		0.10	
99-65-0	1,3-Dinitrobenzene	0.977		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.849		0.10	
121-14-2	2,4-Dinitrotoluene	0.929		0.10	
606-20-2	2,6-Dinitrotoluene	0.924		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.01		0.20	
88-72-2	2-Nitrotoluene	0.849		0.50	
99-08-1	3-Nitrotoluene	0.928		0.50	
99-99-0	4-Nitrotoluene	0.920		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.913		0.10	
2691-41-0	HMX	1.06		0.10	
121-82-4	RDX	1.08		0.10	
98-95-3	Nitrobenzene	0.978		0.10	
479-45-8	Tetryl	0.856		0.10	
55-63-0	Nitroglycerin	4.57		0.65	
78-11-5	PETN	4.37		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MS Lab Sample ID: 580-91195-1 MS

Matrix: Water Lab File ID: X0000046.D

Analysis Method: 8330B Date Collected: 12/03/2019 11:00

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 956(mL) Date Analyzed: 12/26/2019 10:28

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	1.00		0.10	
99-65-0	1,3-Dinitrobenzene	1.07		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.923		0.10	
121-14-2	2,4-Dinitrotoluene	1.03		0.10	
606-20-2	2,6-Dinitrotoluene	1.02		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.13		0.21	
88-72-2	2-Nitrotoluene	0.973		0.52	
99-08-1	3-Nitrotoluene	0.994		0.52	
99-99-0	4-Nitrotoluene	1.00		0.52	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.990		0.10	
2691-41-0	HMX	1.13		0.10	
121-82-4	RDX	1.15		0.10	
98-95-3	Nitrobenzene	1.07		0.10	
479-45-8	Tetryl	0.930		0.10	
55-63-0	Nitroglycerin	4.92		0.68	
78-11-5	PETN	4.86		0.68	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	88		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW MSD Lab Sample ID: 580-91195-1 MSD

Matrix: Water Lab File ID: X0000047.D

Analysis Method: 8330B Date Collected: 12/03/2019 11:00

Extraction Method: 8330-Prep Date Extracted: 12/06/2019 12:05

Sample wt/vol: 939.1(mL) Date Analyzed: 12/26/2019 11:21

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347605 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.976		0.11	
99-65-0	1,3-Dinitrobenzene	1.01		0.11	
118-96-7	2,4,6-Trinitrotoluene	0.885		0.11	
121-14-2	2,4-Dinitrotoluene	0.976		0.11	
606-20-2	2,6-Dinitrotoluene	0.951		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.10		0.21	
88-72-2	2-Nitrotoluene	0.919		0.53	
99-08-1	3-Nitrotoluene	0.944		0.53	
99-99-0	4-Nitrotoluene	0.923		0.53	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.951		0.11	
2691-41-0	HMX	1.09		0.11	
121-82-4	RDX	1.12		0.11	
98-95-3	Nitrobenzene	0.991		0.11	
479-45-8	Tetryl	0.885		0.11	
55-63-0	Nitroglycerin	4.96		0.69	
78-11-5	PETN	4.84		0.69	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	86		79-111

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Start Date: 12/17/2019 22:04

Analysis Batch Number: 346162 End Date: 12/18/2019 05:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-346162/4 IC		12/17/2019 22:04	1	O0000022.D	Synergi C18 4.6(mm)
STD2 320-346162/5 IC		12/17/2019 22:57	1	O0000023.D	Synergi C18 4.6(mm)
STD3 320-346162/6 IC		12/17/2019 23:51	1	O0000024.D	Synergi C18 4.6(mm)
STD4 320-346162/7 IC		12/18/2019 00:45	1	O0000025.D	Synergi C18 4.6(mm)
STD5 320-346162/8 IC		12/18/2019 01:38	1	O0000026.D	Synergi C18 4.6(mm)
STD6 320-346162/9 IC		12/18/2019 02:32	1	O0000027.D	Synergi C18 4.6(mm)
STD7 320-346162/13 IC		12/18/2019 03:25	1	O0000028.D	Synergi C18 4.6(mm)
ICV 320-346162/12		12/18/2019 05:13	1	O0000030.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Instrument ID: LC11 Start Date: 12/24/2019 20:03

Analysis Batch Number: 347605 End Date: 12/27/2019 07:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-347605/3		12/24/2019 20:03	1	X0000003.D	Synergi C18 4.6(mm)
CCV 320-347605/15		12/25/2019 06:46	1		Synergi C18 4.6(mm)
CCV 320-347605/26		12/25/2019 16:35	1		Synergi C18 4.6(mm)
CCV 320-347605/37		12/26/2019 02:25	1	X0000037.D	Synergi C18 4.6(mm)
MB 320-343665/1-A		12/26/2019 05:59	1	X0000041.D	Synergi C18 4.6(mm)
LCS 320-343665/2-A		12/26/2019 06:53	1	X0000042.D	Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 07:47	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 08:40	1		Synergi C18 4.6(mm)
580-91195-1		12/26/2019 09:34	1	X0000045.D	Synergi C18 4.6(mm)
580-91195-1 MS		12/26/2019 10:28	1	X0000046.D	Synergi C18 4.6(mm)
580-91195-1 MSD		12/26/2019 11:21	1	X0000047.D	Synergi C18 4.6(mm)
CCV 320-347605/48		12/26/2019 12:15	1	X0000048.D	Synergi C18 4.6(mm)
580-91195-2		12/26/2019 13:08	1	X0000049.D	Synergi C18 4.6(mm)
580-91195-3		12/26/2019 15:49	1	X0000052.D	Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 16:43	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 17:36	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 19:23	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 20:17	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 21:11	1		Synergi C18 4.6(mm)
ZZZZZ		12/26/2019 22:04	1		Synergi C18 4.6(mm)
CCV 320-347605/60		12/26/2019 22:58	1	X0000060.D	Synergi C18 4.6(mm)
ZZZZZ		12/27/2019 00:45	1		Synergi C18 4.6(mm)
ZZZZZ		12/27/2019 01:39	1		Synergi C18 4.6(mm)
ZZZZZ		12/27/2019 02:32	1		Synergi C18 4.6(mm)
ZZZZZ		12/27/2019 03:26	1		Synergi C18 4.6(mm)
CCV 320-347605/70		12/27/2019 07:01	1		Synergi C18 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91195-1

SDG No.:

Batch Number: 343665 Batch Start Date: 12/06/19 12:04 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date: 12/09/19 08:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00127	HP8330SP 00113
MB 320-343665/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-343665/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
580-91195-C-1	04Q19LCMW04DW	8330-Prep, 8330B	T	1473.1 g	510.30 g	962.8 mL	20 mL	50 uL	
580-91195-B-1 MS	04Q19LCMW04DW	8330-Prep, 8330B	T	1461.0 g	504.97 g	956 mL	20 mL	50 uL	20 uL
580-91195-C-1 MSD	04Q19LCMW04DW	8330-Prep, 8330B	T	1445.6 g	506.53 g	939.1 mL	20 mL	50 uL	20 uL
580-91195-C-2	04Q19LCMW04SW	8330-Prep, 8330B	T	1456.6 g	509.13 g	947.5 mL	20 mL	50 uL	
580-91195-D-3	04Q19LCMW140W	8330-Prep, 8330B	T	1449.7 g	509.31 g	940.4 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPNGPETNSP 00082	AnalysisComment				
MB 320-343665/1		8330-Prep, 8330B			SPE 4 Port 3				
LCS 320-343665/2		8330-Prep, 8330B		100 uL	SPE 4 Port 4				
580-91195-C-1	04Q19LCMW04DW	8330-Prep, 8330B	T		SPE 3 Port 2				
580-91195-B-1 MS	04Q19LCMW04DW	8330-Prep, 8330B	T	100 uL	SPE 3 Port 3				
580-91195-C-1 MSD	04Q19LCMW04DW	8330-Prep, 8330B	T	100 uL	SPE 3 Port 4				
580-91195-C-2	04Q19LCMW04SW	8330-Prep, 8330B	T		SPE 3 Port 5				
580-91195-D-3	04Q19LCMW140W	8330-Prep, 8330B	T		SPE 3 Port 6				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91195-1

SDG No.:

Batch Number: 343665 Batch Start Date: 12/06/19 12:04 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date: 12/09/19 08:50

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00114 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Labels match client ID; Pipette ID: 48487M; 2ml pipette ID lot#09202019
Analyst ID - Concentration	JFA 12/6/19
Date of Clean up	12/6/19 WL/JFA
Date Dilution Performed	12/6/19
Analyst ID - Dilution	WL/JFA
Filter ID	R8MA86520
Date of Final Volume	12/6/19 WL/JFA
Vendor lot number	0.1% HOAc/ACN_00114
Millipore Water Dispense Date	11/29/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	RCO 12/6/19
Solvent	0.1% HOAc/ACN
SPE Cartridge Lot ID	005039142A

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 6850

Perchlorate by LC/MS or LC/MS/MS by Method 6850

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2019.12.10_Perc_011.d

Lab ID: LCS 320-344342/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	5.60	112	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2019.12.10_Perc_012.d

Lab ID: INF 320-344342/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	5.65	113	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab File ID: 2019.12.10_Perc_010.d Lab Sample ID: MB 320-344342/1-A

Matrix: Water Date Extracted: 12/09/2019 19:27

Instrument ID: A5 Date Analyzed: 12/10/2019 12:25

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-344342/2-A	2019.12.10_ Perc_011.d	12/10/2019 12:39
04Q19LCMW04DW	580-91195-1	2019.12.10_ Perc_018.d	12/10/2019 14:13
04Q19LCMW04SW	580-91195-2	2019.12.10_ Perc_019.d	12/10/2019 14:26
04Q19LCMW140W	580-91195-3	2019.12.10_ Perc_020.d	12/10/2019 14:39

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 11/23/2019 15:10

Calibration ID: 48221

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		44182243	9.98				
UPPER LIMIT		66273365	10.98				
LOWER LIMIT		22091122	8.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 320-341105/1		44183900	9.76				
ICV 320-341105/11		46968402	10.04				
CCV 320-344441/1 CCVIS		22565278	9.89				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Sample No.: CCV 320-344441/1 Date Analyzed: 12/10/2019 11:45

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm)

Lab File ID (Standard): 2019.12.10_Perc_007 Heated Purge: (Y/N) N

Calibration ID: 48221

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		22565278	9.89				
UPPER LIMIT		33847917	10.89				
LOWER LIMIT		11282639	8.89				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 320-344441/2		23248581	9.92				
CCB 320-344441/3		23291781	9.96				
MB 320-344342/1-A		23501738	9.97				
LCS 320-344342/2-A		21545282	9.96				
INF 320-344342/3-A		21314525	9.91				
580-91195-1	04Q19LCMW04DW	23287065	9.92				
580-91195-2	04Q19LCMW04SW	22972173	9.93				
580-91195-3	04Q19LCMW140W	22250417	9.95				
CCV 320-344441/16		22355779	9.95				
CCVL 320-344441/33		22663494	9.99				
CCB 320-344441/34		22591343	9.97				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04DW Lab Sample ID: 580-91195-1

Matrix: Water Lab File ID: 2019.12.10_Perc_018.d

Analysis Method: 6850 Date Collected: 12/03/2019 11:00

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 14:13

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW04SW Lab Sample ID: 580-91195-2

Matrix: Water Lab File ID: 2019.12.10_Perc_019.d

Analysis Method: 6850 Date Collected: 12/03/2019 12:20

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 14:26

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: 04Q19LCMW140W Lab Sample ID: 580-91195-3

Matrix: Water Lab File ID: 2019.12.10_Perc_020.d

Analysis Method: 6850 Date Collected: 12/03/2019 12:00

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 14:39

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 341105

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/23/2019 13:36 Calibration End Date: 11/23/2019 15:10 Calibration ID: 48221

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-341105/2	2019.11.23.ICAL_008.d
Level 2	STD02 320-341105/3	2019.11.23.ICAL_009.d
Level 3	STD03 320-341105/4	2019.11.23.ICAL_010.d
Level 4	STD04 320-341105/5	2019.11.23.ICAL_011.d
Level 5	STD05 320-341105/6	2019.11.23.ICAL_012.d
Level 6	STD06 320-341105/7	2019.11.23.ICAL_013.d
Level 7	STD07 320-341105/8	2019.11.23.ICAL_014.d
Level 8	STD08 320-341105/9	2019.11.23.ICAL_015.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.0202 1.0403	1.0566 1.0306	1.0814 1.0453	0.9990	1.0314	Ave		1.0381				2.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1 Analy Batch No.: 341105

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/23/2019 13:36 Calibration End Date: 11/23/2019 15:10 Calibration ID: 48221

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-341105/2	2019.11.23.ICAL_008.d
Level 2	STD02 320-341105/3	2019.11.23.ICAL_009.d
Level 3	STD03 320-341105/4	2019.11.23.ICAL_010.d
Level 4	STD04 320-341105/5	2019.11.23.ICAL_011.d
Level 5	STD05 320-341105/6	2019.11.23.ICAL_012.d
Level 6	STD06 320-341105/7	2019.11.23.ICAL_013.d
Level 7	STD07 320-341105/8	2019.11.23.ICAL_014.d
Level 8	STD08 320-341105/9	2019.11.23.ICAL_015.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	674390 22978447	1154976 45184354	2391461 82499411	4602678	9631308	0.150 5.00	0.250 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

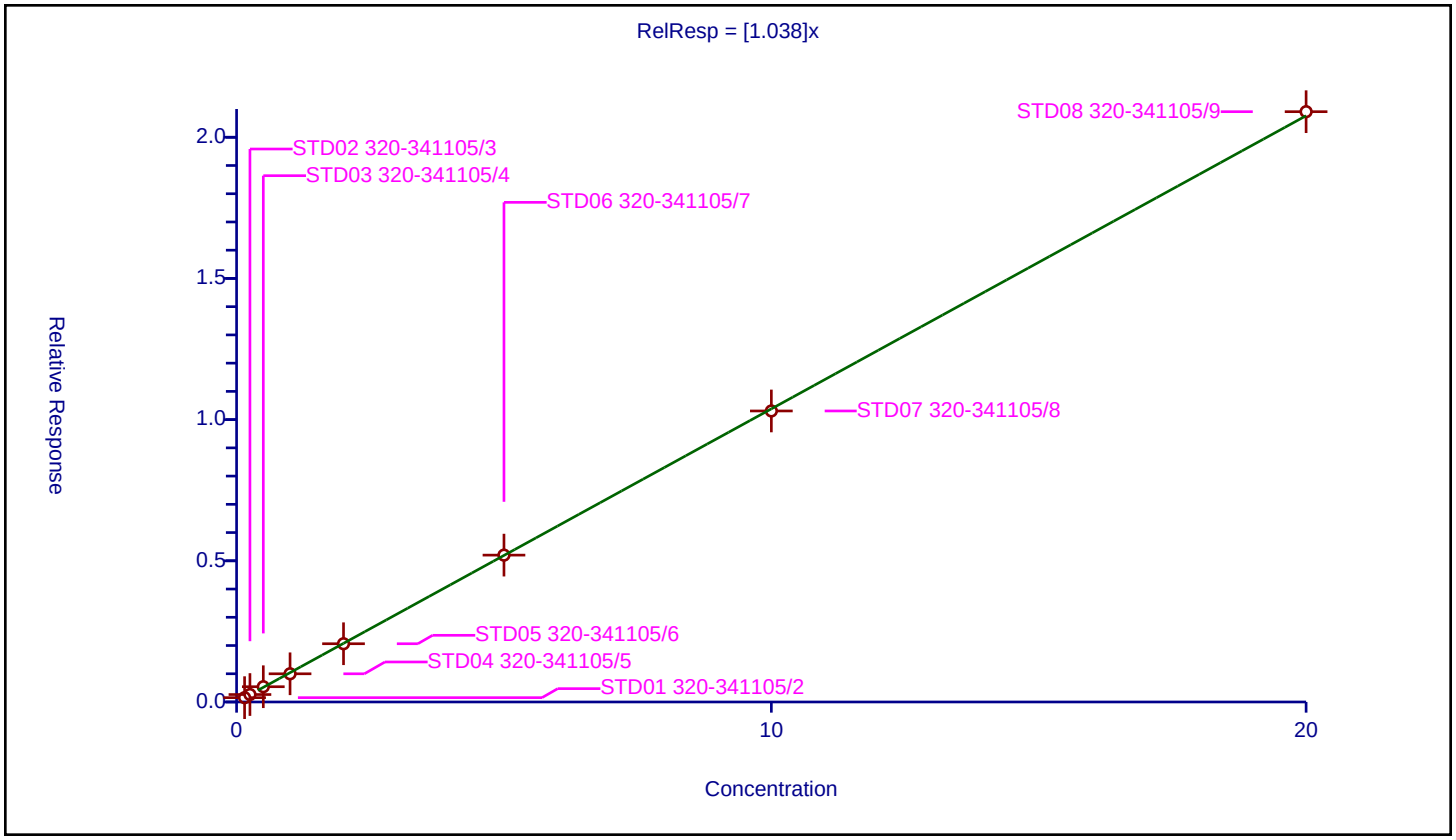
Curve Coefficients

Intercept:	0
Slope:	1.038

Error Coefficients

Standard Error:	36800000
Relative Standard Error:	2.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 320-341105/2	0.15	0.153032	10.033747	44217306.0	1.020213	Y
2	STD02 320-341105/3	0.25	0.264147	10.033747	43872346.0	1.056587	Y
3	STD03 320-341105/4	0.5	0.540695	10.033747	44378645.0	1.08139	Y
4	STD04 320-341105/5	1.0	0.998966	10.033747	46229931.0	0.998966	Y
5	STD05 320-341105/6	2.0	2.062742	10.033747	46849336.0	1.031371	Y
6	STD06 320-341105/7	5.0	5.201503	10.033747	44325634.0	1.040301	Y
7	STD07 320-341105/8	10.0	10.306444	10.033747	43988826.0	1.030644	Y
8	STD08 320-341105/9	20.0	20.905646	10.033747	39595917.0	1.045282	Y



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICV 320-341105/11 Calibration Date: 11/23/2019 15:37

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.11.23.ICAL_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	0.9233		4.45	5.00	-11.1	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-344441/1 Calibration Date: 12/10/2019 11:45

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.187		2.29	2.00	14.4	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVL 320-344441/2 Calibration Date: 12/10/2019 11:58

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_008.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.222		0.589	0.500	17.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCV 320-344441/16 Calibration Date: 12/10/2019 15:06

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_022.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.183		2.28	2.00	13.9	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Lab Sample ID: CCVL 320-344441/33 Calibration Date: 12/10/2019 19:08

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_040.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.191		0.573	0.500	14.7	50.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-344342/1-A

Matrix: Water Lab File ID: 2019.12.10_Perc_010.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:25

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-344441/3

Matrix: Water Lab File ID: 2019.12.10_Perc_009.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/10/2019 12:12

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-344441/34

Matrix: Water Lab File ID: 2019.12.10_Perc_041.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/10/2019 19:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-341105/1

Matrix: Water Lab File ID: 2019.11.23.ICAL_007.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 11/23/2019 13:23

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 341105 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-344342/2-A

Matrix: Water Lab File ID: 2019.12.10_Perc_011.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:39

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	5.60		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 320-344342/3-A

Matrix: Water Lab File ID: 2019.12.10_Perc_012.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:52

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	5.65		0.50	

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Instrument ID: A5 Start Date: 11/23/2019 13:23

Analysis Batch Number: 341105 End Date: 11/23/2019 15:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICB 320-341105/1		11/23/2019 13:23	1	2019.11.23.ICAL 007.d	Anion HR 4.6(mm)
STD01 320-341105/2 IC		11/23/2019 13:36	1	2019.11.23.ICAL 008.d	Anion HR 4.6(mm)
STD02 320-341105/3 IC		11/23/2019 13:50	1	2019.11.23.ICAL 009.d	Anion HR 4.6(mm)
STD03 320-341105/4 IC		11/23/2019 14:03	1	2019.11.23.ICAL 010.d	Anion HR 4.6(mm)
STD04 320-341105/5 IC		11/23/2019 14:17	1	2019.11.23.ICAL 011.d	Anion HR 4.6(mm)
STD05 320-341105/6 ICISAV		11/23/2019 14:30	1	2019.11.23.ICAL 012.d	Anion HR 4.6(mm)
STD06 320-341105/7 IC		11/23/2019 14:43	1	2019.11.23.ICAL 013.d	Anion HR 4.6(mm)
STD07 320-341105/8 IC		11/23/2019 14:57	1	2019.11.23.ICAL 014.d	Anion HR 4.6(mm)
STD08 320-341105/9 IC		11/23/2019 15:10	1	2019.11.23.ICAL 015.d	Anion HR 4.6(mm)
CCB 320-341105/10		11/23/2019 15:24	1		Anion HR 4.6(mm)
ICV 320-341105/11		11/23/2019 15:37	1	2019.11.23.ICAL 017.d	Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91195-1

SDG No.:

Instrument ID: A5 Start Date: 12/10/2019 11:45

Analysis Batch Number: 344441 End Date: 12/10/2019 19:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-344441/1 CCVIS		12/10/2019 11:45	1	2019.12.10_Perc 007.d	Anion HR 4.6(mm)
CCVL 320-344441/2		12/10/2019 11:58	1	2019.12.10_Perc 008.d	Anion HR 4.6(mm)
CCB 320-344441/3		12/10/2019 12:12	1	2019.12.10_Perc 009.d	Anion HR 4.6(mm)
MB 320-344342/1-A		12/10/2019 12:25	1	2019.12.10_Perc 010.d	Anion HR 4.6(mm)
LCS 320-344342/2-A		12/10/2019 12:39	1	2019.12.10_Perc 011.d	Anion HR 4.6(mm)
INF 320-344342/3-A		12/10/2019 12:52	1	2019.12.10_Perc 012.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:05	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:19	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:32	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:46	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:59	1		Anion HR 4.6(mm)
580-91195-1		12/10/2019 14:13	1	2019.12.10_Perc 018.d	Anion HR 4.6(mm)
580-91195-2		12/10/2019 14:26	1	2019.12.10_Perc 019.d	Anion HR 4.6(mm)
580-91195-3		12/10/2019 14:39	1	2019.12.10_Perc 020.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 14:53	1		Anion HR 4.6(mm)
CCV 320-344441/16		12/10/2019 15:06	1	2019.12.10_Perc 022.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:20	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:33	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:46	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:00	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:13	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:27	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:40	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:54	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:07	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:20	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:34	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:47	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:01	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:14	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:28	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:41	1		Anion HR 4.6(mm)
CCV 320-344441/32		12/10/2019 18:54	1		Anion HR 4.6(mm)
CCVL 320-344441/33		12/10/2019 19:08	1	2019.12.10_Perc 040.d	Anion HR 4.6(mm)
CCB 320-344441/34		12/10/2019 19:21	1	2019.12.10_Perc 041.d	Anion HR 4.6(mm)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91195-1

SDG No.:

Batch Number: 344342 Batch Start Date: 12/09/19 19:26 Batch Analyst: Arauz, Horacio J

Batch Method: Filtration Batch End Date: 12/09/19 22:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00045	LC6850SP 00065		
MB 320-344342/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-344342/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-344342/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
580-91195-E-1	04Q19LCMW04DW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
580-91195-E-2	04Q19LCMW04SW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
580-91195-E-3	04Q19LCMW140W	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			

Batch Notes	
BA/AG/H Cartridge ID	190815
Filter #2 ID	R9HA53233
Filter ID	.45um R8MA86520
Interference check solution ID	1822561
Internal Standard ID#	1796912
Pipette/Syringe/Dispenser ID	O30845G
Analyst ID - IS Reagent Drop	HJA
Analyst ID - IS Reagent Drop Witness	JER
Analyst ID - TA Reagent Drop	HJA
Analyst ID - TA Reagent Drop Witness	JER
Reagent Water ID	11-20-19

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins TestAmerica, Seattle Job Number: 580-91195-1

SDG No.:

Project: Camp Bonneville Groundwater 2019-2020

Client Sample ID	Lab Sample ID
04Q19LCMW04DW	580-91195-1
04Q19LCMW04SW	580-91195-2
04Q19LCMW140W	580-91195-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 11:00
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.00030		mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 04Q19LCMW04DW
Lab Sample ID: 580-91195-1
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 11:00
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	0.0010		mg/L			1	6020A
7440-36-0	Antimony	ND	0.00040		mg/L			1	6020A
7440-41-7	Beryllium	ND	0.00040		mg/L			1	6020A
7440-43-9	Cadmium	ND	0.00040		mg/L			1	6020A
7440-47-3	Chromium	0.00051	0.00040		mg/L			1	6020A
7440-50-8	Copper	ND	0.0020		mg/L			1	6020A
7439-92-1	Lead	ND	0.00080		mg/L			1	6020A
7440-02-0	Nickel	ND	0.0030		mg/L			1	6020A
7782-49-2	Selenium	ND	0.0080		mg/L			1	6020A
7440-22-4	Silver	ND	0.00040		mg/L			1	6020A
7440-28-0	Thallium	ND	0.0010		mg/L			1	6020A
7440-66-6	Zinc	ND	0.0070		mg/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 12:20
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.00030		mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 04Q19LCMW04SW
Lab Sample ID: 580-91195-2
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 12:20
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	0.0010		mg/L			1	6020A
7440-36-0	Antimony	ND	0.00040		mg/L			1	6020A
7440-41-7	Beryllium	ND	0.00040		mg/L			1	6020A
7440-43-9	Cadmium	ND	0.00040		mg/L			1	6020A
7440-47-3	Chromium	0.00057	0.00040		mg/L			1	6020A
7440-50-8	Copper	ND	0.0020		mg/L			1	6020A
7439-92-1	Lead	ND	0.00080		mg/L			1	6020A
7440-02-0	Nickel	ND	0.0030		mg/L			1	6020A
7782-49-2	Selenium	ND	0.0080		mg/L			1	6020A
7440-22-4	Silver	ND	0.00040		mg/L			1	6020A
7440-28-0	Thallium	ND	0.0010		mg/L			1	6020A
7440-66-6	Zinc	ND	0.0070		mg/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 12:00
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7439-97-6	Mercury	ND	0.00030		mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 04Q19LCMW140W
Lab Sample ID: 580-91195-3
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG ID.:
Matrix: Water
Date Sampled: 12/03/2019 12:00
Reporting Basis: WET
Date Received: 12/04/2019 13:05

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-38-2	Arsenic	ND	0.0010		mg/L			1	6020A
7440-36-0	Antimony	ND	0.00040		mg/L			1	6020A
7440-41-7	Beryllium	ND	0.00040		mg/L			1	6020A
7440-43-9	Cadmium	ND	0.00040		mg/L			1	6020A
7440-47-3	Chromium	0.00061	0.00040		mg/L			1	6020A
7440-50-8	Copper	ND	0.0020		mg/L			1	6020A
7439-92-1	Lead	ND	0.00080		mg/L			1	6020A
7440-02-0	Nickel	ND	0.0030		mg/L			1	6020A
7782-49-2	Selenium	ND	0.0080		mg/L			1	6020A
7440-22-4	Silver	ND	0.00040		mg/L			1	6020A
7440-28-0	Thallium	ND	0.0010		mg/L			1	6020A
7440-66-6	Zinc	ND	0.0070		mg/L			1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

ICV Source: ICPMS ICV_00043 Concentration Units: ug/L

CCV Source: ICPMS CAL #4_00033

Analyte	ICV 580-318532/7 12/09/2019 10:34				CCV 580-318532/12 12/09/2019 10:53				CCV 580-318532/23 12/09/2019 11:28			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.4		40.0	101	50.2		50.0	100	50.0		50.0	100
Arsenic	40.5		40.0	101	50.4		50.0	101	50.0		50.0	100
Beryllium	40.0		40.0	100	50.4		50.0	101	48.8		50.0	98
Cadmium	40.6		40.0	101	50.0		50.0	100	50.1		50.0	100
Chromium	40.8		40.0	102	51.1		50.0	102	51.8		50.0	104
Copper	41.3		40.0	103	51.4		50.0	103	52.8		50.0	106
Lead	40.3		40.0	101	49.8		50.0	100	51.2		50.0	102
Nickel	40.9		40.0	102	51.1		50.0	102	52.0		50.0	104
Selenium	40.9		40.0	102	49.5		50.0	99	50.4		50.0	101
Silver	40.7		40.0	102	50.9		50.0	102	51.0		50.0	102
Thallium	37.8		40.0	95	48.9		50.0	98	49.1		50.0	98
Zinc	41.6		40.0	104	51.2		50.0	102	52.3		50.0	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

ICV Source: ICPMS ICV_00043 Concentration Units: ug/L

CCV Source: ICPMS CAL #4_00033

Analyte	CCV 580-318532/32 12/09/2019 11:58											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	48.9		50.0	98								
Arsenic	49.0		50.0	98								
Beryllium	49.1		50.0	98								
Cadmium	50.3		50.0	101								
Chromium	49.9		50.0	100								
Copper	50.2		50.0	100								
Lead	48.6		50.0	97								
Nickel	50.1		50.0	100								
Selenium	48.6		50.0	97								
Silver	49.6		50.0	99								
Thallium	48.2		50.0	96								
Zinc	50.1		50.0	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

ICV Source: ICP-MS CCVL_00006 Concentration Units: ug/L

CCV Source: ICP-MS CCVL_00006

Analyte	ICVL 580-318532/9 12/09/2019 10:42				CCVL 580-318532/98 12/09/2019 16:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	0.459		0.400	115	0.461		0.400	115				
Arsenic	1.05		1.00	105	1.03		1.00	103				
Beryllium	0.414		0.400	104	0.403		0.400	101				
Cadmium	ND		0.400	98	0.371	J	0.400	93				
Chromium	0.432		0.400	108	0.430		0.400	108				
Copper	2.12		2.00	106	2.12		2.00	106				
Lead	0.812		0.800	102	0.752	J	0.800	94				
Nickel	3.20		3.00	107	3.21		3.00	107				
Selenium	8.37		8.00	105	7.89	J	8.00	99				
Silver	0.418		0.400	105	0.434		0.400	109				
Thallium	ND		1.00	93	0.940	J	1.00	94				
Zinc	7.30		7.00	104	7.54		7.00	108				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

ICV Source: Hg_ICV_WORK_00051 Concentration Units: mg/L

CCV Source: Hg_CAL_WORK_00046

Analyte	ICV 580-318502/7 12/09/2019 11:26				CCV 580-318502/9 12/09/2019 13:50				CCV 580-318502/21 12/09/2019 14:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	0.00388		0.00400	97	0.00538		0.00500	108	0.00559		0.00500	112

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 580-318532/8 12/09/2019 10:39		CCB 580-318532/13 12/09/2019 11:01		CCB 580-318532/24 12/09/2019 11:37		CCB 580-318532/33 12/09/2019 12:07	
		Found	C	Found	C	Found	C	Found	C
Antimony	0.40	ND		ND		ND		ND	
Arsenic	1.0	ND		ND		ND		ND	
Beryllium	0.40	ND		ND		ND		ND	
Cadmium	0.40	ND		ND		ND		ND	
Chromium	0.40	ND		ND		ND		ND	
Copper	2.0	ND		ND		ND		ND	
Lead	0.80	ND		ND		ND		ND	
Nickel	3.0	ND		ND		ND		ND	
Selenium	8.0	ND		ND		ND		ND	
Silver	0.40	ND		ND		ND		ND	
Thallium	1.0	ND		ND		ND		ND	
Zinc	7.0	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 580-318502/8 12/09/2019 11:29		CCB 580-318502/10 12/09/2019 13:52		CCB 580-318502/22 12/09/2019 14:20			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.00030	ND		ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 580-318385/10-A

Instrument Code: TAC110 Batch No.: 318532

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	ND			6020A_LL
7440-36-0	Antimony	ND			6020A_LL
7440-41-7	Beryllium	ND			6020A_LL
7440-43-9	Cadmium	ND			6020A_LL
7440-47-3	Chromium	ND			6020A_LL
7440-50-8	Copper	ND			6020A_LL
7439-92-1	Lead	ND			6020A_LL
7440-02-0	Nickel	ND			6020A_LL
7782-49-2	Selenium	ND			6020A_LL
7440-22-4	Silver	ND			6020A_LL
7440-28-0	Thallium	ND			6020A_LL
7440-66-6	Zinc	ND			6020A_LL

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 580-318467/17-A

Instrument Code: TAC104 Batch No.: 318502

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	ND			7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICSA 580-318532/10 Instrument ID: TAC110

Lab File ID: 028SMPL.d ICS Source: ICPMS- ICSA_00015

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0240**	
Arsenic		**0.0000**	
Beryllium		**0.0030**	
Cadmium		**-0.0160**	
Chromium		**0.148**	
Copper		**0.0050**	
Lead		**0.0260**	
Nickel		**0.0830**	
Selenium		**-0.0200**	
Silver		**0.0080**	
Thallium		**0.0130**	
Zinc		**0.466**	
Aluminum	*10000*	*9514*	*95*
Barium		*0.0770*	
Cobalt		*0.0270*	
Hg		*0.0020*	
Iron	*10000*	*9604*	*96*
Magnesium	*10000*	*10117*	*101*
Manganese		*0.144*	
Molybdenum	*200*	*196*	*98*
P	*10000*	*9688*	*97*
Potassium	*10000*	*9629*	*96*
Sodium	*10000*	*9907*	*99*
Strontium		*0.133*	
Tin		*0.233*	
Titanium	*200*	*194*	*97*
Uranium		*0.0120*	
Vanadium		*0.0370*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICSAB 580-318532/11 Instrument ID: TAC110

Lab File ID: 029SMPL.d ICS Source: ICPMS- ICSA_00015

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**10.0**	**9.98**	**100**
Arsenic	**20.0**	**20.2**	**101**
Beryllium	**20.0**	**19.7**	**99**
Cadmium	**20.0**	**20.3**	**101**
Chromium	**20.0**	**19.5**	**97**
Copper	**20.0**	**19.0**	**95**
Lead	**20.0**	**19.4**	**97**
Nickel	**20.0**	**19.0**	**95**
Selenium	**20.0**	**19.7**	**99**
Silver	**10.0**	**10.2**	**102**
Thallium	**10.0**	**9.76**	**98**
Zinc	**20.0**	**19.9**	**100**
Aluminum	*10000*	*9648*	*96*
Barium	*20.0*	*20.1*	*101*
Cobalt	*20.0*	*19.1*	*96*
Hg		*0.263*	
Iron	*10000*	*9702*	*97*
Magnesium	*10000*	*10215*	*102*
Manganese	*20.0*	*19.4*	*97*
Molybdenum	*200*	*200*	*100*
P	*10000*	*9826*	*98*
Potassium	*10000*	*9791*	*98*
Sodium	*10000*	*10010*	*100*
Strontium	*20.0*	*19.7*	*99*
Tin	*20.0*	*20.4*	*102*
Titanium	*200*	*198*	*99*
Uranium		*0.0100*	
Vanadium	*20.0*	*19.9*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICSAB 580-318532/11 Instrument ID: TAC110

Lab File ID: 029SMPL.d ICS Source: ICPMS-ICSB_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**10.0**	**9.98**	**100**
Arsenic	**20.0**	**20.2**	**101**
Beryllium	**20.0**	**19.7**	**99**
Cadmium	**20.0**	**20.3**	**101**
Chromium	**20.0**	**19.5**	**97**
Copper	**20.0**	**19.0**	**95**
Lead	**20.0**	**19.4**	**97**
Nickel	**20.0**	**19.0**	**95**
Selenium	**20.0**	**19.7**	**99**
Silver	**10.0**	**10.2**	**102**
Thallium	**10.0**	**9.76**	**98**
Zinc	**20.0**	**19.9**	**100**
Aluminum	*10000*	*9648*	*96*
Barium	*20.0*	*20.1*	*101*
Cobalt	*20.0*	*19.1*	*96*
Hg		*0.263*	
Iron	*10000*	*9702*	*97*
Magnesium	*10000*	*10215*	*102*
Manganese	*20.0*	*19.4*	*97*
Molybdenum	*200*	*200*	*100*
P	*10000*	*9826*	*98*
Potassium	*10000*	*9791*	*98*
Sodium	*10000*	*10010*	*100*
Strontium	*20.0*	*19.7*	*99*
Tin	*20.0*	*20.4*	*102*
Titanium	*200*	*198*	*99*
Uranium		*0.0100*	
Vanadium	*20.0*	*19.9*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Lab Sample ID: ICSAB 580-318532/11 Instrument ID: TAC110

Lab File ID: 029SMPL.d ICS Source: ICPMS-ICSC_00001

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**10.0**	**9.98**	**100**
Arsenic	**20.0**	**20.2**	**101**
Beryllium	**20.0**	**19.7**	**99**
Cadmium	**20.0**	**20.3**	**101**
Chromium	**20.0**	**19.5**	**97**
Copper	**20.0**	**19.0**	**95**
Lead	**20.0**	**19.4**	**97**
Nickel	**20.0**	**19.0**	**95**
Selenium	**20.0**	**19.7**	**99**
Silver	**10.0**	**10.2**	**102**
Thallium	**10.0**	**9.76**	**98**
Zinc	**20.0**	**19.9**	**100**
Aluminum	*10000*	*9648*	*96*
Barium	*20.0*	*20.1*	*101*
Cobalt	*20.0*	*19.1*	*96*
Hg		*0.263*	
Iron	*10000*	*9702*	*97*
Magnesium	*10000*	*10215*	*102*
Manganese	*20.0*	*19.4*	*97*
Molybdenum	*200*	*200*	*100*
P	*10000*	*9826*	*98*
Potassium	*10000*	*9791*	*98*
Sodium	*10000*	*10010*	*100*
Strontium	*20.0*	*19.7*	*99*
Tin	*20.0*	*20.4*	*102*
Titanium	*200*	*198*	*99*
Uranium		*0.0100*	
Vanadium	*20.0*	*19.9*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: 04Q19LCMW04DW MS
Lab ID: 580-91195-1 MS
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.00207		ND		0.00200	104	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 04Q19LCMW04DW MS
Lab ID: 580-91195-1 MS
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	1.06		ND		1.00	106	80-120		6020A
Antimony	1.10		ND		1.00	110	80-120		6020A
Beryllium	1.04		ND		1.00	104	80-120		6020A
Cadmium	1.08		ND		1.00	108	80-120		6020A
Chromium	1.08		0.00051		1.00	108	80-120		6020A
Copper	1.10		ND		1.00	110	80-120		6020A
Lead	1.07		ND		1.00	107	80-120		6020A
Nickel	1.11		ND		1.00	111	80-120		6020A
Selenium	1.04		ND		1.00	104	80-120		6020A
Silver	1.02		ND		1.00	102	80-120		6020A
Thallium	1.18		ND		1.00	118	80-120		6020A
Zinc	1.04		ND		1.00	103	80-120		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: 04Q19LCMW04DW MSD
Lab ID: 580-91195-1 MSD
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.00215		0.00200	108	80-120	4	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 04Q19LCMW04DW MSD
Lab ID: 580-91195-1 MSD
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	1.02		1.00	102	80-120	4	20		6020A
Antimony	1.07		1.00	107	80-120	3	20		6020A
Beryllium	1.01		1.00	101	80-120	3	20		6020A
Cadmium	1.01		1.00	101	80-120	7	20		6020A
Chromium	1.04		1.00	104	80-120	4	20		6020A
Copper	1.06		1.00	106	80-120	4	20		6020A
Lead	1.03		1.00	103	80-120	4	20		6020A
Nickel	1.06		1.00	106	80-120	5	20		6020A
Selenium	0.978		1.00	98	80-120	6	20		6020A
Silver	1.02		1.00	102	80-120	0	20		6020A
Thallium	1.16		1.00	116	80-120	2	20		6020A
Zinc	1.03		1.00	103	80-120	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 04Q19LCMW04DW PDS | Lab ID: 580-91195-1 PDS

Lab Name: Eurofins TestAmerica, Seattle | Job No.: 580-91195-1

SDG No.:

Matrix: Water | Concentration Units: mg/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	1.01		ND		1.00	101	80-120		6020A
Antimony	1.05		ND		1.00	105	80-120		6020A
Beryllium	1.01		ND		1.00	101	80-120		6020A
Cadmium	1.03		ND		1.00	103	80-120		6020A
Chromium	1.06		0.00051		1.00	106	80-120		6020A
Copper	1.07		ND		1.00	107	80-120		6020A
Lead	1.02		ND		1.00	102	80-120		6020A
Nickel	1.08		ND		1.00	108	80-120		6020A
Selenium	0.967		ND		1.00	97	80-120		6020A
Silver	0.972		ND		1.00	97	80-120		6020A
Thallium	0.981		ND		1.00	98	80-120		6020A
Zinc	0.995		ND		1.00	99	80-120		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS

Client ID: 04Q19LCMW04DW DU Lab ID: 580-91195-1 DU

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.00030	ND		ND		NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: 04Q19LCMW04DW DU
Lab ID: 580-91195-1 DU
Lab Name: Eurofins TestAmerica, Seattle
Job No.: 580-91195-1
SDG No.:
% Solids for Sample:
% Solids for Duplicate:
Matrix: Water
Concentration Units: mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	0.0010	ND		ND		NC		6020A
Antimony	0.00040	ND		ND		NC		6020A
Beryllium	0.00040	ND		ND		NC		6020A
Cadmium	0.00040	ND		ND		NC		6020A
Chromium	0.00040	0.00051		0.000631		21	F5	6020A
Copper	0.0020	ND		ND		NC		6020A
Lead	0.00080	ND		ND		NC		6020A
Nickel	0.0030	ND		ND		NC		6020A
Selenium	0.0080	ND		ND		NC		6020A
Silver	0.00040	ND		ND		NC		6020A
Thallium	0.0010	ND		ND		NC		6020A
Zinc	0.0070	ND		ND		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 580-318385/11-A

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

Sample Matrix: Water LCS Source: ICP CAL 1_00005

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	1.00	1.00		100	80	120		6020A
Antimony	1.00	1.00		100	80	120		6020A
Beryllium	1.00	0.982		98	80	120		6020A
Cadmium	1.00	1.01		101	80	120		6020A
Chromium	1.00	1.04		104	80	120		6020A
Copper	1.00	1.06		106	80	120		6020A
Lead	1.00	1.01		101	80	120		6020A
Nickel	1.00	1.05		105	80	120		6020A
Selenium	1.00	0.980		98	80	120		6020A
Silver	1.00	1.02		102	80	120		6020A
Thallium	1.00	0.971		97	80	120		6020A
Zinc	1.00	1.05		105	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TOTAL RECOVERABLE

Lab ID: LCSD 580-318385/12-A

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

Sample Matrix: Water LCS Source: ICP CAL 1_00005

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	1.00		1.00	100	80-120	0	20		6020A
Antimony	0.999		1.00	100	80-120	0	20		6020A
Beryllium	0.985		1.00	99	80-120	0	20		6020A
Cadmium	1.02		1.00	102	80-120	1	20		6020A
Chromium	1.03		1.00	103	80-120	2	20		6020A
Copper	1.04		1.00	104	80-120	1	20		6020A
Lead	1.01		1.00	101	80-120	0	20		6020A
Nickel	1.03		1.00	103	80-120	2	20		6020A
Selenium	1.00		1.00	100	80-120	2	20		6020A
Silver	1.02		1.00	102	80-120	0	20		6020A
Thallium	0.974		1.00	97	80-120	0	20		6020A
Zinc	1.03		1.00	103	80-120	2	20		6020A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 580-318467/18-A

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

Sample Matrix: Water LCS Source: Hg_SPK_WORK_00045

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.00200	0.00212		106	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 580-318467/19-A

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

Sample Matrix: Water LCS Source: Hg_SPK_WORK_00045

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.00210		0.00200	105	80-120	1	20		7470A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 580-91195-1

SDG No:

Lab Name: Eurofins TestAmerica, Seattle Job No: 580-91195-1

Matrix: Water Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	ND		ND		NC		6020A
Antimony	ND		ND		NC		6020A
Beryllium	ND		ND		NC		6020A
Cadmium	ND		ND		NC		6020A
Chromium	0.00051		ND		NC		6020A
Copper	ND		ND		NC		6020A
Lead	ND		ND		NC		6020A
Nickel	ND		ND		NC		6020A
Selenium	ND		ND		NC		6020A
Silver	ND		ND		NC		6020A
Thallium	ND		ND		NC		6020A
Zinc	ND		ND		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins TestAmerica, Seattle Job Number: 580-91195-1

SDG Number:

Matrix: Water Instrument ID: TAC110

Method: 6020A MDL Date: 04/09/2018 11:09

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Antimony		0.0004	0.00011
Arsenic		0.001	0.000204
Beryllium		0.0004	0.000071
Cadmium		0.0004	0.0001
Chromium		0.0004	0.000173
Copper		0.002	0.000603
Lead		0.0008	0.000199
Nickel		0.003	0.000124
Selenium		0.008	0.00206
Silver		0.0004	0.000055
Thallium		0.001	0.000065
Zinc		0.007	0.0019

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins TestAmerica, Seattle Job Number: 580-91195-1

SDG Number:

Matrix: Water Instrument ID: TAC110

Method: 6020A XMDL Date: 06/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		0.4	0.11
Arsenic		1	0.204
Beryllium		0.4	0.071
Cadmium		0.4	0.1
Chromium		0.4	0.173
Copper		2	0.603
Lead		0.8	0.199
Nickel		3	0.124
Selenium		8	2.06
Silver		0.4	0.055
Thallium		1	0.065
Zinc		7	1.9

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job Number: 580-91195-1

SDG Number:

Matrix: Water Instrument ID: TAC104

Method: 7470A MDL Date: 03/30/2017 13:02

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0003	0.00015

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Seattle Job Number: 580-91195-1

SDG Number:

Matrix: Water Instrument ID: TAC104

Method: 7470A XMDL Date: 05/03/2017 12:19

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Mercury		0.0003	0.00015

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
580-91195-1	12/06/2019 11:34	318385		50	50
580-91195-1 DU	12/06/2019 11:34	318385		50	50
580-91195-1 MS	12/06/2019 11:34	318385		50	50
580-91195-1 MSD	12/06/2019 11:34	318385		50	50
580-91195-2	12/06/2019 11:34	318385		50	50
580-91195-3	12/06/2019 11:34	318385		50	50
MB 580-318385/10-A	12/06/2019 11:34	318385		50	50
LCS 580-318385/11-A	12/06/2019 11:34	318385		50	50
LCSD 580-318385/12-A	12/06/2019 11:34	318385		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
580-91195-1	12/09/2019 10:17	318467		50	50
580-91195-1 DU	12/09/2019 10:17	318467		50	50
580-91195-1 MS	12/09/2019 10:17	318467		50	50
580-91195-1 MSD	12/09/2019 10:17	318467		50	50
580-91195-2	12/09/2019 10:17	318467		50	50
580-91195-3	12/09/2019 10:17	318467		50	50
MB 580-318467/17-A	12/09/2019 10:18	318467		50	50
LCS 580-318467/18-A	12/09/2019 10:18	318467		50	50
LCSD 580-318467/19-A	12/09/2019 10:18	318467		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC110 Analysis Method: 6020A

Start Date: 12/09/2019 10:17 End Date: 12/09/2019 16:21

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	As	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Tl	Zn																
ICIS 580-318532/1			10:17	X	X	X	X	X	X	X	X	X	X	X	X																
STD1 580-318532/2 IC	1		10:20	X	X	X	X	X	X	X	X	X	X	X	X																
STD2 580-318532/3 IC	1		10:23	X	X	X	X	X	X	X	X	X	X	X	X																
STD3 580-318532/4 IC	1		10:25	X	X	X	X	X	X	X	X	X	X	X	X																
STD4 580-318532/5 IC	1		10:28	X	X	X	X	X	X	X	X	X	X	X	X																
STD5 580-318532/6 IC	1		10:31	X	X	X	X	X	X	X	X	X	X	X	X																
ICV 580-318532/7	1		10:34	X	X	X	X	X	X	X	X	X	X	X	X																
ICB 580-318532/8	1		10:39	X	X	X	X	X	X	X	X	X	X	X	X																
ICVL 580-318532/9	1		10:42	X	X	X	X	X	X	X	X	X	X	X	X																
ICSA 580-318532/10	1		10:45	X	X	X	X	X	X	X	X	X	X	X	X																
ICSAB 580-318532/11	1		10:47	X	X	X	X	X	X	X	X	X	X	X	X																
CCV 580-318532/12	1		10:53	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 580-318532/13	1		11:01	X	X	X	X	X	X	X	X	X	X	X	X																
MB 580-318385/10-A	1	R	11:04	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1	1	R	11:06	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1 DU	1	R	11:09	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1 PDS	20	R	11:12	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1 MS	20	R	11:15	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1 MSD	20	R	11:17	X	X	X	X	X	X	X	X	X	X	X	X																
LCS 580-318385/11-A	20	R	11:20	X	X	X	X	X	X	X	X	X	X	X	X																
LCSD 580-318385/12-A	20	R	11:23	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-1 SD	5	R	11:26	X	X	X	X	X	X	X	X	X	X	X	X																
CCV 580-318532/23	1		11:28	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 580-318532/24	1		11:37	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-2	1	R	11:39	X	X	X	X	X	X	X	X	X	X	X	X																
580-91195-3	1	R	11:42	X	X	X	X	X	X	X	X	X	X	X	X																
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:50																												
ZZZZZZ			11:53																												
ZZZZZZ			11:56																												
CCV 580-318532/32	1		11:58	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 580-318532/33	1		12:07	X	X	X	X	X	X	X	X	X	X	X	X																
ZZZZZZ			12:09																												
ZZZZZZ			12:12																												
ZZZZZZ			12:15																												
ZZZZZZ			12:18																												
ZZZZZZ			12:20																												
ZZZZZZ			12:23																												
ZZZZZZ			12:26																												
ZZZZZZ			12:28																												
ZZZZZZ			12:31																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC110 Analysis Method: 6020A

Start Date: 12/09/2019 10:17 End Date: 12/09/2019 16:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Tl	Zn														
CCV 580-318532/43			12:34																									
CCB 580-318532/44			12:42																									
ZZZZZZ			12:45																									
ZZZZZZ			12:48																									
ZZZZZZ			12:50																									
ZZZZZZ			12:53																									
ZZZZZZ			12:56																									
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
CCV 580-318532/52			13:04																									
CCB 580-318532/53			13:12																									
CCV 580-318532/54			13:56																									
CCB 580-318532/55			14:04																									
ZZZZZZ			14:07																									
ZZZZZZ			14:10																									
ZZZZZZ			14:12																									
ZZZZZZ			14:15																									
ZZZZZZ			14:18																									
ZZZZZZ			14:21																									
ZZZZZZ			14:23																									
ZZZZZZ			14:26																									
ZZZZZZ			14:29																									
ZZZZZZ			14:32																									
CCV 580-318532/66			14:34																									
CCB 580-318532/67			14:43																									
ZZZZZZ			14:45																									
ZZZZZZ			14:48																									
ZZZZZZ			14:51																									
ZZZZZZ			14:54																									
ZZZZZZ			14:56																									
ZZZZZZ			14:59																									
ZZZZZZ			15:02																									
ZZZZZZ			15:05																									
ZZZZZZ			15:07																									
ZZZZZZ			15:10																									
CCV 580-318532/78			15:13																									
CCB 580-318532/79			15:21																									
ZZZZZZ			15:24																									
ZZZZZZ			15:27																									
ZZZZZZ			15:29																									
ZZZZZZ			15:32																									
ZZZZZZ			15:35																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC110 Analysis Method: 6020A

Start Date: 12/09/2019 10:17 End Date: 12/09/2019 16:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Be	Cd	Cr	Cu	Ni	Pb	Sb	Se	Tl	Zn														
ZZZZZZ			15:38																									
ZZZZZZ			15:40																									
ZZZZZZ			15:43																									
ZZZZZZ			15:46																									
CCV 580-318532/89			15:49																									
CCB 580-318532/90			15:57																									
ZZZZZZ			15:59																									
ZZZZZZ			16:02																									
ZZZZZZ			16:05																									
ZZZZZZ			16:08																									
ZZZZZZ			16:11																									
CCV 580-318532/96			16:13																									
CCVL 580-318532/98	1		16:19	X	X	X	X	X	X	X	X	X	X	X	X													
CCB 580-318532/97			16:21																									

Prep Types:
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Instrument ID: TAC104 Analysis Method: 7470A

Start Date: 12/09/2019 11:11 End Date: 12/09/2019 14:45

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
STD 580-318502/1 IC			11:11	X
STD 580-318502/2 IC			11:13	X
STD 580-318502/3 IC			11:15	X
STD 580-318502/4 IC			11:18	X
STD 580-318502/5 IC			11:20	X
STD 580-318502/6 IC			11:23	X
ICV 580-318502/7	1		11:26	X
ICB 580-318502/8	1		11:29	X
CCV 580-318502/9	1		13:50	X
CCB 580-318502/10	1		13:52	X
MB 580-318467/17-A	1	T	13:55	X
LCS 580-318467/18-A	1	T	13:57	X
LCSD 580-318467/19-A	1	T	13:59	X
580-91195-1	1	T	14:02	X
580-91195-1 DU	1	T	14:04	X
580-91195-1 MS	1	T	14:06	X
580-91195-1 MSD	1	T	14:08	X
580-91195-2	1	T	14:11	X
580-91195-3	1	T	14:13	X
ZZZZZZ			14:15	
CCV 580-318502/21	1		14:17	X
CCB 580-318502/22	1		14:20	X
ZZZZZZ			14:22	
ZZZZZZ			14:24	
ZZZZZZ			14:27	
ZZZZZZ			14:29	
ZZZZZZ			14:31	
ZZZZZZ			14:33	
ZZZZZZ			14:36	
ZZZZZZ			14:38	
ZZZZZZ			14:40	
CCV 580-318502/32			14:42	
CCB 580-318502/33			14:45	

Prep Types:
T = Total/NA

FORM XIII-IN

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318385 Batch Start Date: 12/06/19 11:34 Batch Analyst: Tubens, Andrea R

Batch Method: 3005A Batch End Date: 12/06/19 16:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ICP CAL 1 00005	ICP CAL 2 00005	MET Spike 3C 00016	
580-91195-F-1	04Q19LCMW04DW	3005A, 6020A	R	50 mL	50 mL				
580-91195-F-1 DU	04Q19LCMW04DW	3005A, 6020A	R	50 mL	50 mL				
580-91195-D-1 MS	04Q19LCMW04DW	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-91195-D-1 MSD	04Q19LCMW04DW	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
580-91195-F-2	04Q19LCMW04SW	3005A, 6020A	R	50 mL	50 mL				
580-91195-F-3	04Q19LCMW140W	3005A, 6020A	R	50 mL	50 mL				
MB 580-318385/10		3005A, 6020A		50 mL	50 mL				
LCS 580-318385/11		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 580-318385/12		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	

Batch Notes	
Temperature - Corrected - End	94.1 Degrees C
Temperature - Corrected - Start	94.6 Degrees C
Digestion End Time	12/06/2019 15:48
Digestion Start Time	12/06/2019 11:48
Digestion Unit ID	38010
Hydrochloric Acid ID	2486590
Nitric Acid ID	2461133
pH Indicator ID	6807001
Pipette/Syringe/Dispenser ID	METALS-PREP-2
Analyst ID - Spike Analyst	see above
Sufficient Volume for Batch QC	yes
Thermometer ID	661612
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	94.5 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318385 Batch Start Date: 12/06/19 11:34 Batch Analyst: Tubens, Andrea R

Batch Method: 3005A Batch End Date: 12/06/19 16:44

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318467 Batch Start Date: 12/09/19 10:17 Batch Analyst: Boyer, Alec 1

Batch Method: 7470A Batch End Date: 12/09/19 12:36

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Hg_SPK_WORK 00045			
580-91195-F-1	04Q19LCMW04DW	7470A, 7470A	T	50 mL	50 mL				
580-91195-F-1 DU	04Q19LCMW04DW	7470A, 7470A	T	50 mL	50 mL				
580-91195-D-1 MS	04Q19LCMW04DW	7470A, 7470A	T	50 mL	50 mL	1 mL			
580-91195-D-1 MSD	04Q19LCMW04DW	7470A, 7470A	T	50 mL	50 mL	1 mL			
580-91195-F-2	04Q19LCMW04SW	7470A, 7470A	T	50 mL	50 mL				
580-91195-F-3	04Q19LCMW140W	7470A, 7470A	T	50 mL	50 mL				
MB 580-318467/17		7470A, 7470A		50 mL	50 mL				
LCS 580-318467/18		7470A, 7470A		50 mL	50 mL	1 mL			
LCSD 580-318467/19		7470A, 7470A		50 mL	50 mL	1 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91195-1

SDG No.:

Batch Number: 318467 Batch Start Date: 12/09/19 10:17 Batch Analyst: Boyer, Alec 1

Batch Method: 7470A Batch End Date: 12/09/19 12:36

Batch Notes	
Temperature - Corrected - End	87.5 Degrees C
Temperature - Corrected - Start	87.5 Degrees C
Digestion End Time	12/09/19 12:36
Digestion Start Time	12/09/19 10:36
Digestion Unit ID	38009
Sulfuric Acid ID	2402718
Nitric Acid ID	2461133
Hydroxylamine ID	2447880
Potassium Persulfate ID	2360624
Potassium Permanganate ID	2509631
Pipette/Syringe/Dispenser ID	HG-PREP-1
Analyst ID - Spike Analyst	see above
Sufficient Volume for Batch QC	yes
Thermometer ID	58877
Digestion Tube/Cup ID	2535260
Temperature - Uncorrected - End	87 Degrees C
Temperature - Uncorrected - Start	87 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Subcontract Data

Shipping and Receiving Documents

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

53) 922-5047

	Sampler: Matt Kendall & Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):
en	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com	
mental			

COC No: 580-31510-10297.1
Page: Page 1 of 1
Job #:

Due Date Requested:	
TAT Requested (days):	
PO #:	Purchase Order not required
WO #:	
Project #:	58011152
SSOW#:	

Scott.Braunsten@pbsusa.com

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate - 6850	8260B_LL Full List Explosives 8330	8330A Nitroaromatics and Nitramines SVOCs	Total PP Metals 6020/7470A VOCs 8260B		Total Number of containers	Special Instructions/Note:
Preservation Code:												
12/3/19	1100	G	W	Y	Y	X	X	X	X	X	20	
	1220	G		Y		↓	↓	↓	↓	↓	9	
	1200	G		Y		↓	↓	↓	↓	↓	9	
↓	-		↓							X	3	

580-91195 Chain of Custody

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on
nable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological
I, IV, Other (specify) Data Package III

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements: 4.1, 3.4

	Date:	Time:	Method of Shipment:
	Date/Time: 12/3/19 1700	Company: PBS	Received by:	Date/Time: 12/4/19 1230	Company: M.E.
	Date/Time: 12/4/19 1305	Company: M.E.	Received by:	Date/Time: 12/4/19 1305	Company: TAL
	Date/Time:	Company	Received by:	Date/Time:	Company

stody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.1, 3.4

Ver: 08/04/2016

01/07/2020

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt Randall & Sam Vega	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360.601.7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental		**Analysis Requested**		Job #:
Address: 4412 SW Corbett Ave	**Due Date Requested:**			**Preservation Codes:**
City: Portland	**TAT Requested (days):**			
State, Zip: OR, 97239				
Phone:	PO #: Purchase Order not required			
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:			
Project Name: Camp Bonneville	Project #: 58011152			
Site:	SSOW#:			**Other:**

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate – 6850	~~8330~~ Full list Explosives 8330	~~8330A (Nitroaromatics and Nitramines)~~ SVOCs	Total PP Metals 6020/7470A	VOCs 8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
04Q19LCMW04DW	12/3/19	1100	G	W	Y	Y	X	X	X	X	X	20	
04Q19LCMW04SW	↓	1220	G	↓	Y		↓	↓	↓	↓	↓	9	
04Q19LCMW140W	↓	1200	G	↓	Y		↓	↓	↓	↓	↓	9	
TB120319	↓	—		↓							X	3	

580-91195 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Data Package III

Special Instructions/QC Requirements: 4.1, 3.4

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:
Relinquished by: [signature]	Date/Time: 12/3/19 1700	Company: PBS	Received by: [signature]	Date/Time: 12/4/19 1230	Company: M.E.
Relinquished by: [signature]	Date/Time: 12/4/19 1305	Company: M.E.	Received by: [signature]	Date/Time: 12/4/19 1305	Company: TAPOR
Relinquished by: [signature]	Date/Time: 12/4/19 1700	Company: TAPOR	Received by: [signature]	Date/Time: 12-5-19 0930	Company: TASea

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.1, 3.4 T=3.1/3.4

Ver: 08/04/2016

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72801.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91195-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/20/2019			Preservation Codes:
City: West Sacramento	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B/8330_SPE_P_IWWT (MOD) Explosives, Standard List	6850/Filtration_14D Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19LCMW04DW (580-91195-1)	12/3/19	11:00 Pacific		Water			X	X	3	
04Q19LCMW04DW (580-91195-1MS)	12/3/19	11:00 Pacific	MS	Water			X		2	
04Q19LCMW04DW (580-91195-1MSD)	12/3/19	11:00 Pacific	MSD	Water			X		2	
04Q19LCMW04SW (580-91195-2)	12/3/19	12:20 Pacific		Water			X	X	3	
04Q19LCMW140W (580-91195-3)	12/3/19	12:00 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/4/19 1700	Company TAPOR	Received by:	Date/Time: 12/5/19 950	Company ESA SEC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.: 619522	Cooler Temperature(s) °C and Other Remarks: 2.3 cor 3.1

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 1
Creator: Antonson, Angeline D

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 2
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/05/19 05:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619522
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	OBS 3.5 CORR 3.3C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91195-1

Login Number: 91195
List Number: 3
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/05/19 06:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619522
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	OBS 3.5 CORR 3.3C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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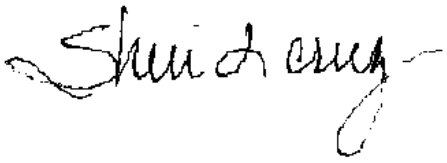
ANALYTICAL REPORT

Job Number: 580-91241-1

Job Description: Camp Bonneville Groundwater 2019-2020

For:
PBS Engineering and Environmental
4412 SW Corbett Ave
Portland, OR 97239

Attention: Scott Braunsten



Approved for release.
Sheri L Cruz
Project Manager I
12/30/2019 2:11 PM

Sheri L Cruz, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
sheri.cruz@testamericainc.com
12/30/2019

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins TestAmerica, Seattle
5755 8th Street East, Tacoma, WA 98424
Tel (253) 922-2310 Fax (253) 922-5047 www.testamericainc.com

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020

Report Number: 580-91241-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/06/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 3.3º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3), 04Q19L4MW02BW (580-91241-4) and TB120519 (580-91241-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 12/09/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCHLORATE

Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were analyzed for Perchlorate in accordance with 6850. The samples were prepared on 12/09/2019 and analyzed on 12/10/2019 and 12/15/2019.

Results for samples 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXPLOSIVES

Samples 04Q19L4MW01AW (580-91241-1), 04Q19L4MW01BW (580-91241-2), 04Q19L4MW02AW (580-91241-3) and 04Q19L4MW02BW (580-91241-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 12/11/2019 and analyzed on 12/14/2019 and 12/24/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330B aqueous in preparation batch 320-344664.

Sample 04Q19L4MW02BW (580-91241-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW01AW — Lab Sample ID: 580-91241-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	1.6		0.50		ug/L	1		6850	Total/NA

Client Sample ID: 04Q19L4MW01BW — Lab Sample ID: 580-91241-2

No Detections.

Client Sample ID: 04Q19L4MW02AW — Lab Sample ID: 580-91241-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HMX	3.2		0.11		ug/L	1		8330B	Total/NA
RDX	6.8		0.11		ug/L	1		8330B	Total/NA
Perchlorate	220		25		ug/L	50		6850	Total/NA

Client Sample ID: 04Q19L4MW02BW — Lab Sample ID: 580-91241-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.46		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethane	1.9		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	0.34		0.20		ug/L	1		8260C	Total/NA
Dichlorodifluoromethane	2.3		0.40		ug/L	1		8260C	Total/NA
2,4,6-Trinitrotoluene	0.18		0.11		ug/L	1		8330B	Total/NA
2,4-Dinitrotoluene	0.36		0.11		ug/L	1		8330B	Total/NA
HMX	6.7		0.11		ug/L	1		8330B	Total/NA
RDX - DL	36		0.54		ug/L	5		8330B	Total/NA
Perchlorate	560		25		ug/L	50		6850	Total/NA

Client Sample ID: TB120519 — Lab Sample ID: 580-91241-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 04Q19L4MW01AW
Lab Sample ID: 580-91241-1

Date Collected: 12/05/19 12:50
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 17:31	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 17:31	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 17:31	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 17:31	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 17:31	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:31	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 17:31	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 17:31	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 17:31	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 17:31	1
Benzene	ND		0.20		ug/L			12/09/19 17:31	1
Bromobenzene	ND		0.20		ug/L			12/09/19 17:31	1
Bromoform	ND		0.50		ug/L			12/09/19 17:31	1
Bromomethane	ND		0.50		ug/L			12/09/19 17:31	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 17:31	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 17:31	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Chloroethane	ND		0.50		ug/L			12/09/19 17:31	1
Chloroform	ND		0.20		ug/L			12/09/19 17:31	1
Chloromethane	ND		0.50		ug/L			12/09/19 17:31	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
Dibromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 17:31	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 17:31	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 17:31	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 17:31	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 17:31	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 17:31	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 17:31	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 17:31	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 17:31	1
Naphthalene	ND		1.0		ug/L			12/09/19 17:31	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 17:31	1

Client Sample ID: 04Q19L4MW01AW
Lab Sample ID: 580-91241-1

Date Collected: 12/05/19 12:50
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 17:31	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 17:31	1
Styrene	ND		0.50		ug/L			12/09/19 17:31	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 17:31	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 17:31	1
Toluene	ND		0.20		ug/L			12/09/19 17:31	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:31	1
Trichloroethene	ND		0.20		ug/L			12/09/19 17:31	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 17:31	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*12/09/19 17:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*12/09/19 17:31*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/09/19 17:31*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*12/09/19 17:31*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/09/19 17:31*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 05:07	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 05:07	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 05:07	1
Nitroglycerin	ND		0.69		ug/L		12/11/19 09:04	12/24/19 05:07	1
PETN	ND		0.69		ug/L		12/11/19 09:04	12/24/19 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/11/19 09:04*	*12/24/19 05:07*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**1.6**		0.50		ug/L		12/09/19 19:27	12/10/19 17:20	1

Client Sample ID: 04Q19L4MW01BW
Lab Sample ID: 580-91241-2

Date Collected: 12/05/19 13:32
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 17:58	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 17:58	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 17:58	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 17:58	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 17:58	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 17:58	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 17:58	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 17:58	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 17:58	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 17:58	1
Benzene	ND		0.20		ug/L			12/09/19 17:58	1
Bromobenzene	ND		0.20		ug/L			12/09/19 17:58	1
Bromoform	ND		0.50		ug/L			12/09/19 17:58	1
Bromomethane	ND		0.50		ug/L			12/09/19 17:58	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 17:58	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 17:58	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Chloroethane	ND		0.50		ug/L			12/09/19 17:58	1
Chloroform	ND		0.20		ug/L			12/09/19 17:58	1
Chloromethane	ND		0.50		ug/L			12/09/19 17:58	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
Dibromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 17:58	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 17:58	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 17:58	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 17:58	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 17:58	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 17:58	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 17:58	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 17:58	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 17:58	1
Naphthalene	ND		1.0		ug/L			12/09/19 17:58	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 17:58	1

Client Sample ID: 04Q19L4MW01BW
Lab Sample ID: 580-91241-2

Date Collected: 12/05/19 13:32
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 17:58	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 17:58	1
Styrene	ND		0.50		ug/L			12/09/19 17:58	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 17:58	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 17:58	1
Toluene	ND		0.20		ug/L			12/09/19 17:58	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 17:58	1
Trichloroethene	ND		0.20		ug/L			12/09/19 17:58	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 17:58	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/09/19 17:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*12/09/19 17:58*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/09/19 17:58*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 17:58*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/09/19 17:58*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		12/11/19 09:04	12/24/19 06:01	1
2-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
3-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
4-Nitrotoluene	ND		0.53		ug/L		12/11/19 09:04	12/24/19 06:01	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
HMX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
RDX	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:01	1
Nitroglycerin	ND		0.69		ug/L		12/11/19 09:04	12/24/19 06:01	1
PETN	ND		0.69		ug/L		12/11/19 09:04	12/24/19 06:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*12/11/19 09:04*	*12/24/19 06:01*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/15/19 23:18	1

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3

Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 18:24	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 18:24	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 18:24	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 18:24	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 18:24	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:24	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 18:24	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 18:24	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 18:24	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 18:24	1
Benzene	ND		0.20		ug/L			12/09/19 18:24	1
Bromobenzene	ND		0.20		ug/L			12/09/19 18:24	1
Bromoform	ND		0.50		ug/L			12/09/19 18:24	1
Bromomethane	ND		0.50		ug/L			12/09/19 18:24	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 18:24	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 18:24	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Chloroethane	ND		0.50		ug/L			12/09/19 18:24	1
Chloroform	ND		0.20		ug/L			12/09/19 18:24	1
Chloromethane	ND		0.50		ug/L			12/09/19 18:24	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
Dibromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 18:24	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 18:24	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 18:24	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 18:24	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 18:24	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 18:24	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 18:24	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 18:24	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 18:24	1
Naphthalene	ND		1.0		ug/L			12/09/19 18:24	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 18:24	1

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3

Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 18:24	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 18:24	1
Styrene	ND		0.50		ug/L			12/09/19 18:24	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 18:24	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 18:24	1
Toluene	ND		0.20		ug/L			12/09/19 18:24	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:24	1
Trichloroethene	ND		0.20		ug/L			12/09/19 18:24	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 18:24	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 18:24*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 18:24*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/09/19 18:24*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 18:24*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*12/09/19 18:24*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,4,6-Trinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,4-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/11/19 09:04	12/24/19 06:55	1
2-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
3-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
4-Nitrotoluene	ND		0.55		ug/L		12/11/19 09:04	12/24/19 06:55	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
HMX	**3.2**		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
RDX	**6.8**		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 06:55	1
Nitroglycerin	ND		0.71		ug/L		12/11/19 09:04	12/24/19 06:55	1
PETN	ND		0.71		ug/L		12/11/19 09:04	12/24/19 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*106*		*79 - 111*	*12/11/19 09:04*	*12/14/19 11:20*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*12/11/19 09:04*	*12/24/19 06:55*	*1*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**220**		25		ug/L		12/09/19 19:27	12/15/19 23:31	50

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4

Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 18:51	1
1,1,1-Trichloroethane	**0.46**		0.20		ug/L			12/09/19 18:51	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloroethane	**1.9**		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloroethene	**0.34**		0.20		ug/L			12/09/19 18:51	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 18:51	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 18:51	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 18:51	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 18:51	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 18:51	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 18:51	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 18:51	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 18:51	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 18:51	1
Benzene	ND		0.20		ug/L			12/09/19 18:51	1
Bromobenzene	ND		0.20		ug/L			12/09/19 18:51	1
Bromoform	ND		0.50		ug/L			12/09/19 18:51	1
Bromomethane	ND		0.50		ug/L			12/09/19 18:51	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 18:51	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 18:51	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Chloroethane	ND		0.50		ug/L			12/09/19 18:51	1
Chloroform	ND		0.20		ug/L			12/09/19 18:51	1
Chloromethane	ND		0.50		ug/L			12/09/19 18:51	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
Dibromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 18:51	1
Dichlorodifluoromethane	**2.3**		0.40		ug/L			12/09/19 18:51	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 18:51	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 18:51	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 18:51	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 18:51	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 18:51	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 18:51	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 18:51	1
Naphthalene	ND		1.0		ug/L			12/09/19 18:51	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 18:51	1

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4

Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50		ug/L			12/09/19 18:51	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 18:51	1
Styrene	ND		0.50		ug/L			12/09/19 18:51	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 18:51	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 18:51	1
Toluene	ND		0.20		ug/L			12/09/19 18:51	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 18:51	1
Trichloroethene	ND		0.20		ug/L			12/09/19 18:51	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 18:51	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 18:51*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 18:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/09/19 18:51*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/09/19 18:51*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*12/09/19 18:51*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
1,3-Dinitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,4,6-Trinitrotoluene	**0.18**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,4-Dinitrotoluene	**0.36**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2,6-Dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
2-Amino-4,6-dinitrotoluene	ND		0.22		ug/L		12/11/19 09:04	12/24/19 07:48	1
2-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
3-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
4-Nitrotoluene	ND		0.54		ug/L		12/11/19 09:04	12/24/19 07:48	1
4-Amino-2,6-dinitrotoluene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
HMX	**6.7**		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Nitrobenzene	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Tetryl	ND		0.11		ug/L		12/11/19 09:04	12/24/19 07:48	1
Nitroglycerin	ND		0.70		ug/L		12/11/19 09:04	12/24/19 07:48	1
PETN	ND		0.70		ug/L		12/11/19 09:04	12/24/19 07:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*115*	*X*	*79 - 111*	*12/11/19 09:04*	*12/14/19 12:27*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*12/11/19 09:04*	*12/24/19 07:48*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**36**		0.54		ug/L		12/11/19 09:04	12/24/19 08:42	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*104*		*79 - 111*	*12/11/19 09:04*	*12/24/19 08:20*	*5*
3,4-Dinitrotoluene	*90*		*79 - 111*	*12/11/19 09:04*	*12/24/19 08:42*	*5*

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4

Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	560		25		ug/L		12/09/19 19:27	12/15/19 23:44	50

Client Sample ID: TB120519
Lab Sample ID: 580-91241-5

Date Collected: 12/05/19 00:01
Matrix: Water
Date Received: 12/06/19 12:50

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 13:07	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 13:07	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 13:07	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 13:07	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 13:07	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 13:07	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 13:07	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 13:07	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 13:07	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 13:07	1
Benzene	ND		0.20		ug/L			12/09/19 13:07	1
Bromobenzene	ND		0.20		ug/L			12/09/19 13:07	1
Bromoform	ND		0.50		ug/L			12/09/19 13:07	1
Bromomethane	ND		0.50		ug/L			12/09/19 13:07	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 13:07	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 13:07	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Chloroethane	ND		0.50		ug/L			12/09/19 13:07	1
Chloroform	ND		0.20		ug/L			12/09/19 13:07	1
Chloromethane	ND		0.50		ug/L			12/09/19 13:07	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
Dibromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 13:07	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 13:07	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 13:07	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 13:07	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 13:07	1

Client Sample ID: TB120519
Date Collected: 12/05/19 00:01
Date Received: 12/06/19 12:50

Lab Sample ID: 580-91241-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			12/09/19 13:07	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 13:07	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 13:07	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 13:07	1
Naphthalene	ND		1.0		ug/L			12/09/19 13:07	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
N-Propylbenzene	ND		0.30		ug/L			12/09/19 13:07	1
o-Xylene	ND		0.50		ug/L			12/09/19 13:07	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 13:07	1
Styrene	ND		0.50		ug/L			12/09/19 13:07	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 13:07	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 13:07	1
Toluene	ND		0.20		ug/L			12/09/19 13:07	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 13:07	1
Trichloroethene	ND		0.20		ug/L			12/09/19 13:07	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 13:07	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/09/19 13:07*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*12/09/19 13:07*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*12/09/19 13:07*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/09/19 13:07*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*12/09/19 13:07*	*1*

Default Detection Limits

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	0.30	0.027	ug/L
1,1,1-Trichloroethane	0.20	0.025	ug/L
1,1,2,2-Tetrachloroethane	0.20	0.056	ug/L
1,1,2-Trichloroethane	0.20	0.070	ug/L
1,1-Dichloroethane	0.20	0.025	ug/L
1,1-Dichloroethene	0.20	0.10	ug/L
1,1-Dichloropropene	0.20	0.036	ug/L
1,2,3-Trichlorobenzene	0.50	0.15	ug/L
1,2,3-Trichloropropane	0.20	0.050	ug/L
1,2,4-Trichlorobenzene	0.30	0.072	ug/L
1,2,4-Trimethylbenzene	0.30	0.072	ug/L
1,2-Dibromo-3-Chloropropane	2.0	0.44	ug/L
1,2-Dichlorobenzene	0.30	0.050	ug/L
1,2-Dichloroethane	0.20	0.043	ug/L
1,2-Dichloropropane	0.20	0.060	ug/L
1,3,5-Trimethylbenzene	0.50	0.15	ug/L
1,3-Dichlorobenzene	0.30	0.050	ug/L
1,3-Dichloropropane	0.20	0.056	ug/L
1,4-Dichlorobenzene	0.30	0.050	ug/L
2,2-Dichloropropane	0.50	0.060	ug/L
2-Chlorotoluene	0.50	0.12	ug/L
4-Chlorotoluene	0.30	0.050	ug/L
4-Isopropyltoluene	0.30	0.050	ug/L
Benzene	0.20	0.030	ug/L
Bromobenzene	0.20	0.035	ug/L
Bromoform	0.50	0.16	ug/L
Bromomethane	0.50	0.16	ug/L
Carbon tetrachloride	0.20	0.025	ug/L
Chlorobenzene	0.20	0.025	ug/L
Chlorobromomethane	0.20	0.025	ug/L
Chlorodibromomethane	0.20	0.055	ug/L
Chloroethane	0.50	0.096	ug/L
Chloroform	0.20	0.030	ug/L
Chloromethane	0.50	0.15	ug/L
cis-1,2-Dichloroethene	0.20	0.055	ug/L
cis-1,3-Dichloropropene	0.20	0.090	ug/L
Dibromomethane	0.20	0.062	ug/L
Dichlorobromomethane	0.20	0.060	ug/L
Dichlorodifluoromethane	0.40	0.13	ug/L
Ethylbenzene	0.20	0.030	ug/L
Ethylene Dibromide	0.10	0.025	ug/L
Hexachlorobutadiene	0.50	0.15	ug/L
Isopropylbenzene	1.0	0.19	ug/L
Methyl tert-butyl ether	0.30	0.070	ug/L
Methylene Chloride	5.0	0.74	ug/L
m-Xylene & p-Xylene	0.50	0.12	ug/L
Naphthalene	1.0	0.22	ug/L
n-Butylbenzene	0.50	0.080	ug/L
N-Propylbenzene	0.30	0.091	ug/L
o-Xylene	0.50	0.15	ug/L
sec-Butylbenzene	1.0	0.17	ug/L
Styrene	0.50	0.19	ug/L
tert-Butylbenzene	0.50	0.10	ug/L

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	RL	MDL	Units
Tetrachloroethene	0.50	0.084	ug/L
Toluene	0.20	0.050	ug/L
trans-1,2-Dichloroethene	0.20	0.089	ug/L
trans-1,3-Dichloropropene	0.20	0.092	ug/L
Trichloroethene	0.20	0.066	ug/L
Trichlorofluoromethane	0.50	0.11	ug/L
Vinyl chloride	0.020	0.013	ug/L

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 8330-Prep

Analyte	RL	MDL	Units
1,3,5-Trinitrobenzene	0.10	0.031	ug/L
1,3-Dinitrobenzene	0.10	0.050	ug/L
2,4,6-Trinitrotoluene	0.10	0.050	ug/L
2,4-Dinitrotoluene	0.10	0.050	ug/L
2,6-Dinitrotoluene	0.10	0.050	ug/L
2-Amino-4,6-dinitrotoluene	0.20	0.015	ug/L
2-Nitrotoluene	0.50	0.088	ug/L
3-Nitrotoluene	0.50	0.057	ug/L
4-Amino-2,6-dinitrotoluene	0.10	0.050	ug/L
4-Nitrotoluene	0.50	0.088	ug/L
HMX	0.10	0.036	ug/L
Nitrobenzene	0.10	0.050	ug/L
Nitroglycerin	0.65	0.33	ug/L
PETN	0.65	0.30	ug/L
RDX	0.10	0.036	ug/L
Tetryl	0.10	0.050	ug/L

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Prep: Filtration

Analyte	RL	MDL	Units
Perchlorate	0.50	0.085	ug/L

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		DCA	BFB	DBFM	TOL	TFT
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)	(80-120)
580-91241-1	04Q19L4MW01AW	106	101	100	102	98
580-91241-2	04Q19L4MW01BW	103	99	99	103	100
580-91241-3	04Q19L4MW02AW	105	100	101	103	97
580-91241-4	04Q19L4MW02BW	105	100	103	104	98
580-91241-5	TB120519	102	100	99	103	100
LCS 580-318472/4	Lab Control Sample	100	103	100	104	97
LCSD 580-318472/5	Lab Control Sample Dup	101	103	100	104	94
MB 580-318472/7	Method Blank	105	102	98	105	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
TFT = Trifluorotoluene (Surr)

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DNT1
Lab Sample ID	Client Sample ID	(79-111)
580-91241-1	04Q19L4MW01AW	84
580-91241-2	04Q19L4MW01BW	85
580-91241-3	04Q19L4MW02AW	106
580-91241-3	04Q19L4MW02AW	84
580-91241-4	04Q19L4MW02BW	115 X
580-91241-4	04Q19L4MW02BW	87
580-91241-4 - DL	04Q19L4MW02BW	90
580-91241-4 - DL	04Q19L4MW02BW	104
LCS 320-344664/2-A	Lab Control Sample	88
LCSD 320-344664/3-A	Lab Control Sample Dup	83
MB 320-344664/1-A	Method Blank	86

Surrogate Legend

DNT = 3,4-Dinitrotoluene

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			12/09/19 12:14	1
1,1,1-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1,2-Trichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
1,1-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,2,3-Trichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			12/09/19 12:14	1
1,2-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,2-Dichloroethane	ND		0.20		ug/L			12/09/19 12:14	1
1,2-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
1,3-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
1,3-Dichloropropane	ND		0.20		ug/L			12/09/19 12:14	1
1,4-Dichlorobenzene	ND		0.30		ug/L			12/09/19 12:14	1
2,2-Dichloropropane	ND		0.50		ug/L			12/09/19 12:14	1
2-Chlorotoluene	ND		0.50		ug/L			12/09/19 12:14	1
4-Chlorotoluene	ND		0.30		ug/L			12/09/19 12:14	1
4-Isopropyltoluene	ND		0.30		ug/L			12/09/19 12:14	1
Benzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Bromoform	ND		0.50		ug/L			12/09/19 12:14	1
Bromomethane	ND		0.50		ug/L			12/09/19 12:14	1
Carbon tetrachloride	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobenzene	ND		0.20		ug/L			12/09/19 12:14	1
Chlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chlorodibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Chloroethane	ND		0.50		ug/L			12/09/19 12:14	1
Chloroform	ND		0.20		ug/L			12/09/19 12:14	1
Chloromethane	ND		0.50		ug/L			12/09/19 12:14	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Dibromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorobromomethane	ND		0.20		ug/L			12/09/19 12:14	1
Dichlorodifluoromethane	ND		0.40		ug/L			12/09/19 12:14	1
Ethylbenzene	ND		0.20		ug/L			12/09/19 12:14	1
Ethylene Dibromide	ND		0.10		ug/L			12/09/19 12:14	1
Hexachlorobutadiene	ND		0.50		ug/L			12/09/19 12:14	1
Isopropylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Methyl tert-butyl ether	ND		0.30		ug/L			12/09/19 12:14	1
Methylene Chloride	ND		5.0		ug/L			12/09/19 12:14	1
m-Xylene & p-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
Naphthalene	ND		1.0		ug/L			12/09/19 12:14	1
n-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-318472/7
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30		ug/L			12/09/19 12:14	1
o-Xylene	ND		0.50		ug/L			12/09/19 12:14	1
sec-Butylbenzene	ND		1.0		ug/L			12/09/19 12:14	1
Styrene	ND		0.50		ug/L			12/09/19 12:14	1
tert-Butylbenzene	ND		0.50		ug/L			12/09/19 12:14	1
Tetrachloroethene	ND		0.50		ug/L			12/09/19 12:14	1
Toluene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			12/09/19 12:14	1
Trichloroethene	ND		0.20		ug/L			12/09/19 12:14	1
Trichlorofluoromethane	ND		0.50		ug/L			12/09/19 12:14	1
Vinyl chloride	ND		0.020		ug/L			12/09/19 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*12/09/19 12:14*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*12/09/19 12:14*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*12/09/19 12:14*	*1*

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.48		ug/L		110	79 - 127
1,1,1-Trichloroethane	5.00	4.99		ug/L		100	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	69 - 139
1,1,2-Trichloroethane	5.00	4.96		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.02		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	4.85		ug/L		97	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.28		ug/L		106	75 - 137
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	5.04		ug/L		101	79 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.83		ug/L		97	69 - 130
1,2-Dichlorobenzene	5.00	5.03		ug/L		101	80 - 129
1,2-Dichloroethane	5.00	4.74		ug/L		95	74 - 130
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130
1,3,5-Trimethylbenzene	5.00	5.12		ug/L		102	80 - 139
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	80 - 130
1,3-Dichloropropane	5.00	5.00		ug/L		100	80 - 130
1,4-Dichlorobenzene	5.00	4.76		ug/L		95	80 - 129
2,2-Dichloropropane	5.00	4.78		ug/L		96	58 - 150
2-Chlorotoluene	5.00	5.02		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.06		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 132

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-318472/4
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.02		ug/L		100	73 - 133
Bromobenzene	5.00	4.71		ug/L		94	80 - 130
Bromoform	5.00	4.62		ug/L		92	69 - 137
Bromomethane	5.00	5.35		ug/L		107	68 - 120
Carbon tetrachloride	5.00	4.91		ug/L		98	71 - 132
Chlorobenzene	5.00	4.80		ug/L		96	80 - 123
Chlorobromomethane	5.00	5.00		ug/L		100	79 - 131
Chlorodibromomethane	5.00	4.60		ug/L		92	76 - 131
Chloroethane	5.00	5.23		ug/L		105	49 - 135
Chloroform	5.00	5.07		ug/L		101	80 - 130
Chloromethane	5.00	4.57		ug/L		91	32 - 143
cis-1,2-Dichloroethene	5.00	5.07		ug/L		101	72 - 130
cis-1,3-Dichloropropene	5.00	5.13		ug/L		103	66 - 141
Dibromomethane	5.00	4.92		ug/L		98	65 - 141
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131
Dichlorodifluoromethane	5.00	4.61		ug/L		92	20 - 137
Ethylbenzene	5.00	5.15		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.97		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	4.86		ug/L		97	72 - 138
Isopropylbenzene	5.00	5.08		ug/L		102	75 - 137
Methyl tert-butyl ether	5.00	5.13		ug/L		103	60 - 150
Methylene Chloride	5.00	5.09		ug/L		102	75 - 134
m-Xylene & p-Xylene	5.00	5.37		ug/L		107	78 - 130
Naphthalene	5.00	4.94		ug/L		99	64 - 132
n-Butylbenzene	5.00	5.01		ug/L		100	73 - 135
N-Propylbenzene	5.00	5.27		ug/L		105	77 - 142
o-Xylene	5.00	5.01		ug/L		100	80 - 139
sec-Butylbenzene	5.00	4.97		ug/L		99	78 - 140
Styrene	5.00	4.72		ug/L		94	74 - 136
tert-Butylbenzene	5.00	4.52		ug/L		90	77 - 140
Tetrachloroethene	5.00	5.06		ug/L		101	75 - 131
Toluene	5.00	4.77		ug/L		95	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	71 - 128
Trichloroethene	5.00	4.85		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	4.78		ug/L		96	60 - 132
Vinyl chloride	5.00	5.09		ug/L		102	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.41		ug/L		108	79 - 127	1	20
1,1,1-Trichloroethane	5.00	4.90		ug/L		98	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	4.90		ug/L		98	69 - 139	1	22
1,1,2-Trichloroethane	5.00	5.08		ug/L		102	80 - 127	3	19
1,1-Dichloroethane	5.00	4.93		ug/L		99	74 - 135	2	20
1,1-Dichloroethene	5.00	4.80		ug/L		96	71 - 126	1	17
1,1-Dichloropropene	5.00	4.90		ug/L		98	72 - 132	1	13
1,2,3-Trichlorobenzene	5.00	5.11		ug/L		102	75 - 137	3	20
1,2,3-Trichloropropane	5.00	4.95		ug/L		99	80 - 127	1	20
1,2,4-Trichlorobenzene	5.00	4.89		ug/L		98	79 - 130	3	20
1,2,4-Trimethylbenzene	5.00	5.00		ug/L		100	78 - 136	4	20
1,2-Dibromo-3-Chloropropane	5.00	4.89		ug/L		98	69 - 130	1	26
1,2-Dichlorobenzene	5.00	4.88		ug/L		98	80 - 129	3	14
1,2-Dichloroethane	5.00	4.75		ug/L		95	74 - 130	0	15
1,2-Dichloropropane	5.00	4.85		ug/L		97	80 - 130	0	14
1,3,5-Trimethylbenzene	5.00	4.90		ug/L		98	80 - 139	4	20
1,3-Dichlorobenzene	5.00	4.81		ug/L		96	80 - 130	4	12
1,3-Dichloropropane	5.00	5.09		ug/L		102	80 - 130	2	19
1,4-Dichlorobenzene	5.00	4.60		ug/L		92	80 - 129	4	11
2,2-Dichloropropane	5.00	4.61		ug/L		92	58 - 150	4	28
2-Chlorotoluene	5.00	4.85		ug/L		97	80 - 136	3	20
4-Chlorotoluene	5.00	4.91		ug/L		98	80 - 130	3	20
4-Isopropyltoluene	5.00	4.74		ug/L		95	78 - 132	4	14
Benzene	5.00	4.99		ug/L		100	73 - 133	1	20
Bromobenzene	5.00	4.65		ug/L		93	80 - 130	1	20
Bromoform	5.00	4.67		ug/L		93	69 - 137	1	20
Bromomethane	5.00	5.15		ug/L		103	68 - 120	4	18
Carbon tetrachloride	5.00	4.82		ug/L		96	71 - 132	2	15
Chlorobenzene	5.00	4.77		ug/L		95	80 - 123	1	12
Chlorobromomethane	5.00	4.99		ug/L		100	79 - 131	0	20
Chlorodibromomethane	5.00	4.62		ug/L		92	76 - 131	1	20
Chloroethane	5.00	5.10		ug/L		102	49 - 135	2	27
Chloroform	5.00	5.01		ug/L		100	80 - 130	1	20
Chloromethane	5.00	4.35		ug/L		87	32 - 143	5	23
cis-1,2-Dichloroethene	5.00	4.99		ug/L		100	72 - 130	2	20
cis-1,3-Dichloropropene	5.00	5.16		ug/L		103	66 - 141	1	22
Dibromomethane	5.00	5.04		ug/L		101	65 - 141	2	20
Dichlorobromomethane	5.00	4.46		ug/L		89	74 - 131	0	20
Dichlorodifluoromethane	5.00	4.39		ug/L		88	20 - 137	5	22
Ethylbenzene	5.00	5.12		ug/L		102	80 - 130	1	20
Ethylene Dibromide	5.00	5.07		ug/L		101	80 - 126	2	20
Hexachlorobutadiene	5.00	4.64		ug/L		93	72 - 138	5	20
Isopropylbenzene	5.00	5.01		ug/L		100	75 - 137	1	20
Methyl tert-butyl ether	5.00	5.19		ug/L		104	60 - 150	1	25
Methylene Chloride	5.00	5.06		ug/L		101	75 - 134	1	18
m-Xylene & p-Xylene	5.00	5.35		ug/L		107	78 - 130	0	20
Naphthalene	5.00	4.85		ug/L		97	64 - 132	2	20
n-Butylbenzene	5.00	4.82		ug/L		96	73 - 135	4	18

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-318472/5
Matrix: Water
Analysis Batch: 318472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene			5.00	5.05		ug/L		101	77 - 142	4	20
o-Xylene			5.00	4.93		ug/L		99	80 - 139	2	20
sec-Butylbenzene			5.00	4.77		ug/L		95	78 - 140	4	20
Styrene			5.00	4.67		ug/L		93	74 - 136	1	20
tert-Butylbenzene			5.00	4.36		ug/L		87	77 - 140	4	20
Tetrachloroethene			5.00	4.98		ug/L		100	75 - 131	2	20
Toluene			5.00	4.76		ug/L		95	80 - 126	0	20
trans-1,2-Dichloroethene			5.00	4.80		ug/L		96	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.67		ug/L		93	71 - 128	2	21
Trichloroethene			5.00	4.87		ug/L		97	72 - 136	0	14
Trichlorofluoromethane			5.00	4.65		ug/L		93	60 - 132	3	20
Vinyl chloride			5.00	4.88		ug/L		98	52 - 128	4	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-344664/1-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
1,3-Dinitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		12/11/19 09:04	12/23/19 23:46	1
2-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
3-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Nitrotoluene	ND		0.50		ug/L		12/11/19 09:04	12/23/19 23:46	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
HMX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
RDX	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitrobenzene	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Tetryl	ND		0.10		ug/L		12/11/19 09:04	12/23/19 23:46	1
Nitroglycerin	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1
PETN	ND		0.65		ug/L		12/11/19 09:04	12/23/19 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*12/11/19 09:04*	*12/23/19 23:46*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 320-344664/2-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	0.927		ug/L		93	74 - 120		
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.826		ug/L		83	69 - 111		
2,4-Dinitrotoluene			1.00	0.923		ug/L		92	70 - 119		
2,6-Dinitrotoluene			1.00	0.908		ug/L		91	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.08		ug/L		108	77 - 123		
2-Nitrotoluene			1.00	0.885		ug/L		89	64 - 120		
3-Nitrotoluene			1.00	0.895		ug/L		89	67 - 114		
4-Nitrotoluene			1.00	0.903		ug/L		90	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	0.879		ug/L		88	68 - 113		
HMX			1.00	1.04		ug/L		104	67 - 115		
RDX			1.00	1.03		ug/L		103	68 - 122		
Nitrobenzene			1.00	0.962		ug/L		96	69 - 119		
Tetryl			1.00	0.931		ug/L		93	66 - 105		
Nitroglycerin			5.00	4.54		ug/L		91	85 - 115		
PETN			5.00	4.48		ug/L		90	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Lab Sample ID: LCSD 320-344664/3-A
Matrix: Water
Analysis Batch: 347379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 344664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.925		ug/L		93	74 - 120	0	29
1,3-Dinitrobenzene			1.00	0.966		ug/L		97	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.825		ug/L		83	69 - 111	0	28
2,4-Dinitrotoluene			1.00	0.926		ug/L		93	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.912		ug/L		91	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.05		ug/L		105	77 - 123	3	27
2-Nitrotoluene			1.00	0.873		ug/L		87	64 - 120	1	36
3-Nitrotoluene			1.00	0.903		ug/L		90	67 - 114	1	31
4-Nitrotoluene			1.00	0.917		ug/L		92	67 - 115	2	32
4-Amino-2,6-dinitrotoluene			1.00	0.890		ug/L		89	68 - 113	1	30
HMX			1.00	1.04		ug/L		104	67 - 115	1	32
RDX			1.00	1.03		ug/L		103	68 - 122	0	32
Nitrobenzene			1.00	0.964		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.955		ug/L		95	66 - 105	2	26
Nitroglycerin			5.00	4.49		ug/L		90	85 - 115	1	15
PETN			5.00	4.44		ug/L		89	84 - 117	1	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*83*		*79 - 111*

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-344342/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 344441
Prep Batch: 344342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		12/09/19 19:27	12/10/19 12:25	1

Lab Sample ID: LCS 320-344342/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 344441
Prep Batch: 344342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.60		ug/L		112	80 - 120

Lab Sample ID: INF 320-344342/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Analysis Batch: 344441
Prep Batch: 344342

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	5.65		ng/mL		113	80 - 120

GC/MS VOA

Analysis Batch: 318472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-1	04Q19L4MW01AW	Total/NA	Water	8260C	
580-91241-2	04Q19L4MW01BW	Total/NA	Water	8260C	
580-91241-3	04Q19L4MW02AW	Total/NA	Water	8260C	
580-91241-4	04Q19L4MW02BW	Total/NA	Water	8260C	
580-91241-5	TB120519	Total/NA	Water	8260C	
MB 580-318472/7	Method Blank	Total/NA	Water	8260C	
LCS 580-318472/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-318472/5	Lab Control Sample Dup	Total/NA	Water	8260C	

HPLC/IC

Prep Batch: 344664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-1	04Q19L4MW01AW	Total/NA	Water	8330-Prep	
580-91241-2	04Q19L4MW01BW	Total/NA	Water	8330-Prep	
580-91241-3	04Q19L4MW02AW	Total/NA	Water	8330-Prep	
580-91241-4	04Q19L4MW02BW	Total/NA	Water	8330-Prep	
580-91241-4 - DL	04Q19L4MW02BW	Total/NA	Water	8330-Prep	
MB 320-344664/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-344664/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
LCSD 320-344664/3-A	Lab Control Sample Dup	Total/NA	Water	8330-Prep	

Analysis Batch: 345107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-3	04Q19L4MW02AW	Total/NA	Water	8330B	344664
580-91241-4	04Q19L4MW02BW	Total/NA	Water	8330B	344664

Analysis Batch: 347379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-1	04Q19L4MW01AW	Total/NA	Water	8330B	344664
580-91241-2	04Q19L4MW01BW	Total/NA	Water	8330B	344664
580-91241-3	04Q19L4MW02AW	Total/NA	Water	8330B	344664
580-91241-4	04Q19L4MW02BW	Total/NA	Water	8330B	344664
580-91241-4 - DL	04Q19L4MW02BW	Total/NA	Water	8330B	344664
MB 320-344664/1-A	Method Blank	Total/NA	Water	8330B	344664
LCS 320-344664/2-A	Lab Control Sample	Total/NA	Water	8330B	344664
LCSD 320-344664/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	344664

Analysis Batch: 347504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-4 - DL	04Q19L4MW02BW	Total/NA	Water	8330B	344664

LCMS

Prep Batch: 344342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-1	04Q19L4MW01AW	Total/NA	Water	Filtration	
580-91241-2	04Q19L4MW01BW	Total/NA	Water	Filtration	
580-91241-3	04Q19L4MW02AW	Total/NA	Water	Filtration	
580-91241-4	04Q19L4MW02BW	Total/NA	Water	Filtration	
MB 320-344342/1-A	Method Blank	Total/NA	Water	Filtration	
INF 320-344342/3-A	Lab Control Sample		Water	Filtration	

LCMS (Continued)

Prep Batch: 344342 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-344342/2-A	Lab Control Sample	Total/NA	Water	Filtration	

Analysis Batch: 344441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-1	04Q19L4MW01AW	Total/NA	Water	6850	344342
MB 320-344342/1-A	Method Blank	Total/NA	Water	6850	344342
INF 320-344342/3-A	Lab Control Sample		Water	6850	344342
LCS 320-344342/2-A	Lab Control Sample	Total/NA	Water	6850	344342

Analysis Batch: 345699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-91241-2	04Q19L4MW01BW	Total/NA	Water	6850	344342
580-91241-3	04Q19L4MW02AW	Total/NA	Water	6850	344342
580-91241-4	04Q19L4MW02BW	Total/NA	Water	6850	344342

Client Sample ID: 04Q19L4MW01AW
Lab Sample ID: 580-91241-1
Date Collected: 12/05/19 12:50
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 17:31	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 05:07	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	344441	12/10/19 17:20	JY1	TAL SAC

Client Sample ID: 04Q19L4MW01BW
Lab Sample ID: 580-91241-2
Date Collected: 12/05/19 13:32
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 17:58	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 06:01	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		1	345699	12/15/19 23:18	JY1	TAL SAC

Client Sample ID: 04Q19L4MW02AW
Lab Sample ID: 580-91241-3
Date Collected: 12/05/19 14:07
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 18:24	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 06:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	345107	12/14/19 11:20	AJC	TAL SAC
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		50	345699	12/15/19 23:31	JY1	TAL SAC

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4
Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 18:51	TL1	TAL SEA
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	347379	12/24/19 07:48	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B	DL	5	347379	12/24/19 08:42	AJC	TAL SAC
Total/NA	Prep	8330-Prep			344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B		1	345107	12/14/19 12:27	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		344664	12/11/19 09:04	JFA	TAL SAC
Total/NA	Analysis	8330B	DL	5	347504	12/24/19 08:20	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 04Q19L4MW02BW
Lab Sample ID: 580-91241-4

Date Collected: 12/05/19 15:05
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			344342	12/09/19 19:27	HJA	TAL SAC
Total/NA	Analysis	6850		50	345699	12/15/19 23:44	JY1	TAL SAC

Client Sample ID: TB120519
Lab Sample ID: 580-91241-5

Date Collected: 12/05/19 00:01
Matrix: Water
Date Received: 12/06/19 12:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318472	12/09/19 13:07	TL1	TAL SEA

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-20
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-06-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-20 *
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8330B	Nitroaromatics and Nitramines (HPLC)	SW846	TAL SAC
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
5030B	Purge and Trap	SW846	TAL SEA
8330-Prep	Solid-Phase Extraction (Explosives)	SW846	TAL SAC
Filtration	Sample Filtration	None	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: PBS Engineering and Environmental
Job ID: 580-91241-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-91241-1	04Q19L4MW01AW	Water	12/05/19 12:50	12/06/19 12:50	
580-91241-2	04Q19L4MW01BW	Water	12/05/19 13:32	12/06/19 12:50	
580-91241-3	04Q19L4MW02AW	Water	12/05/19 14:07	12/06/19 12:50	
580-91241-4	04Q19L4MW02BW	Water	12/05/19 15:05	12/06/19 12:50	
580-91241-5	TB120519	Water	12/05/19 00:01	12/06/19 12:50	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.11	Invalid Compound ID	wongsakul t	12/05/19 12:08
Vinyl chloride	2.25	Unspecified		
Bromomethane	2.63	Peak assignment corrected	vaughand	12/05/19 12:07
Trichlorofluoromethane	3.09	Baseline	vaughand	12/05/19 09:27
Acrolein	3.74	Peak assignment corrected	vaughand	12/05/19 12:07
1,1-Dichloroethene	3.88	Invalid Compound ID	vaughand	12/05/19 12:07
1,1,2-Trichloro-1,2,2-trifluoroet hane	3.95	Unspecified		
Acetone	3.98	Invalid Compound ID	wongsakul t	12/05/19 12:09
Carbon disulfide	4.19	Invalid Compound ID	wongsakul t	12/05/19 12:09
Methylene Chloride	4.79	Invalid Compound ID	wongsakul t	12/05/19 12:09
Acrylonitrile	5.28	Unspecified		
Methyl tert-butyl ether	5.35	Incomplete Integration	wongsakul t	12/05/19 12:09
Vinyl acetate	6.23	Incomplete Integration	vaughand	12/05/19 12:17
Tert-butyl ethyl ether	6.94	Shouldering	vaughand	12/05/19 10:14
2,2-Dichloropropane	7.14	Incomplete Integration	wongsakul t	12/05/19 12:09
2-Butanone (MEK)	7.18	Incomplete Integration	vaughand	12/05/19 12:17
Chlorobromomethane	7.52	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1,1-Trichloroethane	7.91	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1-Dichloropropene	8.13	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakul t	12/05/19 12:10
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakul t	12/05/19 12:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 12:10
Dichlorobromomethane	9.74	Invalid Compound ID	wongsakul t	12/05/19 12:10
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakul t	12/05/19 12:10
4-Methyl-2-pentanone (MIBK)	10.32	Invalid Compound ID	wongsakul t	12/05/19 12:10
Toluene	10.47	Invalid Compound ID	wongsakul t	12/05/19 12:10
trans-1,3-Dichloropropene	10.71	Peak assignment corrected	vaughand	12/05/19 10:03
2-Hexanone	11.07	Invalid Compound ID	wongsakul t	12/05/19 12:10
Chlorodibromomethane	11.21	Invalid Compound ID	wongsakul t	12/05/19 12:10
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 12:10
1,1,1,2-Tetrachloroethane	11.81	Invalid Compound ID	wongsakul t	12/05/19 12:10
Styrene	12.26	Invalid Compound ID	wongsakul t	12/05/19 12:10
Bromoform	12.42	Invalid Compound ID	wongsakul t	12/05/19 12:10
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakul t	12/05/19 12:10
trans-1,4-Dichloro-2-butene	12.82	Unspecified		
1,2,3-Trichloropropane	12.85	Assign Peak	vaughand	12/05/19 12:16
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 12:11
1,2,4-Trimethylbenzene	13.66	Unspecified		
n-Butylbenzene	13.90	Invalid Compound ID	wongsakul t	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/3 IC Client Sample ID:

Date Analyzed: 12/04/19 16:17 Lab File ID: 12041903b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dibromo-3-Chloropropane	14.55	Invalid Compound ID	wongsakul t	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/4 IC Client Sample ID:

Date Analyzed: 12/04/19 16:43 Lab File ID: 12041904b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.10	Invalid Compound ID	wongsakul t	12/05/19 12:05
Vinyl chloride	2.25	Invalid Compound ID	wongsakul t	12/05/19 12:05
Bromomethane	2.63	Invalid Compound ID	wongsakul t	12/05/19 12:05
Chloroethane	2.75	Assign Peak	vaughand	12/05/19 09:37
Trichlorofluoromethane	3.10	Shouldering	vaughand	12/05/19 09:27
Acrolein	3.73	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,1,2-Trichloro-1,2,2-trifluoroet hane	3.94	Invalid Compound ID	wongsakul t	12/05/19 12:06
Acetone	3.98	Invalid Compound ID	wongsakul t	12/05/19 12:06
Methylene Chloride	4.78	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Methyl-2-propanol	5.09	Assign Peak	wongsakul t	12/05/19 12:06
Acrylonitrile	5.28	Invalid Compound ID	wongsakul t	12/05/19 12:06
Vinyl acetate	6.23	Invalid Compound ID	wongsakul t	12/05/19 12:06
Tert-butyl ethyl ether	6.93	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Butanone (MEK)	7.18	Invalid Compound ID	wongsakul t	12/05/19 12:06
Chlorobromomethane	7.52	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,1-Dichloropropene	8.13	Invalid Compound ID	wongsakul t	12/05/19 12:06
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakul t	12/05/19 12:06
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakul t	12/05/19 12:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/4 IC Client Sample ID:

Date Analyzed: 12/04/19 16:43 Lab File ID: 12041904b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorobromomethane	9.74	Invalid Compound ID	wongsakul t	12/05/19 12:06
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakul t	12/05/19 12:06
4-Methyl-2-pentanone (MIBK)	10.31	Invalid Compound ID	wongsakul t	12/05/19 12:06
trans-1,3-Dichloropropene	10.71	Peak assignment corrected	vaughand	12/05/19 10:03
Chlorodibromomethane	11.21	Invalid Compound ID	wongsakul t	12/05/19 12:06
Chlorobenzene	11.74	Assign Peak	wongsakul t	12/05/19 12:07
1,1,1,2-Tetrachloroethane	11.81	Invalid Compound ID	wongsakul t	12/05/19 12:07
Styrene	12.26	Invalid Compound ID	wongsakul t	12/05/19 12:07
Bromoform	12.43	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakul t	12/05/19 12:07
trans-1,4-Dichloro-2-butene	12.83	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,4-Dichlorobenzene	13.65	Assign Peak	wongsakul t	12/05/19 12:07
1,2,4-Trimethylbenzene	13.66	Unspecified		
n-Butylbenzene	13.90	Invalid Compound ID	wongsakul t	12/05/19 12:07
1,2-Dibromo-3-Chloropropane	14.54	Invalid Compound ID	wongsakul t	12/05/19 12:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/5 IC Client Sample ID:

Date Analyzed: 12/04/19 17:10 Lab File ID: 12041905b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane	2.75	Assign Peak	vaughand	12/05/19 09:37
Trichlorofluoromethane	3.11	Assign Peak	vaughand	12/05/19 09:26
1,1,2-Trichloro-1,2,2-trifluoroethane	3.94	Invalid Compound ID	wongsakult	12/05/19 11:59
Acetone	3.97	Invalid Compound ID	wongsakult	12/05/19 11:59
Methylene Chloride	4.78	Invalid Compound ID	wongsakult	12/05/19 11:59
2-Methyl-2-propanol	5.11	Incomplete Integration	vaughand	12/05/19 10:36
Acrylonitrile	5.28	Invalid Compound ID	wongsakult	12/05/19 11:59
trans-1,2-Dichloroethene	5.32	Assign Peak	wongsakult	12/05/19 11:59
Vinyl acetate	6.23	Invalid Compound ID	wongsakult	12/05/19 11:59
2-Butanone (MEK)	7.20	Unspecified		
1,2-Dichloroethane	8.46	Invalid Compound ID	wongsakult	12/05/19 11:59
Tert-amyl methyl ether	8.58	Invalid Compound ID	wongsakult	12/05/19 11:59
1,2-Dichloropropane	9.45	Assign Peak	wongsakult	12/05/19 12:00
2-Chloroethyl vinyl ether	10.03	Invalid Compound ID	wongsakult	12/05/19 12:00
4-Methyl-2-pentanone (MIBK)	10.32	Invalid Compound ID	wongsakult	12/05/19 12:00
Chlorobenzene	11.74	Assign Peak	wongsakult	12/05/19 12:00
1,1,2,2-Tetrachloroethane	12.80	Invalid Compound ID	wongsakult	12/05/19 12:00
trans-1,4-Dichloro-2-butene	12.82	Invalid Compound ID	wongsakult	12/05/19 12:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/5 IC Client Sample ID:

Date Analyzed: 12/04/19 17:10 Lab File ID: 12041905b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene	13.65	Assign Peak	wongsakul t	12/05/19 12:00
1,2,4-Trimethylbenzene	13.66	Unspecified		
1,2-Dibromo-3-Chloropropane	14.55	Invalid Compound ID	wongsakul t	12/05/19 12:00

Lab Sample ID: STD 580-318234/6 IC Client Sample ID:

Date Analyzed: 12/04/19 17:36 Lab File ID: 12041906b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.79	Invalid Compound ID	wongsakul t	12/05/19 11:56
2-Methyl-2-propanol	5.12	Incomplete Integration	wongsakul t	12/05/19 11:56
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 11:57
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 11:57
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 11:57
1,2,4-Trimethylbenzene	13.66	Incomplete Integration	wongsakul t	12/05/19 11:58
1,2-Dibromo-3-Chloropropane	14.55	Peak assignment corrected	vaughand	12/05/19 12:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: STD 580-318234/7 IC Client Sample ID:

Date Analyzed: 12/04/19 18:03 Lab File ID: 12041907b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Shouldering	vaughand	12/05/19 09:25
1,2-Dichloropropane	9.45	Incomplete Integration	wongsakul t	12/05/19 11:53
Chlorobenzene	11.74	Incomplete Integration	wongsakul t	12/05/19 11:54
1,4-Dichlorobenzene	13.65	Incomplete Integration	wongsakul t	12/05/19 11:54
1,2,4-Trimethylbenzene	13.66	Incomplete Integration	wongsakul t	12/05/19 11:54

Lab Sample ID: STD 580-318234/8 IC Client Sample ID:

Date Analyzed: 12/04/19 18:30 Lab File ID: 12041908b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.12	Incomplete Integration	vaughand	12/05/19 09:25
Fluorobenzene (IS)	8.76	Peak assignment corrected	vaughand	12/05/19 09:15
Chlorobenzene	11.74	Peak assignment corrected	vaughand	12/05/19 09:15
1,4-Dichlorobenzene	13.65	Peak assignment corrected	vaughand	12/05/19 09:15

Lab Sample ID: STD 580-318234/9 IC Client Sample ID:

Date Analyzed: 12/04/19 18:56 Lab File ID: 12041909b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Incomplete Integration	vaughand	12/05/19 09:25
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: ICIS 580-318234/10 Client Sample ID:

Date Analyzed: 12/04/19 19:23 Lab File ID: 12041910b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:06

Lab Sample ID: STD 580-318234/11 IC Client Sample ID:

Date Analyzed: 12/04/19 19:49 Lab File ID: 12041911b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.13	Incomplete Integration	vaughand	12/05/19 09:24
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:05

Lab Sample ID: STD 580-318234/12 IC Client Sample ID:

Date Analyzed: 12/04/19 20:16 Lab File ID: 12041912b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.13	Incomplete Integration	vaughand	12/05/19 09:10
1,2-Dichloropropane	9.45	Assign Peak	vaughand	12/05/19 09:05
Isopropylbenzene	12.54	Assign Peak	vaughand	12/05/19 09:05

Lab Sample ID: STD 580-318234/15 IC Client Sample ID:

Date Analyzed: 12/04/19 20:42 Lab File ID: 12041913b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/05/19 09:07

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318234

Lab Sample ID: ICV 580-318234/14 Client Sample ID:

Date Analyzed: 12/04/19 21:35 Lab File ID: 12041915b.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	overmand	12/05/19 10:46

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: CCVIS 580-318472/3 Client Sample ID:

Date Analyzed: 12/09/19 10:28 Lab File ID: 12091903.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Incomplete Integration	vaughand	12/09/19 11:13
1,2-Dichloropropane	9.45	Incomplete Integration	vaughand	12/09/19 11:14

Lab Sample ID: LCS 580-318472/4 Client Sample ID:

Date Analyzed: 12/09/19 10:54 Lab File ID: 12091904.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.09	Incomplete Integration	vaughand	12/09/19 11:32
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/09/19 11:31

Lab Sample ID: LCSD 580-318472/5 Client Sample ID:

Date Analyzed: 12/09/19 11:21 Lab File ID: 12091905.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane	9.45	Peak assignment corrected	vaughand	12/09/19 12:42

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: MB 580-318472/7 Client Sample ID:

Date Analyzed: 12/09/19 12:14 Lab File ID: 12091907.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	5.34	Incomplete Integration	vaughand	12/09/19 12:46
1,1-Dichloroethene		Invalid Compound ID	limwirojt	12/10/19 10:54
1,2-Dibromo-3-Chloropropane		Invalid Compound ID	limwirojt	12/10/19 10:59
2,2-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 10:54
Bromomethane		Invalid Compound ID	limwirojt	12/10/19 10:54
Chlorobromomethane		Invalid Compound ID	limwirojt	12/10/19 10:54
Chloroethane		Invalid Compound ID	limwirojt	12/10/19 10:54
Chloromethane		Invalid Compound ID	limwirojt	12/10/19 10:54
Dibromomethane		Invalid Compound ID	limwirojt	12/10/19 10:55
Trichlorofluoromethane		Invalid Compound ID	limwirojt	12/10/19 10:54
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 10:54
Chlorobenzene	11.74	Peak assignment corrected	vaughand	12/09/19 12:44
o-Xylene	12.25	Incomplete Integration	vaughand	12/09/19 12:45
1,1,2,2-Tetrachloroethane	12.80	Peak assignment corrected	vaughand	12/09/19 12:43
1,4-Dichlorobenzene	13.65	Peak assignment corrected	vaughand	12/09/19 12:43
1,2,4-Trimethylbenzene	13.66	Peak assignment corrected	vaughand	12/09/19 12:43

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: 580-91241-5 Client Sample ID: TB120519

Date Analyzed: 12/09/19 13:07 Lab File ID: 12091909.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	5.31	Peak assignment corrected	vaughand	12/09/19 14:11
1,1,1-Trichloroethane		Invalid Compound ID	vaughand	12/09/19 14:12
1,1,2-Trichloroethane		Invalid Compound ID	vaughand	12/09/19 14:13
1,2,4-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 11:08
1,2-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 11:07
1,4-Dichlorobenzene		Invalid Compound ID	limwirojt	12/10/19 11:08
Chlorobenzene		Invalid Compound ID	limwirojt	12/10/19 11:08
Chloromethane		Invalid Compound ID	limwirojt	12/10/19 11:07
cis-1,2-Dichloroethene		Invalid Compound ID	vaughand	12/09/19 14:12
Dibromomethane		Invalid Compound ID	limwirojt	12/10/19 11:08
Dichlorobromomethane		Invalid Compound ID	limwirojt	12/10/19 11:08
Methyl tert-butyl ether		Invalid Compound ID	vaughand	12/09/19 14:11
trans-1,3-Dichloropropene		Invalid Compound ID	vaughand	12/09/19 14:13
Trichlorofluoromethane		Invalid Compound ID	limwirojt	12/10/19 11:07
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 11:07
Tetrachloroethene	10.94	Incomplete Integration	vaughand	12/09/19 14:13
1,3-Dichloropropane	11.02	Incomplete Integration	vaughand	12/09/19 14:14

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: 580-91241-1 Client Sample ID: 04Q19L4MW01AW

Date Analyzed: 12/09/19 17:31 Lab File ID: 12091919.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloropropene		Invalid Compound ID	limwirojt	12/10/19 12:47
1,2,3-Trichloropropane		Invalid Compound ID	limwirojt	12/10/19 12:48
1,2,4-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 12:48
1,3-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 12:48
Bromomethane		Invalid Compound ID	limwirojt	12/10/19 12:47
Carbon tetrachloride		Invalid Compound ID	limwirojt	12/10/19 12:47
Chloroethane		Invalid Compound ID	limwirojt	12/10/19 12:47
Chloromethane		Invalid Compound ID	limwirojt	12/10/19 12:47
Dibromomethane		Invalid Compound ID	limwirojt	12/10/19 12:48
Methylene Chloride		Invalid Compound ID	limwirojt	12/10/19 12:47
trans-1,2-Dichloroethene		Invalid Compound ID	limwirojt	12/10/19 12:47
Trichlorofluoromethane		Invalid Compound ID	limwirojt	12/10/19 12:47
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 12:47
Isopropylbenzene	12.54	Peak assignment corrected	limwirojt	12/10/19 12:48
4-Isopropyltoluene	13.58	Peak assignment corrected	limwirojt	12/10/19 12:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: 580-91241-2 Client Sample ID: 04Q19L4MW01BW

Date Analyzed: 12/09/19 17:58 Lab File ID: 12091920.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloroethane		Invalid Compound ID	limwirojt	12/10/19 12:49
1,2,4-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 12:50
1,2-Dichlorobenzene		Invalid Compound ID	limwirojt	12/10/19 12:50
1,2-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 12:49
1,3,5-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 12:50
Bromomethane		Invalid Compound ID	limwirojt	12/10/19 12:49
Carbon tetrachloride		Invalid Compound ID	limwirojt	12/10/19 12:49
Chlorobenzene		Invalid Compound ID	limwirojt	12/10/19 12:50
cis-1,2-Dichloroethene		Invalid Compound ID	limwirojt	12/10/19 12:49
Dichlorobromomethane		Invalid Compound ID	limwirojt	12/10/19 12:49
Methyl tert-butyl ether		Invalid Compound ID	limwirojt	12/10/19 12:49
trans-1,2-Dichloroethene		Invalid Compound ID	limwirojt	12/10/19 12:49
Trichlorofluoromethane		Invalid Compound ID	limwirojt	12/10/19 12:49
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 12:49
Toluene	10.48	Peak assignment corrected	limwirojt	12/10/19 12:49

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: 580-91241-3 Client Sample ID: 04Q19L4MW02AW

Date Analyzed: 12/09/19 18:24 Lab File ID: 12091921.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 12:53
1,3-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 12:52
Bromomethane		Invalid Compound ID	limwirojt	12/10/19 12:51
Carbon tetrachloride		Invalid Compound ID	limwirojt	12/10/19 12:51
Chlorobromomethane		Invalid Compound ID	limwirojt	12/10/19 12:51
Chloroethane		Invalid Compound ID	limwirojt	12/10/19 12:51
cis-1,3-Dichloropropene		Invalid Compound ID	limwirojt	12/10/19 12:51
Ethylene Dibromide		Invalid Compound ID	limwirojt	12/10/19 12:52
N-Propylbenzene		Invalid Compound ID	limwirojt	12/10/19 12:53
Trichlorofluoromethane		Invalid Compound ID	limwirojt	12/10/19 12:51
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 12:51
Toluene	10.48	Peak assignment corrected	limwirojt	12/10/19 12:51
Chlorobenzene	11.73	Peak assignment corrected	limwirojt	12/10/19 12:52
1,4-Dichlorobenzene	13.65	Peak assignment corrected	limwirojt	12/10/19 12:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Analysis Batch Number: 318472

Lab Sample ID: 580-91241-4 Client Sample ID: 04Q19L4MW02BW

Date Analyzed: 12/09/19 18:51 Lab File ID: 12091922.D GC Column: DB-VRX ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.10	Assign Peak	limwirojt	12/10/19 12:54
1,1-Dichloropropene		Invalid Compound ID	limwirojt	12/10/19 12:59
1,2,4-Trimethylbenzene		Invalid Compound ID	limwirojt	12/10/19 13:03
1,2-Dichloropropane		Invalid Compound ID	limwirojt	12/10/19 12:59
Bromomethane		Invalid Compound ID	limwirojt	12/10/19 12:54
Chlorobenzene		Invalid Compound ID	limwirojt	12/10/19 13:00
Chloroethane		Invalid Compound ID	limwirojt	12/10/19 12:54
Chloromethane		Invalid Compound ID	limwirojt	12/10/19 12:54
cis-1,3-Dichloropropene		Invalid Compound ID	limwirojt	12/10/19 12:59
Dibromomethane		Invalid Compound ID	limwirojt	12/10/19 12:59
Ethylene Dibromide		Invalid Compound ID	limwirojt	12/10/19 12:59
Methyl tert-butyl ether		Invalid Compound ID	limwirojt	12/10/19 12:59
N-Propylbenzene		Invalid Compound ID	limwirojt	12/10/19 13:00
Vinyl chloride		Invalid Compound ID	limwirojt	12/10/19 12:54
Toluene	10.48	Assign Peak	limwirojt	12/10/19 12:59
m-Xylene & p-Xylene	11.92	Assign Peak	limwirojt	12/10/19 13:00
4-Isopropyltoluene	13.58	Assign Peak	limwirojt	12/10/19 13:02
1,4-Dichlorobenzene	13.65	Assign Peak	limwirojt	12/10/19 13:03

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 346162

Lab Sample ID: STD1 320-346162/4 IC Client Sample ID:

Date Analyzed: 12/17/19 22:04 Lab File ID: O0000022.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	34.00	Incomplete Integration	cartiera	12/18/19 14:43
4-Nitrotoluene	35.34	Incomplete Integration	cartiera	12/18/19 14:43
PETN	37.44	Peak not integrated	cartiera	12/18/19 14:43

Lab Sample ID: STD2 320-346162/5 IC Client Sample ID:

Date Analyzed: 12/17/19 22:57 Lab File ID: O0000023.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	34.00	Baseline Smoothing	cartiera	12/18/19 15:06
PETN	37.50	Baseline Smoothing	cartiera	12/18/19 14:44

Lab Sample ID: STD5 320-346162/8 IC Client Sample ID:

Date Analyzed: 12/18/19 01:38 Lab File ID: O0000026.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,4-Dinitrotoluene	28.84	Split Peak	cartiera	12/18/19 14:42
2-Amino-4,6-dinitrotoluene	29.01	Split Peak	cartiera	12/18/19 14:42

Lab Sample ID: STD7 320-346162/13 IC Client Sample ID:

Date Analyzed: 12/18/19 03:25 Lab File ID: O0000028.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	29.02	Split Peak	cartiera	12/18/19 15:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347379

Lab Sample ID: MB 320-344664/1-A Client Sample ID:

Date Analyzed: 12/23/19 23:46 Lab File ID: W0000010.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/24/19 12:54
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 12:54
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 12:54
HMX		Invalid Compound ID	cartiera	12/24/19 12:53
PETN		Invalid Compound ID	cartiera	12/24/19 12:54
RDX		Invalid Compound ID	cartiera	12/24/19 12:53

Lab Sample ID: 580-91241-1 Client Sample ID: 04Q19L4MW01AW

Date Analyzed: 12/24/19 05:07 Lab File ID: W0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/24/19 12:56
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	12/24/19 12:56
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:02
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:02
2-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:02
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 12:56
4-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:02
HMX		Invalid Compound ID	cartiera	12/24/19 12:55

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347379

Lab Sample ID: 580-91241-2 Client Sample ID: 04Q19L4MW01BW

Date Analyzed: 12/24/19 06:01 Lab File ID: W0000017.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:03
2-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:03
4-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:03
HMX		Invalid Compound ID	cartiera	12/24/19 13:03
PETN		Invalid Compound ID	cartiera	12/24/19 13:03

Lab Sample ID: 580-91241-3 Client Sample ID: 04Q19L4MW02AW

Date Analyzed: 12/24/19 06:55 Lab File ID: W0000018.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:04
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:04
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:04
4-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:04
Nitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:04
Nitroglycerin		Invalid Compound ID	cartiera	12/24/19 13:04
PETN		Invalid Compound ID	cartiera	12/24/19 13:04
Tetryl		Invalid Compound ID	cartiera	12/24/19 13:04

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347379

Lab Sample ID: 580-91241-4 Client Sample ID: 04Q19L4MW02BW

Date Analyzed: 12/24/19 07:48 Lab File ID: W0000019.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:05
2-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:05
3-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:05
4-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:05
Nitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:04
PETN		Invalid Compound ID	cartiera	12/24/19 13:05
Tetryl		Invalid Compound ID	cartiera	12/24/19 13:04
2,4,6-Trinitrotoluene	27.84	Split Peak	cartiera	12/24/19 13:05
2,4-Dinitrotoluene	31.24	Split Peak	cartiera	12/24/19 13:05

Lab Sample ID: 580-91241-4 DL Client Sample ID: 04Q19L4MW02BW DL

Date Analyzed: 12/24/19 08:42 Lab File ID: W0000020.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:05
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:05
2-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:06
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 13:06
Nitrobenzene		Invalid Compound ID	cartiera	12/24/19 13:05
Nitroglycerin		Invalid Compound ID	cartiera	12/24/19 13:05
PETN		Invalid Compound ID	cartiera	12/24/19 13:06
2,4,6-Trinitrotoluene	27.86	Baseline Smoothing	cartiera	12/24/19 13:06
2,4-Dinitrotoluene	31.27	Baseline Smoothing	cartiera	12/24/19 13:06

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 347379

Lab Sample ID: CCV 320-347379/57 Client Sample ID:

Date Analyzed: 12/24/19 13:10 Lab File ID: W0000025.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.83	Split Peak	cartiera	12/24/19 14:06

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 336275

Lab Sample ID: STD1 320-336275/4 IC Client Sample ID:

Date Analyzed: 11/05/19 21:31 Lab File ID: E000004.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	26.86	Split Peak	cartiera	11/06/19 13:18
4-Nitrotoluene	26.86	Split Peak	cartiera	11/06/19 13:18
3-Nitrotoluene	27.30	Split Peak	cartiera	11/06/19 13:18
2-Amino-4,6-dinitrotoluene	33.02	Split Peak	cartiera	11/06/19 13:18
4-Amino-2,6-dinitrotoluene	33.48	Split Peak	cartiera	11/06/19 13:18

Lab Sample ID: STD2 320-336275/5 IC Client Sample ID:

Date Analyzed: 11/05/19 22:38 Lab File ID: E000005.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.52	Baseline Smoothing	cartiera	11/06/19 13:20
2-Nitrotoluene	26.82	Split Peak	cartiera	11/06/19 13:21
4-Nitrotoluene	26.82	Split Peak	cartiera	11/06/19 13:21
3-Nitrotoluene	27.40	Split Peak	cartiera	11/06/19 13:21
2-Amino-4,6-dinitrotoluene	33.01	Split Peak	cartiera	11/06/19 13:21
4-Amino-2,6-dinitrotoluene	33.50	Split Peak	cartiera	11/06/19 13:21
Nitroglycerin	41.55	Incomplete Integration	cartiera	11/06/19 13:21
PETN	50.14	Baseline Smoothing	cartiera	11/06/19 13:21

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 336275

Lab Sample ID: STD3 320-336275/6 IC Client Sample ID:

Date Analyzed: 11/05/19 23:44 Lab File ID: E000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.51	Baseline Smoothing	cartiera	11/06/19 13:22
2-Nitrotoluene	26.83	Split Peak	cartiera	11/06/19 13:22
4-Nitrotoluene	26.83	Split Peak	cartiera	11/06/19 13:22
3-Nitrotoluene	27.37	Split Peak	cartiera	11/06/19 13:22
Nitroglycerin	41.57	Incomplete Integration	cartiera	11/06/19 13:23
PETN	50.15	Baseline Smoothing	cartiera	11/06/19 13:25

Lab Sample ID: STD4 320-336275/7 IC Client Sample ID:

Date Analyzed: 11/06/19 00:51 Lab File ID: E000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.50	Baseline Smoothing	cartiera	11/06/19 13:26
PETN	50.15	Baseline Smoothing	cartiera	11/06/19 13:26

Lab Sample ID: STD5 320-336275/8 IC Client Sample ID:

Date Analyzed: 11/06/19 01:58 Lab File ID: E000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.55	Peak not integrated	cartiera	11/06/19 13:14
1,3,5-Trinitrobenzene	24.61	Peak assignment corrected	cartiera	11/06/19 15:02
PETN	50.16	Baseline Smoothing	cartiera	11/06/19 13:15

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 336275

Lab Sample ID: STD6 320-336275/9 IC Client Sample ID:

Date Analyzed: 11/06/19 03:04 Lab File ID: E000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.45	Baseline Smoothing	cartiera	11/06/19 13:28
PETN	50.16	Baseline Smoothing	cartiera	11/06/19 13:27

Lab Sample ID: STD7 320-336275/10 IC Client Sample ID:

Date Analyzed: 11/06/19 04:11 Lab File ID: E000010.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.54	Baseline Smoothing	cartiera	11/06/19 13:28
2-Nitrotoluene	26.80	Baseline Smoothing	cartiera	11/06/19 13:29
4-Nitrotoluene	26.80	Baseline Smoothing	cartiera	11/06/19 13:29
3-Nitrotoluene	27.33	Peak not integrated	cartiera	11/06/19 13:29
3,5-Dinitroaniline	28.27	Baseline Smoothing	cartiera	11/06/19 13:29
RDX	28.97	Baseline Smoothing	cartiera	11/06/19 13:29
2,4-Dinitrotoluene	30.03	Baseline Smoothing	cartiera	11/06/19 13:29
2,6-Dinitrotoluene	30.92	Baseline Smoothing	cartiera	11/06/19 13:29
2-Amino-4,6-dinitrotoluene	33.00	Baseline Smoothing	cartiera	11/06/19 13:29
4-Amino-2,6-dinitrotoluene	33.52	Baseline Smoothing	cartiera	11/06/19 13:29
3,4-Dinitrotoluene	35.51	Baseline Smoothing	cartiera	11/06/19 13:29
2,4,6-Trinitrotoluene	36.60	Baseline Smoothing	cartiera	11/06/19 13:29
HMX	39.27	Incomplete Integration	cartiera	11/06/19 13:29
PETN	50.16	Baseline Smoothing	cartiera	11/06/19 13:30

Lab Sample ID: ICV 320-336275/12 Client Sample ID:

Date Analyzed: 11/06/19 06:25 Lab File ID: E000012.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	20.41	Baseline Smoothing	cartiera	11/06/19 14:35
PETN	50.16	Baseline Smoothing	cartiera	11/06/19 14:36

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 345107

Lab Sample ID: CCVRT 320-345107/3 Client Sample ID:

Date Analyzed: 12/12/19 20:24 Lab File ID: L000003.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	49.86	Baseline Smoothing	cartiera	12/13/19 13:36

Lab Sample ID: CCV 320-345107/37 Client Sample ID:

Date Analyzed: 12/14/19 10:13 Lab File ID: L000037.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate		Invalid Compound ID	cartiera	12/16/19 15:38
PETN	49.88	Baseline Smoothing	cartiera	12/16/19 15:38

Lab Sample ID: 580-91241-3 Client Sample ID: 04Q19L4MW02AW

Date Analyzed: 12/14/19 11:20 Lab File ID: L000038.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:40
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:40
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:41
2-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:40
3-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:41
4-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:40
Nitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:40
Tetryl		Invalid Compound ID	cartiera	12/16/19 15:41
PETN	49.75	Peak not integrated	cartiera	12/16/19 15:42

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 345107

Lab Sample ID: 580-91241-4 Client Sample ID: 04Q19L4MW02BW

Date Analyzed: 12/14/19 12:27 Lab File ID: L000039.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:42
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:42
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:44
2-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:42
3-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:42
4-Nitrotoluene		Invalid Compound ID	cartiera	12/16/19 15:42
Nitrobenzene		Invalid Compound ID	cartiera	12/16/19 15:42
Nitroglycerin		Invalid Compound ID	cartiera	12/16/19 15:44
Tetryl		Invalid Compound ID	cartiera	12/16/19 15:44
3,4-Dinitrotoluene	34.88	Baseline Smoothing	cartiera	12/16/19 15:44
2,4,6-Trinitrotoluene	35.98	Baseline Smoothing	cartiera	12/16/19 15:44
PETN	49.78	Baseline Smoothing	cartiera	12/16/19 15:45

Lab Sample ID: CCV 320-345107/46 Client Sample ID:

Date Analyzed: 12/14/19 20:14 Lab File ID: L000046.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate		Invalid Compound ID	cartiera	12/16/19 16:04
PETN	49.83	Baseline Smoothing	cartiera	12/16/19 16:05

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 347499

Lab Sample ID: STD1 320-347499/4 IC Client Sample ID:

Date Analyzed: 12/23/19 20:06 Lab File ID: W000004.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene	24.23	Incomplete Integration	cartiera	12/24/19 13:55
2-Nitrotoluene	26.48	Incomplete Integration	cartiera	12/24/19 13:54
4-Nitrotoluene	26.48	Incomplete Integration	cartiera	12/24/19 13:54
3-Nitrotoluene	27.05	Baseline Smoothing	cartiera	12/24/19 13:54
3,5-Dinitroaniline	27.80	Baseline Smoothing	cartiera	12/24/19 13:54
RDX	28.46	Baseline Smoothing	cartiera	12/24/19 13:54
2,4-Dinitrotoluene	29.59	Baseline Smoothing	cartiera	12/24/19 13:54
2,6-Dinitrotoluene	30.45	Baseline Smoothing	cartiera	12/24/19 13:54
2-Amino-4,6-dinitrotoluene	32.41	Baseline Smoothing	cartiera	12/24/19 13:54
4-Amino-2,6-dinitrotoluene	32.95	Baseline Smoothing	cartiera	12/24/19 13:54
3,4-Dinitrotoluene	34.95	Baseline Smoothing	cartiera	12/24/19 13:54
2,4,6-Trinitrotoluene	36.04	Baseline Smoothing	cartiera	12/24/19 13:54
HMX	38.82	Baseline Smoothing	cartiera	12/24/19 13:55
Nitroglycerin	41.16	Incomplete Integration	cartiera	12/24/19 13:55
Tetryl	43.12	Baseline Smoothing	cartiera	12/24/19 13:55
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 13:57

Lab Sample ID: STD2 320-347499/5 IC Client Sample ID:

Date Analyzed: 12/23/19 21:12 Lab File ID: W000005.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	26.44	Incomplete Integration	cartiera	12/24/19 13:42
4-Nitrotoluene	26.44	Incomplete Integration	cartiera	12/24/19 13:42
3,5-Dinitroaniline	27.80	Split Peak	cartiera	12/24/19 13:42
RDX	28.48	Split Peak	cartiera	12/24/19 13:42
2-Amino-4,6-dinitrotoluene	32.46	Split Peak	cartiera	12/24/19 13:41
4-Amino-2,6-dinitrotoluene	32.94	Split Peak	cartiera	12/24/19 13:41
Nitroglycerin	41.13	Incomplete Integration	cartiera	12/24/19 13:40
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 13:39

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 347499

Lab Sample ID: STD3 320-347499/6 IC Client Sample ID:

Date Analyzed: 12/23/19 22:19 Lab File ID: W000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	19.92	Incomplete Integration	cartiera	12/24/19 13:43
Nitroglycerin	41.14	Incomplete Integration	cartiera	12/24/19 13:44
PETN	49.87	Baseline Smoothing	cartiera	12/24/19 13:45

Lab Sample ID: STD4 320-347499/7 IC Client Sample ID:

Date Analyzed: 12/23/19 23:26 Lab File ID: W000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	41.13	Incomplete Integration	cartiera	12/24/19 13:46
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 13:45

Lab Sample ID: STD5 320-347499/8 IC Client Sample ID:

Date Analyzed: 12/24/19 00:33 Lab File ID: W000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	49.89	Baseline Smoothing	cartiera	12/24/19 13:37

Lab Sample ID: STD6 320-347499/9 IC Client Sample ID:

Date Analyzed: 12/24/19 01:39 Lab File ID: W000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	43.06	Incomplete Integration	cartiera	12/24/19 13:47
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 13:47

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 347499

Lab Sample ID: STD7 320-347499/10 IC Client Sample ID:

Date Analyzed: 12/24/19 02:46 Lab File ID: W000010.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	49.89	Baseline Smoothing	cartiera	12/24/19 13:48

Lab Sample ID: ICV 320-347499/12 Client Sample ID:

Date Analyzed: 12/24/19 05:00 Lab File ID: W000012.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	19.91	Incomplete Integration	cartiera	12/24/19 13:48
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 13:49

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Analysis Batch Number: 347504

Lab Sample ID: CCVRT 320-347504/1 Client Sample ID:

Date Analyzed: 12/24/19 06:06 Lab File ID: W000013.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 14:43

Lab Sample ID: 580-91241-4 DL Client Sample ID: 04Q19L4MW02BW DL

Date Analyzed: 12/24/19 08:20 Lab File ID: W000015.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	cartiera	12/24/19 14:43
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	12/24/19 14:43
2-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 14:43
3-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 14:43
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	12/24/19 14:43
4-Nitrotoluene		Invalid Compound ID	cartiera	12/24/19 14:43
Nitrobenzene		Invalid Compound ID	cartiera	12/24/19 14:43
Tetryl		Invalid Compound ID	cartiera	12/24/19 14:44
RDX	28.56	Split Peak	cartiera	12/24/19 14:43
2,4-Dinitrotoluene	29.65	Peak not integrated	cartiera	12/24/19 14:43
3,4-Dinitrotoluene	34.96	Split Peak	cartiera	12/24/19 14:44

Lab Sample ID: CCV 320-347504/4 Client Sample ID:

Date Analyzed: 12/24/19 09:26 Lab File ID: W000016.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	49.88	Baseline Smoothing	cartiera	12/24/19 14:44

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Analysis Batch Number: 345262

Lab Sample ID: STD02 320-345262/3 IC Client Sample ID:

Date Analyzed: 12/13/19 16:13 Lab File ID: 2019.12.13.Perc_ICALA_009 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	10.81	Peak assignment corrected	yuj	12/13/19 17:06

Lab Sample ID: STD03 320-345262/4 IC Client Sample ID:

Date Analyzed: 12/13/19 16:26 Lab File ID: 2019.12.13.Perc_ICALA_010 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.88	Peak assignment corrected	yuj	12/13/19 17:07
Perchlorate	10.90	Peak assignment corrected	yuj	12/13/19 17:07

Lab Sample ID: STD04 320-345262/5 IC Client Sample ID:

Date Analyzed: 12/13/19 16:40 Lab File ID: 2019.12.13.Perc_ICALA_011 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.77	Assign Peak	yuj	12/13/19 17:08

Lab Sample ID: STD06 320-345262/7 IC Client Sample ID:

Date Analyzed: 12/13/19 17:06 Lab File ID: 2019.12.13.Perc_ICALA_013 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	10.63	Incomplete Integration	yuj	12/14/19 10:49

Lab Sample ID: STD07 320-345262/8 IC Client Sample ID:

Date Analyzed: 12/13/19 17:20 Lab File ID: 2019.12.13.Perc_ICALA_014 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.60	Assign Peak	yuj	12/14/19 10:49
Perchlorate	10.60	Assign Peak	yuj	12/14/19 10:49

6850

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Analysis Batch Number: 345262

Lab Sample ID: STD08 320-345262/9 IC Client Sample ID:

Date Analyzed: 12/13/19 17:33 Lab File ID: 2019.12.13.Perc_ICALA_015 GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.80	Assign Peak	yuj	12/14/19 10:50
Perchlorate	10.81	Assign Peak	yuj	12/14/19 10:50

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Analysis Batch Number: 345699

Lab Sample ID: CCV 320-345699/1 CCVIS Client Sample ID:

Date Analyzed: 12/15/19 22:37 Lab File ID: 2019.12.15.PercAA_035.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.60	Assign Peak	onishim	12/17/19 09:11
Perchlorate	10.62	Assign Peak	onishim	12/17/19 09:11

Lab Sample ID: CCVL 320-345699/2 Client Sample ID:

Date Analyzed: 12/15/19 22:51 Lab File ID: 2019.12.15.PercAA_036.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.75	Assign Peak	onishim	12/17/19 09:12

Lab Sample ID: CCB 320-345699/3 Client Sample ID:

Date Analyzed: 12/15/19 23:04 Lab File ID: 2019.12.15.PercAA_037.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.83	Peak assignment corrected	onishim	12/17/19 09:12

Lab Sample ID: 580-91241-3 Client Sample ID:

Date Analyzed: 12/15/19 23:31 Lab File ID: 2019.12.15.PercAA_039.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.88	Assign Peak	onishim	12/17/19 09:13
Perchlorate	10.90	Assign Peak	onishim	12/17/19 09:13

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Analysis Batch Number: 345699

Lab Sample ID: 580-91241-4 Client Sample ID:

Date Analyzed: 12/15/19 23:44 Lab File ID: 2019.12.15.PercAA_040.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.62	Assign Peak	onishim	12/17/19 09:13
Perchlorate	10.62	Assign Peak	onishim	12/17/19 09:13

Lab Sample ID: CCV 320-345699/8 Client Sample ID:

Date Analyzed: 12/16/19 00:11 Lab File ID: 2019.12.15.PercAA_042.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.62	Assign Peak	onishim	12/17/19 09:14

Lab Sample ID: CCB 320-345699/10 Client Sample ID:

Date Analyzed: 12/16/19 00:38 Lab File ID: 2019.12.15.PercAA_044.d GC Column: Anion HR ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	10.86	Assign Peak	onishim	12/17/19 09:15

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
5X SUR/IS/TFT_00011							Tentatively Identified Compound	
							Xylenes, Total	
					SURR/IS/TFT_00107	20 mL	Trifluorotoluene (Surr)	49.98 ppm
							1,2-Dichloroethane-d4 (Surr)	48.75 ppm
							1,4-Dichlorobenzene-d4	48.75 ppm
							4-Bromofluorobenzene (Surr)	48.75 ppm
							BFB	48.75 ppm
							Chlorobenzene-d5	48.75 ppm
							Dibromofluoromethane (Surr)	48.75 ppm
							Fluorobenzene (IS)	48.75 ppm
							TBA-d9 (IS)	975 ppm
							Toluene-d8 (Surr)	48.75 ppm
.SURR/IS/TFT_00107	03/12/20	09/11/19	MeOH, Lot voarsurr/is_00048	25 mL	V-TFTStk_00037	625 uL	Trifluorotoluene (Surr)	249.9 ppm
					VOARSURR/IS_00048	24.375 mL	1,2-Dichloroethane-d4 (Surr)	243.75 ppm
							1,4-Dichlorobenzene-d4	243.75 ppm
							4-Bromofluorobenzene (Surr)	243.75 ppm
							BFB	243.75 ppm
							Chlorobenzene-d5	243.75 ppm
							Dibromofluoromethane (Surr)	243.75 ppm
							Fluorobenzene (IS)	243.75 ppm
							TBA-d9 (IS)	4875 ppm
							Toluene-d8 (Surr)	243.75 ppm
..V-TFTStk_00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat_00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
...TFTneat_00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
..VOARSURR/IS_00048	10/31/22	Restek, Lot A0131478			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							BFB	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
VOAMasterMix_00046	02/29/20	11/13/19	MeOH, Lot 230446	50 mL	VOAR2CEVE__00019	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					VOARAcrolein_00057	750 uL	Acrolein	300 ug/mL
					VOARADDCOM__00024	1000 uL	1,3,5-Trichlorobenzene	50 ug/mL
					VOARGAS__00022	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOARKETON__00024	1000 uL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOARMegMix__00032	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isopropylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					VOARPOLARAD__00017	1250 uL	Tert-amyl methyl ether	62.5 ug/mL
							Tert-butyl ethyl ether	62.5 ug/mL
					VOARVA__00046	1250 uL	Vinyl acetate	125 ug/mL
.VOAR2CEVE__00019	10/31/21		Restek, Lot A0142584		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.VOARAcrolein_00057	03/31/20		Restek, Lot A0153030		(Purchased Reagent)		Acrolein	20000 ug/mL
.VOARADDCOM__00024	07/31/20		Restek, Lot A0145375		(Purchased Reagent)		1,3,5-Trichlorobenzene	2500 ug/mL
.VOARGAS__00022	11/30/21		Restek, Lot A0143158		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOARKETON__00024	12/31/21		Restek, Lot A0143988		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.VOARMegMix__00032	06/30/21		Restek, Lot A0143774		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.VOARPOLARAD__00017	01/31/21	Restek, Lot A0144915			(Purchased Reagent)		Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VOARVA__00046	02/29/20	Restek, Lot A0152359			(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VOAMasterSEC_00039	12/15/19	11/15/19	MeOH, Lot 230446	25 mL	VOASGAS2__00024	500 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					VOASMegMix2__00022	500 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
.VOASGAS2__00024	03/31/22		Restek, Lot A0147004		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOASMegMix2__00022	06/30/21		Restek, Lot A0144202		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobromomethane	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Dichlorobromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
.HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
HP8330IC_00068	12/01/19	10/24/19		25 mL	HP8330TA_00069	10 uL	1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
					HPNGTA_00062	50 uL	Nitroglycerin	200 ng/mL
					HPPETNTA_00061	50 uL	PETN	200 ng/mL
.HP8330TA_00069	08/31/21	AccuStandard, Lot 219071402			(Purchased Reagent)		1,3,5-Trinitrobenzene	500 ug/mL
							1,3-Dinitrobenzene	500 ug/mL
							2,4,6-Trinitrotoluene	500 ug/mL
							2,4-Dinitrotoluene	500 ug/mL
							2,6-Dinitrotoluene	500 ug/mL
							2-Amino-4,6-dinitrotoluene	500 ug/mL
							2-Nitrotoluene	500 ug/mL
							3-Nitrotoluene	500 ug/mL
							4-Amino-2,6-dinitrotoluene	500 ug/mL
							4-Nitrotoluene	500 ug/mL
							HMX	500 ug/mL
							Nitrobenzene	500 ug/mL
							RDX	500 ug/mL
							Tetryl	500 ug/mL
.HPNGTA_00062	01/13/20	Accustandard, Lot 217121234			(Purchased Reagent)		Nitroglycerin	100 ug/mL
.HPPETNTA_00061	04/06/20	Accustandard, Lot 215051302-04			(Purchased Reagent)		PETN	100 ug/mL
HP8330IC_00072	01/13/20	12/17/19		25 mL	HP8330SP_00110	100 uL	1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							RDX	200 ng/mL
							Tetryl	200 ng/mL
					HPNGTA_00062	50 uL	Nitroglycerin	200 ng/mL
					HPPETNTA_00061	50 uL	PETN	200 ng/mL
.HP8330SP_00110	01/15/20	07/15/19	Acetonitrile, Lot Acetonitrile_00145	25 mL	HP8330TA_00065	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP8330TA_00065	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.HPNGTA_00062	01/13/20	Accustandard, Lot 217121234			(Purchased Reagent)		Nitroglycerin	100 ug/mL
.HPPETNTA_00061	04/06/20	Accustandard, Lot 215051302-04			(Purchased Reagent)		PETN	100 ug/mL
HP8330L1_00045	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	50 mL	HP8330L7_00041	0.5 mL	3,4-Dinitrotoluene	5 ng/mL
							3,5-Dinitroaniline	5 ng/mL
							1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL
							Nitroglycerin	5 ng/mL
							PETN	5 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L1_00046	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	50 mL	HP8330L7_00042	0.5 mL	3,4-Dinitrotoluene	5 ng/mL
							3,5-Dinitroaniline	5 ng/mL
							1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL
							PETN	5 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23	Restek, Lot A0143132			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22	Restek, Lot A0148050			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPPETNTA_00065	09/04/20	Restek, Lot A0147962			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L2_00037	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	50 mL	HP8330L7_00041	1 mL	3,4-Dinitrotoluene	10 ng/mL
							3,5-Dinitroaniline	10 ng/mL
							1,3,5-Trinitrobenzene	10 ng/mL
							1,3-Dinitrobenzene	10 ng/mL
							2,4,6-Trinitrotoluene	10 ng/mL
							2,4-Dinitrotoluene	10 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	10 ng/mL
							2-Amino-4,6-dinitrotoluene	10 ng/mL
							2-Nitrotoluene	10 ng/mL
							3-Nitrotoluene	10 ng/mL
							4-Amino-2,6-dinitrotoluene	10 ng/mL
							4-Nitrotoluene	10 ng/mL
							HMX	10 ng/mL
							Nitrobenzene	10 ng/mL
							RDX	10 ng/mL
							Tetryl	10 ng/mL
							Ethylene glycol dinitrate	10 ng/mL
							Nitroglycerin	10 ng/mL
							PETN	10 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile 00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00083	10/31/21	Restek, Lot A0131485			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L2_00038	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	50 mL	HP8330L7_00042	1 mL	3,4-Dinitrotoluene	10 ng/mL
							3,5-Dinitroaniline	10 ng/mL
							1,3,5-Trinitrobenzene	10 ng/mL
							1,3-Dinitrobenzene	10 ng/mL
							2,4,6-Trinitrotoluene	10 ng/mL
							2,4-Dinitrotoluene	10 ng/mL
							2,6-Dinitrotoluene	10 ng/mL
							2-Amino-4,6-dinitrotoluene	10 ng/mL
							2-Nitrotoluene	10 ng/mL
							3-Nitrotoluene	10 ng/mL
							4-Amino-2,6-dinitrotoluene	10 ng/mL
							4-Nitrotoluene	10 ng/mL
							HMX	10 ng/mL
							Nitrobenzene	10 ng/mL
							RDX	10 ng/mL
							Tetryl	10 ng/mL
							Nitroglycerin	10 ng/mL
							PETN	10 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L3_00040	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	50 mL	HP8330L7_00041	2 mL	3,4-Dinitrotoluene	20 ng/mL
							3,5-Dinitroaniline	20 ng/mL
							1,3,5-Trinitrobenzene	20 ng/mL
							1,3-Dinitrobenzene	20 ng/mL
							2,4,6-Trinitrotoluene	20 ng/mL
							2,4-Dinitrotoluene	20 ng/mL
							2,6-Dinitrotoluene	20 ng/mL
							2-Amino-4,6-dinitrotoluene	20 ng/mL
							2-Nitrotoluene	20 ng/mL
							3-Nitrotoluene	20 ng/mL
							4-Amino-2,6-dinitrotoluene	20 ng/mL
							4-Nitrotoluene	20 ng/mL
							HMX	20 ng/mL
							Nitrobenzene	20 ng/mL
							RDX	20 ng/mL
							Tetryl	20 ng/mL
							Ethylene glycol dinitrate	20 ng/mL
							Nitroglycerin	20 ng/mL
							PETN	20 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L3_00041	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	50 mL	HP8330L7_00042	2 mL	3,4-Dinitrotoluene	20 ng/mL
							3,5-Dinitroaniline	20 ng/mL
							1,3,5-Trinitrobenzene	20 ng/mL
							1,3-Dinitrobenzene	20 ng/mL
							2,4,6-Trinitrotoluene	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	20 ng/mL
							2,6-Dinitrotoluene	20 ng/mL
							2-Amino-4,6-dinitrotoluene	20 ng/mL
							2-Nitrotoluene	20 ng/mL
							3-Nitrotoluene	20 ng/mL
							4-Amino-2,6-dinitrotoluene	20 ng/mL
							4-Nitrotoluene	20 ng/mL
							HMX	20 ng/mL
							Nitrobenzene	20 ng/mL
							RDX	20 ng/mL
							Tetryl	20 ng/mL
							Nitroglycerin	20 ng/mL
							PETN	20 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00069	01/15/20	10/14/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0040	200 mL	HP8330L7_00041	20 mL	3,4-Dinitrotoluene	50 ng/mL
							3,5-Dinitroaniline	50 ng/mL
							1,3,5-Trinitrobenzene	50 ng/mL
							1,3-Dinitrobenzene	50 ng/mL
							2,4,6-Trinitrotoluene	50 ng/mL
							2,4-Dinitrotoluene	50 ng/mL
							2,6-Dinitrotoluene	50 ng/mL
							2-Amino-4,6-dinitrotoluene	50 ng/mL
							2-Nitrotoluene	50 ng/mL
							3-Nitrotoluene	50 ng/mL
							4-Amino-2,6-dinitrotoluene	50 ng/mL
							4-Nitrotoluene	50 ng/mL
							HMX	50 ng/mL
							Nitrobenzene	50 ng/mL
							RDX	50 ng/mL
							Tetryl	50 ng/mL
							Ethylene glycol dinitrate	50 ng/mL
							Nitroglycerin	50 ng/mL
							PETN	50 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	1000 ug/mL
..HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile 00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00070	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0040	200 mL	HP8330L7_00042	20 mL	3,4-Dinitrotoluene	50 ng/mL
							3,5-Dinitroaniline	50 ng/mL
							1,3,5-Trinitrobenzene	50 ng/mL
							1,3-Dinitrobenzene	50 ng/mL
							2,4,6-Trinitrotoluene	50 ng/mL
							2,4-Dinitrotoluene	50 ng/mL
							2,6-Dinitrotoluene	50 ng/mL
							2-Amino-4,6-dinitrotoluene	50 ng/mL
							2-Nitrotoluene	50 ng/mL
							3-Nitrotoluene	50 ng/mL
							4-Amino-2,6-dinitrotoluene	50 ng/mL
							4-Nitrotoluene	50 ng/mL
							HMX	50 ng/mL
							Nitrobenzene	50 ng/mL
							RDX	50 ng/mL
							Tetryl	50 ng/mL
							Nitroglycerin	50 ng/mL
							PETN	50 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24	Restek, Lot A0152518			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23	Restek, Lot A0143132			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22	Restek, Lot A0148050			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20	Restek, Lot A0151049			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20	Restek, Lot A0147962			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00074	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	100 mL	HP8330L7_00041	20 mL	3,4-Dinitrotoluene	100 ng/mL
							3,5-Dinitroaniline	100 ng/mL
							1,3,5-Trinitrobenzene	100 ng/mL
							1,3-Dinitrobenzene	100 ng/mL
							2,4,6-Trinitrotoluene	100 ng/mL
							2,4-Dinitrotoluene	100 ng/mL
							2,6-Dinitrotoluene	100 ng/mL
							2-Amino-4,6-dinitrotoluene	100 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	100 ng/mL
							3-Nitrotoluene	100 ng/mL
							4-Amino-2,6-dinitrotoluene	100 ng/mL
							4-Nitrotoluene	100 ng/mL
							HMX	100 ng/mL
							Nitrobenzene	100 ng/mL
							RDX	100 ng/mL
							Tetryl	100 ng/mL
							Ethylene glycol dinitrate	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile 00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00075	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	100 mL	HP8330L7_00042	20 mL	3,4-Dinitrotoluene	100 ng/mL
							3,5-Dinitroaniline	100 ng/mL
							1,3,5-Trinitrobenzene	100 ng/mL
							1,3-Dinitrobenzene	100 ng/mL
							2,4,6-Trinitrotoluene	100 ng/mL
							2,4-Dinitrotoluene	100 ng/mL
							2,6-Dinitrotoluene	100 ng/mL
							2-Amino-4,6-dinitrotoluene	100 ng/mL
							2-Nitrotoluene	100 ng/mL
							3-Nitrotoluene	100 ng/mL
							4-Amino-2,6-dinitrotoluene	100 ng/mL
							4-Nitrotoluene	100 ng/mL
							HMX	100 ng/mL
							Nitrobenzene	100 ng/mL
							RDX	100 ng/mL
							Tetryl	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L6_00057	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	25 mL	HP8330L7_00041	10 mL	3,4-Dinitrotoluene	200 ng/mL
							3,5-Dinitroaniline	200 ng/mL
							1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
							Ethylene glycol dinitrate	200 ng/mL
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL
.HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile 00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L6_00058	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	25 mL	HP8330L7_00042	10 mL	3,4-Dinitrotoluene	200 ng/mL
							3,5-Dinitroaniline	200 ng/mL
							1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL
.HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	50 ug/mL
...HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
...HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L7_00041	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00112	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPEGDNSP_00049	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
.HP34DNTSU_00121	01/31/20	07/31/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HP8330SU_00083	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
..HP8330SU_00083	10/31/21		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
.HP8330SP_00112	03/04/20	09/04/19	Acetonitrile, Lot Acetonitrile_00156	25 mL	HP35DNATA_00070	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00068	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP35DNATA_00070	09/04/20		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
..HP8330TA_00068	09/04/20		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.HPEGDNSP_00049	02/16/20	08/16/19	Acetonitrile, Lot Acetonitrile_00151	25 mL	HPEGDNTA_00035	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
..HPEGDNTA_00035	08/16/20		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
.HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
..HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
..HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L7_00042	02/16/20	11/01/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0041	200 mL	HP34DNTSU_00127	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00113	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
.HP34DNTSU_00127	04/30/20	10/30/19	Acetonitrile, Lot 0000237289	25 mL	HP8330SU_00085	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
..HP8330SU_00085	09/30/24		Restek, Lot A0152518		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
.HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
..HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
..HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
..HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330SP_00113	04/03/20	10/03/19	Acetonitrile, Lot 0000235404	25 mL	HP35DNATA_00073	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00070	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
.HP35DNATA_00073	06/30/23		Restek, Lot A0143132		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.HP8330TA_00070	11/30/22		Restek, Lot A0148050		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
HPNGPETNSP_00082	03/04/20	09/04/19	Methanol, Lot Methanol_00465	25 mL	HPNGTA_00067	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00065	1.25 mL	PETN	50 ug/mL
.HPNGTA_00067	09/04/20		Restek, Lot A0151049		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.HPPETNTA_00065	09/04/20		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
LC6850IC_00025	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26		Cambridge Isotope Laboratories, Lot SDFF-012		(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
LC6850IC_00025	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850IM_00018	125 uL	Perchlorate	5 ng/mL
.LC6850IM_00018	01/16/20	07/16/19	MIllipore Water, Lot H2O7.16.2019	25 mL	LC6850TA_00013	25 uL	Perchlorate	1 ug/mL
..LC6850TA_00013	04/25/22		Absolute Standards, Inc., Lot 042519		(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850IS_00045	10/30/20	10/30/19	MIllipore Water, Lot M12142016	99 g	LC6850IS_00044	1.2246 g	18-O Perchlorate	1.00801 ug/mL
.LC6850IS_00044	04/28/26		Cambridge Isotope Laboratories, Lot SDFF-012		(Purchased Reagent)		18-O Perchlorate	81.49 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
LC6850L1_00025	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	37.5 uL	Perchlorate	0.15 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L2_00020	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	62.5 uL	Perchlorate	0.25 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L3_00027	01/15/20	11/23/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00066	125 uL	Perchlorate	0.5 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00066	01/15/20	07/15/19	MIllipore Water, Lot M06222017	10 mL	LC6850SP_00065	1 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L4_00024	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	25 uL	Perchlorate	1 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L5_00024	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LC6850SP_00065	50 uL	Perchlorate	2 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L6_00023	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	125 uL	Perchlorate	5 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L7_00020	01/15/20	11/14/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	250 uL	Perchlorate	10 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L8_00020	01/15/20	07/15/19	MIllipore Water, Lot M06222017	25 mL	LC6850IS_00043	250 uL	18-O Perchlorate	10.0337 ng/mL
					LC6850SP_00065	500 uL	Perchlorate	20 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
.LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L9_00029	02/24/20	08/24/19	MIllipore Water, Lot M05162017	250 mL	LC6850IS_00043	2.5 mL	18-O Perchlorate	10.0337 ng/mL
.LC6850IS_00043	05/20/20	05/20/19	MIllipore Water, Lot M12142016	102 g	LC6850IS_00037	1.2573 g	18-O Perchlorate	1.00337 ug/mL
..LC6850IS_00037	04/28/26	Cambridge Isotope Laboratories, Lot SDFF-012			(Purchased Reagent)		18-O Perchlorate	81.4 ug/mL
LC6850SP_00065	01/15/20	07/15/19	MIllipore Water, Lot M06222017	50 mL	LC6850TA_00012	50 uL	Perchlorate	1 ug/mL
.LC6850TA_00012	07/25/20	AccuStandard, Inc., Lot 218065075			(Purchased Reagent)		Perchlorate	1000 ug/mL

Method 8260C Low Level

Volatile Organic Compounds (GC/MS) by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-VRX ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TFT #	TOL #	BFB #
04Q19L4MW01AW	580-91241-1	100	106	98	102	101
04Q19L4MW01BW	580-91241-2	99	103	100	103	99
04Q19L4MW02AW	580-91241-3	101	105	97	103	100
04Q19L4MW02BW	580-91241-4	103	105	98	104	100
TB120519	580-91241-5	99	102	100	103	100
	MB 580-318472/7	98	105	102	105	102
	LCS 580-318472/4	100	100	97	104	103
	LCSD 580-318472/5	100	101	94	104	103

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TFT = Trifluorotoluene (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12091904.D

Lab ID: LCS 580-318472/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.48	110	79-127	
1,1,1-Trichloroethane	5.00	4.99	100	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.96	99	69-139	
1,1,2-Trichloroethane	5.00	4.96	99	80-127	
1,1-Dichloroethane	5.00	5.02	100	74-135	
1,1-Dichloroethene	5.00	4.85	97	71-126	
1,1-Dichloropropene	5.00	4.95	99	72-132	
1,2,3-Trichlorobenzene	5.00	5.28	106	75-137	
1,2,3-Trichloropropane	5.00	4.88	98	80-127	
1,2,4-Trichlorobenzene	5.00	5.04	101	79-130	
1,2,4-Trimethylbenzene	5.00	5.22	104	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.83	97	69-130	
1,2-Dichlorobenzene	5.00	5.03	101	80-129	
1,2-Dichloroethane	5.00	4.74	95	74-130	
1,2-Dichloropropane	5.00	4.85	97	80-130	
1,3,5-Trimethylbenzene	5.00	5.12	102	80-139	
1,3-Dichlorobenzene	5.00	4.99	100	80-130	
1,3-Dichloropropane	5.00	5.00	100	80-130	
1,4-Dichlorobenzene	5.00	4.76	95	80-129	
2,2-Dichloropropane	5.00	4.78	96	58-150	
2-Chlorotoluene	5.00	5.02	100	80-136	
4-Chlorotoluene	5.00	5.06	101	80-130	
4-Isopropyltoluene	5.00	4.96	99	78-132	
Benzene	5.00	5.02	100	73-133	
Bromobenzene	5.00	4.71	94	80-130	
Bromoform	5.00	4.62	92	69-137	
Bromomethane	5.00	5.35	107	68-120	
Carbon tetrachloride	5.00	4.91	98	71-132	
Chlorobenzene	5.00	4.80	96	80-123	
Chlorobromomethane	5.00	5.00	100	79-131	
Chlorodibromomethane	5.00	4.60	92	76-131	
Chloroethane	5.00	5.23	105	49-135	
Chloroform	5.00	5.07	101	80-130	
Chloromethane	5.00	4.57	91	32-143	
cis-1,2-Dichloroethene	5.00	5.07	101	72-130	
cis-1,3-Dichloropropene	5.00	5.13	103	66-141	
Dibromomethane	5.00	4.92	98	65-141	
Dichlorobromomethane	5.00	4.46	89	74-131	
Dichlorodifluoromethane	5.00	4.61	92	20-137	
Ethylbenzene	5.00	5.15	103	80-130	
Ethylene Dibromide	5.00	4.97	99	80-126	
Hexachlorobutadiene	5.00	4.86	97	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12091904.D

Lab ID: LCS 580-318472/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	5.08	102	75-137	
Methyl tert-butyl ether	5.00	5.13	103	60-150	
Methylene Chloride	5.00	5.09	102	75-134	
m-Xylene & p-Xylene	5.00	5.37	107	78-130	
Naphthalene	5.00	4.94	99	64-132	
n-Butylbenzene	5.00	5.01	100	73-135	
N-Propylbenzene	5.00	5.27	105	77-142	
o-Xylene	5.00	5.01	100	80-139	
sec-Butylbenzene	5.00	4.97	99	78-140	
Styrene	5.00	4.72	94	74-136	
tert-Butylbenzene	5.00	4.52	90	77-140	
Tetrachloroethene	5.00	5.06	101	75-131	
Toluene	5.00	4.77	95	80-126	
trans-1,2-Dichloroethene	5.00	4.90	98	63-133	
trans-1,3-Dichloropropene	5.00	4.59	92	71-128	
Trichloroethene	5.00	4.85	97	72-136	
Trichlorofluoromethane	5.00	4.78	96	60-132	
Vinyl chloride	5.00	5.09	102	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12091905.D

Lab ID: LCSD 580-318472/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.41	108	1	20	79-127	
1,1,1-Trichloroethane	5.00	4.90	98	2	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.90	98	1	22	69-139	
1,1,2-Trichloroethane	5.00	5.08	102	3	19	80-127	
1,1-Dichloroethane	5.00	4.93	99	2	20	74-135	
1,1-Dichloroethene	5.00	4.80	96	1	17	71-126	
1,1-Dichloropropene	5.00	4.90	98	1	13	72-132	
1,2,3-Trichlorobenzene	5.00	5.11	102	3	20	75-137	
1,2,3-Trichloropropane	5.00	4.95	99	1	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.89	98	3	20	79-130	
1,2,4-Trimethylbenzene	5.00	5.00	100	4	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.89	98	1	26	69-130	
1,2-Dichlorobenzene	5.00	4.88	98	3	14	80-129	
1,2-Dichloroethane	5.00	4.75	95	0	15	74-130	
1,2-Dichloropropane	5.00	4.85	97	0	14	80-130	
1,3,5-Trimethylbenzene	5.00	4.90	98	4	20	80-139	
1,3-Dichlorobenzene	5.00	4.81	96	4	12	80-130	
1,3-Dichloropropane	5.00	5.09	102	2	19	80-130	
1,4-Dichlorobenzene	5.00	4.60	92	4	11	80-129	
2,2-Dichloropropane	5.00	4.61	92	4	28	58-150	
2-Chlorotoluene	5.00	4.85	97	3	20	80-136	
4-Chlorotoluene	5.00	4.91	98	3	20	80-130	
4-Isopropyltoluene	5.00	4.74	95	4	14	78-132	
Benzene	5.00	4.99	100	1	20	73-133	
Bromobenzene	5.00	4.65	93	1	20	80-130	
Bromoform	5.00	4.67	93	1	20	69-137	
Bromomethane	5.00	5.15	103	4	18	68-120	
Carbon tetrachloride	5.00	4.82	96	2	15	71-132	
Chlorobenzene	5.00	4.77	95	1	12	80-123	
Chlorobromomethane	5.00	4.99	100	0	20	79-131	
Chlorodibromomethane	5.00	4.62	92	1	20	76-131	
Chloroethane	5.00	5.10	102	2	27	49-135	
Chloroform	5.00	5.01	100	1	20	80-130	
Chloromethane	5.00	4.35	87	5	23	32-143	
cis-1,2-Dichloroethene	5.00	4.99	100	2	20	72-130	
cis-1,3-Dichloropropene	5.00	5.16	103	1	22	66-141	
Dibromomethane	5.00	5.04	101	2	20	65-141	
Dichlorobromomethane	5.00	4.46	89	0	20	74-131	
Dichlorodifluoromethane	5.00	4.39	88	5	22	20-137	
Ethylbenzene	5.00	5.12	102	1	20	80-130	
Ethylene Dibromide	5.00	5.07	101	2	20	80-126	
Hexachlorobutadiene	5.00	4.64	93	5	20	72-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 12091905.D

Lab ID: LCSD 580-318472/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	5.01	100	1	20	75-137	
Methyl tert-butyl ether	5.00	5.19	104	1	25	60-150	
Methylene Chloride	5.00	5.06	101	1	18	75-134	
m-Xylene & p-Xylene	5.00	5.35	107	0	20	78-130	
Naphthalene	5.00	4.85	97	2	20	64-132	
n-Butylbenzene	5.00	4.82	96	4	18	73-135	
N-Propylbenzene	5.00	5.05	101	4	20	77-142	
o-Xylene	5.00	4.93	99	2	20	80-139	
sec-Butylbenzene	5.00	4.77	95	4	20	78-140	
Styrene	5.00	4.67	93	1	20	74-136	
tert-Butylbenzene	5.00	4.36	87	4	20	77-140	
Tetrachloroethene	5.00	4.98	100	2	20	75-131	
Toluene	5.00	4.76	95	0	20	80-126	
trans-1,2-Dichloroethene	5.00	4.80	96	2	17	63-133	
trans-1,3-Dichloropropene	5.00	4.67	93	2	21	71-128	
Trichloroethene	5.00	4.87	97	0	14	72-136	
Trichlorofluoromethane	5.00	4.65	93	3	20	60-132	
Vinyl chloride	5.00	4.88	98	4	21	52-128	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab File ID: 12091907.D Lab Sample ID: MB 580-318472/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC113 Date Analyzed: 12/09/2019 12:14

GC Column: DB-VRX ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-318472/4	12091904.D	12/09/2019 10:54
	LCSD 580-318472/5	12091905.D	12/09/2019 11:21
TB120519	580-91241-5	12091909.D	12/09/2019 13:07
04Q19L4MW01AW	580-91241-1	12091919.D	12/09/2019 17:31
04Q19L4MW01BW	580-91241-2	12091920.D	12/09/2019 17:58
04Q19L4MW02AW	580-91241-3	12091921.D	12/09/2019 18:24
04Q19L4MW02BW	580-91241-4	12091922.D	12/09/2019 18:51

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab File ID: 12041902b.D BFB Injection Date: 12/04/2019

Instrument ID: TAC113 BFB Injection Time: 15:51

Analysis Batch No.: 318234

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.7	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	75.4	
175	5.0 - 9.0 % of mass 174	5.4	(7.2) 1
176	95.0 - 101.0 % of mass 174	72.6	(96.3) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD 580-318234/3	12041903b.D	12/04/2019	16:17
	STD 580-318234/4	12041904b.D	12/04/2019	16:43
	STD 580-318234/5	12041905b.D	12/04/2019	17:10
	STD 580-318234/6	12041906b.D	12/04/2019	17:36
	STD 580-318234/7	12041907b.D	12/04/2019	18:03
	STD 580-318234/8	12041908b.D	12/04/2019	18:30
	STD 580-318234/9	12041909b.D	12/04/2019	18:56
	ICIS 580-318234/10	12041910b.D	12/04/2019	19:23
	STD 580-318234/11	12041911b.D	12/04/2019	19:49
	STD 580-318234/12	12041912b.D	12/04/2019	20:16
	STD 580-318234/15	12041913b.D	12/04/2019	20:42
	ICV 580-318234/14	12041915b.D	12/04/2019	21:35

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab File ID: 12091902.D BFB Injection Date: 12/09/2019

Instrument ID: TAC113 BFB Injection Time: 10:01

Analysis Batch No.: 318472

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.1	
75	30.0 - 60.0 % of mass 95	57.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	75.7	
175	5.0 - 9.0 % of mass 174	5.6	(7.4) 1
176	95.0 - 101.0 % of mass 174	72.3	(95.5) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-318472/3	12091903.D	12/09/2019	10:28
	LCS 580-318472/4	12091904.D	12/09/2019	10:54
	LCSD 580-318472/5	12091905.D	12/09/2019	11:21
	MB 580-318472/7	12091907.D	12/09/2019	12:14
TB120519	580-91241-5	12091909.D	12/09/2019	13:07
04Q19L4MW01AW	580-91241-1	12091919.D	12/09/2019	17:31
04Q19L4MW01BW	580-91241-2	12091920.D	12/09/2019	17:58
04Q19L4MW02AW	580-91241-3	12091921.D	12/09/2019	18:24
04Q19L4MW02BW	580-91241-4	12091922.D	12/09/2019	18:51

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Sample No.: ICIS 580-318234/10 Date Analyzed: 12/04/2019 19:23

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12041910b.D Heated Purge: (Y/N) N

Calibration ID: 28568

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		381331	4.93	3453720	8.76	2623509	11.71
UPPER LIMIT			5.10	6907440	8.92		11.88
LOWER LIMIT			4.77	1726860	8.59		11.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-318234/14		466997	4.93	3533281	8.76	2718416	11.71

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Sample No.: ICIS 580-318234/10 Date Analyzed: 12/04/2019 19:23

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12041910b.D Heated Purge: (Y/N) N

Calibration ID: 28568

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1355165	13.63				
UPPER LIMIT			13.79				
LOWER LIMIT			13.46				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-318234/14		1393301	13.63				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Sample No.: CCVIS 580-318472/3 Date Analyzed: 12/09/2019 10:28

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm)

Lab File ID (Standard): 12091903.D Heated Purge: (Y/N) N

Calibration ID: 28568

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2734974	8.76	1969644	11.71	1077186	13.63
UPPER LIMIT		5469948	8.92		11.88		13.79
LOWER LIMIT		1367487	8.59		11.55		13.46
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-318472/4		2953430	8.76	2080398	11.71	1134507	13.63
LCSD 580-318472/5		2713834	8.76	1930626	11.71	1072987	13.63
MB 580-318472/7		2473615	8.76	1730130	11.71	915047	13.63
580-91241-5	TB120519	2274785	8.76	1680486	11.71	868609	13.63
580-91241-1	04Q19L4MW01AW	2151087	8.76	1689325	11.71	859087	13.63
580-91241-2	04Q19L4MW01BW	2137864	8.76	1653438	11.71	841756	13.63
580-91241-3	04Q19L4MW02AW	2045084	8.76	1557362	11.71	817288	13.63
580-91241-4	04Q19L4MW02BW	2063809	8.76	1536828	11.71	811432	13.63

FB = Fluorobenzene (IS)
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.1666 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01AW Lab Sample ID: 580-91241-1

Matrix: Water Lab File ID: 12091919.D

Analysis Method: 8260C Date Collected: 12/05/2019 12:50

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01AW Lab Sample ID: 580-91241-1

Matrix: Water Lab File ID: 12091919.D

Analysis Method: 8260C Date Collected: 12/05/2019 12:50

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	98		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01BW Lab Sample ID: 580-91241-2

Matrix: Water Lab File ID: 12091920.D

Analysis Method: 8260C Date Collected: 12/05/2019 13:32

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 17:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01BW Lab Sample ID: 580-91241-2

Matrix: Water Lab File ID: 12091920.D

Analysis Method: 8260C Date Collected: 12/05/2019 13:32

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 17:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	103		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Matrix: Water Lab File ID: 12091921.D

Analysis Method: 8260C Date Collected: 12/05/2019 14:07

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 18:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Matrix: Water Lab File ID: 12091921.D

Analysis Method: 8260C Date Collected: 12/05/2019 14:07

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 18:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	103		80-120
98-08-8	Trifluorotoluene (Surr)	97		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Matrix: Water Lab File ID: 12091922.D

Analysis Method: 8260C Date Collected: 12/05/2019 15:05

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 18:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	0.46		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	1.9		0.20	
75-35-4	1,1-Dichloroethene	0.34		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Matrix: Water Lab File ID: 12091922.D

Analysis Method: 8260C Date Collected: 12/05/2019 15:05

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 18:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	2.3		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	98		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: TB120519 Lab Sample ID: 580-91241-5

Matrix: Water Lab File ID: 12091909.D

Analysis Method: 8260C Date Collected: 12/05/2019 00:01

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 13:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: TB120519 Lab Sample ID: 580-91241-5

Matrix: Water Lab File ID: 12091909.D

Analysis Method: 8260C Date Collected: 12/05/2019 00:01

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 13:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		80-120
2037-26-5	Toluene-d8 (Surr)	103		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Dichlorodifluoromethane	+++++ +++++ 0.2620	0.2533 0.2974	0.2580 0.2591	0.2453 0.2881	0.2430 0.2793	Ave		0.2651			0.1000	7.2		20.0			
Chloromethane	+++++ +++++ 0.2542	+++++ 0.3427	+++++ 0.3397	0.3742 0.3100	0.3299 0.2750	Qua2	0.0069	0.3337	-0.000867		0.1000	5.6			0.9980		0.9900
Vinyl chloride	0.5523 +++++ 0.2452	0.3606 0.3397	0.3209 0.3248	0.3139 0.3130	0.3085 0.2790	Qua2	0.0045	0.3070	-0.000549		0.1000	8.9			0.9920		0.9900
Bromomethane	+++++ +++++ +++++	+++++ 0.2432	0.2412 0.2387	0.2432 0.2235	0.2306 0.1893	Ave		0.2299			0.1000	8.4		20.0			
Chloroethane	+++++ +++++ +++++	+++++ 0.0671	+++++ 0.0651	0.0800 0.0597	0.0688 0.0510	Lin2	0.0040	0.0604			0.0600	10.0			0.9900		0.9900
Trichlorofluoromethane	+++++ +++++ 0.4658	+++++ 0.4950	0.5239 0.4555	0.5043 0.4937	0.4917 0.4761	Ave		0.4882			0.1000	4.5		20.0			
Acrolein	+++++ +++++ 0.0199	+++++ 0.0194	+++++ 0.0166	0.0158 0.0188	0.0171 0.0194	Lin2	-0.004	0.0188				6.2			0.9960		0.9900
1,1-Dichloroethene	+++++ +++++ 0.2367	+++++ 0.2309	0.2202 0.2293	0.2192 0.2396	0.2139 0.2387	Ave		0.2286			0.1000	4.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ +++++ 0.2090	+++++ 0.2100	0.2218 0.1874	0.2159 0.2113	0.2137 0.2110	Ave		0.2100			0.1000	4.8		20.0			
Acetone	+++++ +++++ 0.0358	+++++ 0.0444	+++++ 0.0409	0.1233 0.0410	0.0714 0.0361	Lin2	0.0848	0.0382			0.0200	5.9			0.9970		0.9900
Iodomethane	+++++ +++++ 0.4114	+++++ 0.3978	0.3836 0.4101	0.3807 0.4164	0.3742 0.4158	Ave		0.3987				4.3		20.0			
Carbon disulfide	+++++ +++++ 0.7159	+++++ 0.7421	0.7253 0.7807	0.6082 0.8100	0.5851 0.7966	Ave		0.7205			0.1000	11.6		20.0			
Methylene Chloride	+++++ +++++ 0.2528	+++++ 0.2671	+++++ 0.2612	0.3476 0.2602	0.3073 0.2560	Lin2	0.0186	0.2593			0.1000	2.5			0.9990		0.9900
2-Methyl-2-propanol	+++++ +++++ 0.0075	+++++ 0.0065	0.0053 0.0053	0.0064 0.0057	0.0057 0.0066	Ave		0.0061				12.4		20.0			
Acrylonitrile	+++++ +++++ 0.0398	+++++ 0.0424	+++++ 0.0393	0.0387 0.0406	0.0381 0.0411	Ave		0.0400				3.7		20.0			
trans-1,2-Dichloroethene	+++++ +++++ 0.2836	+++++ 0.2826	0.3096 0.2843	0.2729 0.2883	0.2674 0.2875	Ave		0.2845			0.1000	4.4		20.0			
Methyl tert-butyl ether	+++++ +++++ 0.4262	0.3129 0.3878	0.3349 0.3695	0.3264 0.3950	0.3160 0.4200	Ave		0.3654			0.1000	12.1		20.0			
Hexane	+++++ +++++ 0.3787	+++++ 0.3777	+++++ 0.3367	0.2923 0.3904	0.2935 0.3963	Lin1	-0.029	0.3832				9.2			0.9990		0.9900
1,1-Dichloroethane	+++++ +++++ 0.4680	0.5176 0.5059	0.4981 0.5096	0.4889 0.5165	0.5009 0.5056	Ave		0.5012			0.2000	3.1		20.0			
Vinyl acetate	+++++ +++++ 0.0354	+++++ 0.0261	+++++ 0.0271	0.0167 0.0292	0.0160 0.0330	Qua2	-0.005	0.0255	0.0000450			11.7			0.9910		0.9900
Tert-butyl ethyl ether	+++++ +++++ 0.2607	+++++ 0.2189	+++++ 0.2231	0.1625 0.2403	0.1620 0.2569	Qua2	-0.017	0.2184	0.0004115			8.2			0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2,2-Dichloropropane	+++++ +++++ 0.3445	+++++ 0.3206	0.2708 0.3415	0.2569 0.3551	0.2598 0.3625	Lin1	-0.017	0.3501				12.7			0.9990		0.9900
cis-1,2-Dichloroethene	+++++ +++++ 0.3082	+++++ 0.2972	0.2701 0.3016	0.2672 0.3123	0.2670 0.3150	Ave		0.2923			0.1000	7.1		20.0			
2-Butanone (MEK)	+++++ +++++ 0.0138	+++++ 0.0125	+++++ 0.0116	0.0099 0.0125	0.0091 0.0131	Qua1	-0.004	0.0121	0.0000035	*	0.0200	9.5			1.0000		0.9900
Chlorobromomethane	+++++ +++++ 0.1647	+++++ 0.1539	0.1588 0.1510	0.1447 0.1555	0.1471 0.1612	Ave		0.1546				4.4		20.0			
Chloroform	+++++ +++++ 0.4525	0.5421 0.5138	0.5212 0.5121	0.5028 0.5194	0.5046 0.5081	Ave		0.5085			0.2000	4.7		20.0			
1,1,1-Trichloroethane	0.5298 +++++ 0.4300	0.3941 0.4297	0.3759 0.4391	0.3736 0.4572	0.3891 0.4598	Ave		0.4278			0.1000	11.2		20.0			
Carbon tetrachloride	+++++ +++++ 0.4109	+++++ 0.3945	0.3565 0.3956	0.3532 0.4260	0.3634 0.4353	Ave		0.3919			0.1000	8.1		20.0			
1,1-Dichloropropene	+++++ +++++ 0.3753	+++++ 0.3942	0.3320 0.3944	0.3285 0.4135	0.3435 0.4159	Lin1	-0.008	0.3921				6.0			0.9980		0.9900
Benzene	+++++ +++++ +++++	1.2178 1.1227	1.1285 1.1222	1.0726 1.1156	1.1164 0.9647	Ave		1.1076			0.5000	6.4		20.0			
1,2-Dichloroethane	+++++ +++++ 0.2718	+++++ 0.3094	0.4152 0.2926	0.3532 0.2949	0.3314 0.2910	Ave		0.3199			0.1000	14.4		20.0			
Tert-amyl methyl ether	+++++ +++++ +++++	+++++ 0.4369	+++++ 0.4350	0.3071 0.4735	0.3187 0.4998	Lin1	-0.075	0.4851				14.7			0.9980		0.9900
Trichloroethene	+++++ +++++ 0.2920	0.3326 0.2760	0.2772 0.2836	0.2520 0.2937	0.2598 0.3030	Ave		0.2855			0.2000	8.4		20.0			
1,2-Dichloropropane	+++++ +++++ 0.2538	+++++ 0.2623	0.2916 0.2612	0.2474 0.2672	0.2486 0.2694	Ave		0.2627			0.1000	5.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Dibromomethane	+++++ +++++ 0.1354	+++++ 0.1204	0.1199 0.1181	0.1102 0.1223	0.1156 0.1299	Ave		0.1215				6.5		20.0			
Dichlorobromomethane	+++++ +++++ 0.3131	+++++ 0.3062	0.2752 0.3096	0.2493 0.3298	0.2573 0.3403	Qua1	-0.015	0.3357	-0.000193		0.2000	15.0			0.9990		0.9900
2-Chloroethyl vinyl ether	+++++ +++++ 0.1167	+++++ 0.0941	+++++ 0.0990	0.0745 0.1057	0.0704 0.1120	Qua1	-0.010	0.1024	0.0001498			12.6			1.0000		0.9900
cis-1,3-Dichloropropene	+++++ +++++ 0.4008	+++++ 0.4212	0.3279 0.4460	0.3068 0.4685	0.3191 0.4574	Lin1	-0.015	0.4266			0.2000	11.6			0.9950		0.9900
4-Methyl-2-pentanone (MIBK)	+++++ +++++ 0.0494	+++++ 0.0500	+++++ 0.0474	0.0304 0.0500	0.0328 0.0510	Lin1	-0.026	0.0499		*	0.0600	8.8			1.0000		0.9900
Toluene	+++++ +++++ +++++	1.9563 1.4730	1.6830 1.5162	1.5408 1.4572	1.5356 +++++	Ave		1.5946			0.4000	11.0		20.0			
trans-1,3-Dichloropropene	+++++ +++++ 0.3350	+++++ 0.3161	0.2537 0.3284	0.2419 0.3554	0.2273 0.3634	Lin1	-0.019	0.3444			0.1000	15.9			0.9980		0.9900
1,1,2-Trichloroethane	+++++ +++++ 0.1837	+++++ 0.1893	0.1953 0.1795	0.1893 0.1805	0.1882 0.1820	Ave		0.1860			0.1000	2.9		20.0			
Tetrachloroethene	+++++ +++++ 0.3011	+++++ 0.2973	0.3052 0.3048	0.3037 0.3139	0.3086 0.3145	Ave		0.3061			0.2000	1.9		20.0			
1,3-Dichloropropane	+++++ +++++ 0.3089	+++++ 0.3500	0.3433 0.3343	0.3325 0.3348	0.3352 0.3300	Ave		0.3336				3.6		20.0			
2-Hexanone	+++++ +++++ 0.0448	+++++ 0.0451	+++++ 0.0409	0.0267 0.0437	0.0310 0.0440	Lin1	-0.023	0.0444		*	0.0600	7.9			1.0000		0.9900
Chlorodibromomethane	+++++ +++++ 0.2502	+++++ 0.2175	0.1854 0.2236	0.1684 0.2390	0.1709 0.2503	Qua1	-0.012	0.2349	0.0001703		0.1000	15.8			0.9990		0.9900
Ethylene Dibromide	+++++ +++++ 0.1766	0.2027 0.1764	0.1783 0.1688	0.1606 0.1732	0.1566 0.1742	Ave		0.1742			0.1000	7.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorobenzene	+++++ +++++ +++++	+++++ 0.9479	1.1952 0.9406	1.0479 0.9374	1.0088 0.8044	Ave		0.9832			0.5000	12.2		20.0			
1,1,1,2-Tetrachloroethane	+++++ +++++ 0.3025	+++++ 0.3275	0.2743 0.3437	0.2811 0.3587	0.2747 0.3646	Ave		0.3159				11.9		20.0			
Ethylbenzene	+++++ +++++ +++++	1.7187 1.6931	1.5393 1.7515	1.4807 1.6415	1.5380 +++++	Ave		1.6233			0.1000	6.4		20.0			
m-Xylene & p-Xylene	+++++ +++++ +++++	+++++ 1.2834	1.0980 1.3338	1.0716 1.3009	1.1314 1.0374	Ave		1.1795			0.1000	10.4		20.0			
o-Xylene	+++++ +++++ +++++	+++++ 1.3416	+++++ 1.4145	0.9798 1.3663	1.0698 +++++	Lin1	-0.102	1.3843			0.3000	6.7			1.0000		0.9900
Styrene	+++++ +++++ +++++	+++++ 0.9024	+++++ 0.9211	0.5806 0.9338	0.6672 0.8012	Qua1	-0.106	0.9819	-0.003504		0.3000	10.3			0.9990		0.9900
Bromoform	+++++ +++++ 0.1397	+++++ 0.1038	0.0923 0.1017	0.0784 0.1144	0.0832 0.1285	Qua1	-0.005	0.1079	0.0003286		0.1000	15.4			0.9990		0.9900
Isopropylbenzene	+++++ +++++ +++++	+++++ 1.6407	+++++ 1.7184	1.1233 1.6292	1.2661 +++++	Lin1	-0.130	1.6660			0.1000	6.6			0.9990		0.9900
1,1,2,2-Tetrachloroethane	+++++ +++++ +++++	+++++ 0.4030	0.4205 0.3723	0.3970 0.3965	0.3804 0.4108	Ave		0.3972			0.3000	4.2		20.0			
Bromobenzene	+++++ +++++ 0.7037	+++++ 0.6771	+++++ 0.6954	0.6950 0.7317	0.6783 0.7687	Ave		0.7071				4.6		20.0			
trans-1,4-Dichloro-2-butene	+++++ +++++ 0.1072	+++++ 0.0953	+++++ 0.0893	0.0877 0.1003	0.0862 0.1058	Qua1	-0.004	0.0977	0.0001024			7.6			0.9990		0.9900
1,2,3-Trichloropropane	+++++ +++++ 0.1196	+++++ 0.1189	0.1248 0.1097	0.1140 0.1139	0.1162 0.1176	Ave		0.1168				3.9		20.0			
N-Propylbenzene	+++++ +++++ +++++	+++++ 3.8098	+++++ 4.0157	3.2013 3.7116	3.3306 +++++	Ave		3.6138				9.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
2-Chlorotoluene	+++++ +++++ 0.7074	+++++ 0.7450	0.7096 0.7952	0.6616 0.8223	0.6892 0.8309	Ave		0.7452				8.6		20.0			
1,3,5-Trimethylbenzene	+++++ +++++ +++++	+++++ 2.7054	1.9547 2.9128	1.9860 2.8738	2.1967 +++++	Lin2	-0.095	2.7116				9.7			0.9900		0.9900
4-Chlorotoluene	+++++ +++++ 0.7023	+++++ 0.7540	0.6856 0.7797	0.6596 0.8117	0.7008 0.8251	Ave		0.7399				8.3		20.0			
tert-Butylbenzene	+++++ +++++ +++++	+++++ 2.2505	+++++ 2.4873	1.5971 2.5851	1.7489 2.0157	Qua1	-0.328	2.7065	-0.013278			15.6			0.9970		0.9900
sec-Butylbenzene	+++++ +++++ +++++	+++++ 3.4668	+++++ 3.6990	2.4521 3.5619	2.8322 +++++	Lin1	-0.277	3.6093				5.6			0.9990		0.9900
1,3-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.5080	1.6523 1.5412	1.4784 1.6075	1.4691 1.4709	Ave		1.5325			0.6000	4.7		20.0			
4-Isopropyltoluene	+++++ +++++ +++++	+++++ 3.0231	1.9208 3.2613	1.9922 3.2166	2.3625 +++++	Qua1	-0.181	3.1137	0.0065645			14.3			0.9990		0.9900
1,4-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.4982	1.9021 1.4943	1.6424 1.5563	1.5943 1.4352	Ave		1.5890			0.5000	9.7		20.0			
1,2,4-Trimethylbenzene	+++++ +++++ +++++	+++++ 2.8021	2.6326 2.9298	2.6031 2.9118	2.6519 +++++	Ave		2.7552				5.3		20.0			
n-Butylbenzene	+++++ +++++ 0.6986	+++++ 0.7461	+++++ 0.8006	0.5317 0.8487	0.5764 0.8582	Lin1	-0.040	0.7655				10.9			0.9900		0.9900
1,2-Dichlorobenzene	+++++ +++++ +++++	+++++ 1.3583	1.4556 1.3354	1.3698 1.3845	1.3728 1.2977	Ave		1.3677			0.4000	3.5		20.0			
1,2-Dibromo-3-Chloropropane	+++++ +++++ 0.0721	+++++ 0.0540	+++++ 0.0517	+++++ 0.0605	0.0453 0.0672	Qua2	-0.005	0.0542	0.0001967		0.0500	5.4			0.9980		0.9900
1,3,5-Trichlorobenzene	+++++ +++++ +++++	+++++ 1.2123	1.4607 1.2730	1.2064 1.3442	1.1486 1.2733	Ave		1.2741				8.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,2,4-Trichlorobenzene	+++++ +++++ 0.8291	+++++ 0.9063	1.0908 0.9387	0.9121 1.0196	0.7766 1.0116	Ave		0.9356			0.2000	11.1		20.0			
Hexachlorobutadiene	+++++ +++++ +++++	+++++ 0.5941	0.7083 0.6200	0.6296 0.6554	0.5974 0.6675	Ave		0.6389				6.4		20.0			
Naphthalene	+++++ +++++ +++++	+++++ 1.2155	+++++ 1.2198	+++++ 1.3277	0.8274 1.2492	Lin1	-0.221	1.2726				3.5			0.9990		0.9900
1,2,3-Trichlorobenzene	+++++ +++++ 0.7141	+++++ 0.7559	+++++ 0.7592	0.7612 0.8038	0.6411 0.7951	Ave		0.7472				7.4		20.0			
Dibromofluoromethane (Surr)	0.2532 +++++ 0.2652	0.2518 0.2614	0.2562 0.2536	0.2552 0.2595	0.2535 0.2614	Ave		0.2571				1.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2461 +++++ 0.2442	0.2527 0.2554	0.2578 0.2433	0.2590 0.2463	0.2503 0.2443	Ave		0.2499				2.4		20.0			
Trifluorotoluene (Surr)	1.3734 +++++ 1.3549	1.2625 1.1669	1.2466 1.2521	1.2966 1.2773	1.2245 1.2933	Ave		1.2748				4.7		20.0			
Toluene-d8 (Surr)	1.3362 +++++ 1.1630	1.2935 1.2808	1.3166 1.2893	1.3344 1.2477	1.3232 1.1705	Ave		1.2755				5.0		20.0			
4-Bromofluorobenzene (Surr)	0.3756 +++++ 0.3678	0.3882 0.3936	0.3832 0.3807	0.3790 0.3693	0.3858 0.3592	Ave		0.3782				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Dichlorodifluoromethane	FB	Ave	+++++ +++++ 11427499	4217 500118	8190 917927	15467 2154093	38067 5683623	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloromethane	FB	Qua2	+++++ +++++ 11085841	+++++ 576188	+++++ 1203396	23596 2318538	51682 5596144	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Vinyl chloride	FB	Qua2	3821 +++++ 10693189	6003 571279	10187 1150574	19796 2340803	48335 5676367	0.0200 +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromomethane	FB	Ave	+++++ +++++ +++++	+++++ 408874	7658 845368	15335 1671331	36133 3851250	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroethane	FB	Lin2	+++++ +++++ +++++	+++++ 112910	+++++ 230690	5045 446772	10772 1037168	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Trichlorofluoromethane	FB	Ave	+++++ +++++ 20315333	+++++ 832258	16630 1613405	31801 3691530	77033 9687427	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acrolein	FB	Lin2	+++++ +++++ 5201700	+++++ 195515	+++++ 353625	5984 843005	16062 2372458	+++++ +++++ 600	+++++ 30.0	+++++ 60.0	1.20 120	3.00 300
1,1-Dichloroethene	FB	Ave	+++++ +++++ 10321388	+++++ 388311	6990 812158	13822 1791629	33520 4856917	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ +++++ 9113674	+++++ 353138	7041 663935	13611 1579766	33482 4294347	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acetone	FB	Lin2	+++++ +++++ 7812376	+++++ 373530	+++++ 724993	38860 1532343	55951 3672356	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Iodomethane	FB	Ave	+++++ +++++ 17943428	+++++ 668829	12176 1452575	24005 3114048	58625 8460698	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon disulfide	FB	Ave	+++++ +++++ 31218970	+++++ 1247884	23025 2765407	38350 6057351	91673 16209139	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methylene Chloride	FB	Lin2	+++++ +++++ 11024367	+++++ 449067	+++++ 925378	21919 1945994	48155 5209033	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
2-Methyl-2-propanol	FB	Ave	+++++ +++++ 3264463	+++++ 109713	1667 188597	4010 429791	8918 1342301	+++++ +++++ 1000	+++++ 50.0	1.00 100	2.00 200	5.00 500
Acrylonitrile	FB	Ave	+++++ +++++ 17358347	+++++ 712781	+++++ 1393334	24401 3032818	59684 8360503	+++++ +++++ 1000	+++++ 50.0	+++++ 100	2.00 200	5.00 500
trans-1,2-Dichloroethene	FB	Ave	+++++ +++++ 12368496	+++++ 475195	9827 1007177	17210 2156160	41902 5850198	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methyl tert-butyl ether	FB	Ave	+++++ +++++ 18585573	5210 652017	10631 1308695	20582 2954011	49504 8545672	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Hexane	FB	Lin1	+++++ +++++ 16513912	+++++ 635074	+++++ 1192829	18432 2919380	45979 8064331	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1-Dichloroethane	FB	Ave	+++++ +++++ 20409591	8618 850672	15812 1805133	30827 3862088	78474 10289001	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Vinyl acetate	FB	Qua2	+++++ +++++ 3861294	+++++ 109624	+++++ 239641	2631 545365	6257 1677857	+++++ +++++ 250	+++++ 12.5	+++++ 25.0	0.500 50.0	1.25 125
Tert-butyl ethyl ether	FB	Qua2	+++++ +++++ 14209285	+++++ 460029	+++++ 987636	12805 2246071	31734 6535006	+++++ +++++ 125	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2,2-Dichloropropane	FB	Lin1	+++++ +++++ 15025247	+++++ 539042	8596 1209781	16201 2655637	40699 7377087	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
cis-1,2-Dichloroethene	FB	Ave	+++++ +++++ 13439022	+++++ 499697	8574 1068234	16850 2335430	41834 6409271	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Butanone (MEK)	FB	Qua1	+++++ +++++ 3012798	+++++ 105120	+++++ 205170	3108 466072	7092 1329374	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Chlorobromomethane	FB	Ave	+++++ +++++ 7181487	+++++ 258704	5041 534932	9122 1162566	23050 3279534	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroform	FB	Ave	+++++ +++++ 19732590	9026 864021	16544 1813866	31706 3884025	79064 10338887	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1-Trichloroethane	FB	Ave	3665 +++++ 18752913	6561 722543	11934 1555366	23556 3419295	60967 9355984	0.0200 +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon tetrachloride	FB	Ave	+++++ +++++ 17920869	+++++ 663348	11317 1401218	22272 3185986	56932 8858070	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1-Dichloropropene	FB	Lin1	+++++ +++++ 16367666	+++++ 662878	10540 1397207	20717 3092249	53818 8463342	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Benzene	FB	Ave	+++++ +++++ +++++	20274 1887742	35824 3975128	67636 8342339	174922 19630354	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloroethane	FB	Ave	+++++ +++++ 11854011	+++++ 520200	13181 1036631	22271 2205003	51924 5921783	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tert-amyl methyl ether	FB	Lin1	+++++ +++++ +++++	+++++ 918364	+++++ 1926066	24209 4426291	62419 12711689	+++++ +++++ +++++	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5
Trichloroethene	FB	Ave	+++++ +++++ 12734586	5537 464175	8800 1004414	15888 2196451	40702 6166022	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloropropane	FB	Ave	+++++ +++++ 11066918	+++++ 440991	9255 925222	15599 1997905	38944 5481897	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Dibromomethane	FB	Ave	+++++ +++++ 5906404	+++++ 202453	3806 418435	6948 914238	18117 2642938	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dichlorobromomethane	FB	Qual	+++++ +++++ 13652313	+++++ 514908	8737 1096680	15723 2466186	40320 6924371	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Chloroethyl vinyl ether	CBNZ d5	Qual	+++++ +++++ 4258582	+++++ 121850	+++++ 266295	3408 621128	7925 1892532	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
cis-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ +++++ 14623804	+++++ 545643	7542 1200036	14033 2752689	35907 7725714	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Lin1	+++++ +++++ 9017497	+++++ 323909	+++++ 638010	6946 1467761	18430 4304049	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Toluene	CBNZ d5	Ave	+++++ +++++ +++++	24857 1908098	38710 4079726	70470 8561770	172818 +++++	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 +++++
trans-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ +++++ 12223531	+++++ 409411	5836 883631	11061 2087828	25579 6137879	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,2-Trichloroethane	CBNZ d5	Ave	+++++ +++++ 6703896	+++++ 245252	4493 483074	8657 1060659	21177 3074418	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tetrachloroethene	CBNZ d5	Ave	+++++ +++++ 10984353	+++++ 385111	7019 820189	13889 1844320	34732 5311367	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3-Dichloropropane	CBNZ d5	Ave	+++++ +++++ 11270510	+++++ 453345	7897 899528	15208 1966946	37718 5573930	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Hexanone	CBNZ d5	Lin1	+++++ +++++ 8165453	+++++ 291872	+++++ 549612	6100 1284248	17423 3715479	+++++ +++++ 500	+++++ 25.0	+++++ 50.0	1.00 100	2.50 250
Chlorodibromomethane	CBNZ d5	Qual	+++++ +++++ 9128428	+++++ 281787	4264 601592	7704 1404485	19234 4227550	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Ethylene Dibromide	CBNZ d5	Ave	+++++ +++++ 6444202	2576 228571	4102 454225	7347 1017554	17619 2942237	+++++ +++++ 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorobenzene	CBNZ d5	Ave	+++++ +++++ +++++	+++++ 1227910	27489 2530886	47924 5507861	113528 13586763	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ +++++ 11038263	+++++ 424284	6308 924731	12856 2107370	30919 6157482	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Ethylbenzene	CBNZ d5	Ave	+++++ +++++ +++++	21839 2193213	35405 4713008	67721 9644311	173083 +++++	+++++ +++++ +++++	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 +++++
m-Xylene & p-Xylene	CBNZ d5	Ave	+++++ +++++ +++++	+++++ 1662476	25253 3588859	49008 7643049	127327 17521446	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
o-Xylene	CBNZ d5	Lin1	+++++ +++++ +++++	+++++ 1737940	+++++ 3806183	44810 8027834	120390 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
Styrene	CBNZ d5	Qua1	+++++ +++++ +++++	+++++ 1168924	+++++ 2478563	26554 5486190	75081 13533183	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Bromoform	CBNZ d5	Qua1	+++++ +++++ 5098128	+++++ 134472	2123 273661	3586 671980	9367 2170757	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Isopropylbenzene	CBNZ d5	Lin1	+++++ +++++ +++++	+++++ 2125404	+++++ 4623923	51374 9572101	142484 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	+++++ +++++ +++++	+++++ 281501	5133 517490	9313 1163746	23066 3314216	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromobenzene	DCBd 4	Ave	+++++ +++++ 12313367	+++++ 472931	+++++ 966598	16304 2147302	41131 6201014	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Qua1	+++++ +++++ 1875349	+++++ 66555	+++++ 124158	2057 294378	5225 853571	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ +++++ 2093297	+++++ 83031	1524 152527	2674 334251	7048 948719	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
N-Propylbenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 2660883	+++++ 5581536	75099 10892884	201958 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	DCBd 4	Ave	+++++ +++++ 12377989	+++++ 520342	8663 1105299	15520 2413300	41793 6702831	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3,5-Trimethylbenzene	DCBd 4	Lin2	+++++ +++++ +++++	+++++ 1889580	23863 4048475	46590 8433925	133200 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
4-Chlorotoluene	DCBd 4	Ave	+++++ +++++ 12289830	+++++ 526613	8370 1083722	15474 2382243	42496 6656568	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
tert-Butylbenzene	DCBd 4	Qua1	+++++ +++++ +++++	+++++ 1571809	+++++ 3457087	37466 7586790	106045 16261421	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
sec-Butylbenzene	DCBd 4	Lin1	+++++ +++++ +++++	+++++ 2421380	+++++ 5141276	57523 10453568	171735 +++++	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 +++++
1,3-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1053241	20171 2142107	34682 4717729	89083 11865836	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Isopropyltoluene	DCBd 4	Qua1	+++++ +++++ +++++	+++++ 2111415	23449 4532877	46735 9440089	143255 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
1,4-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1046393	23221 2076957	38528 4567510	96673 11577748	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 1957111	32139 4072132	61067 8545619	160801 +++++	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 +++++
n-Butylbenzene	DCBd 4	Lin1	+++++ +++++ 12224022	+++++ 521088	+++++ 1112750	12472 2490739	34950 6923199	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2-Dichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 948713	17770 1856048	32135 4063236	83245 10469072	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Qua2	+++++ +++++ 1261845	+++++ 37746	+++++ 71891	+++++ 177596	2749 542109	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 846694	17832 1769349	28300 3945059	69649 10271681	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ 14508327	+++++ 632978	13316 1304746	21396 2992367	47091 8161166	+++++ +++++ 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Hexachlorobutadiene	DCBd 4	Ave	+++++ +++++ +++++	+++++ 414917	8647 861734	14770 1923542	36224 5385224	+++++ +++++ +++++	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Naphthalene	DCBd 4	Lin1	+++++ +++++ +++++	+++++ 848967	+++++ 1695386	+++++ 3896461	50168 10077980	+++++ +++++ +++++	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	+++++ +++++ 12495636	+++++ 527926	+++++ 1055206	17857 2358924	38874 6414139	+++++ +++++ 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Dibromofluoromethane (Surr)	FB	Ave	853855 +++++ 1127738	817425 857089	792987 875774	784522 945881	774666 1037220	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
1,2-Dichloroethane-d4 (Surr)	FB	Ave	830002 +++++ 1038383	820430 837584	797950 840189	796247 897881	764632 969319	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
Trifluorotoluene (Surr)	DCBd 4	Ave	1695338 +++++ 2369959	1630862 1629400	1521211 1739641	1520227 1873553	1484455 2085822	10.00 +++++ 10.00	10.00 10.00	10.00 10.00	10.00 10.00	10.00 10.00
Toluene-d8 (Surr)	CBNZ d5	Ave	3257378 +++++ 4137206	3205046 3235281	2952547 3382365	2975226 3573611	2903738 3855336	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	915545 +++++ 1308278	961775 994339	859279 998879	845052 1057687	846627 1183145	9.75 +++++ 9.75	9.75 9.75	9.75 9.75	9.75 9.75	9.75 9.75

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua1 = Quadratic 1/conc ISTD
Qua2 = Quadratic 1/conc^2 ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-318234/3	12041903b.D
Level 2	STD 580-318234/4	12041904b.D
Level 3	STD 580-318234/5	12041905b.D
Level 4	STD 580-318234/6	12041906b.D
Level 5	STD 580-318234/7	12041907b.D
Level 6	STD 580-318234/8	12041908b.D
Level 7	STD 580-318234/9	12041909b.D
Level 8	ICIS 580-318234/10	12041910b.D
Level 9	STD 580-318234/11	12041911b.D
Level 10	STD 580-318234/12	12041912b.D
Level 11	STD 580-318234/15	12041913b.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
Dichlorodifluoromethane	+++++	-4.4				+++++		50				
Chloromethane	+++++	+++++	+++++	1.9		+++++				30		
Vinyl chloride	7.2					+++++	30					
Bromomethane	+++++	+++++	4.9		+++++	+++++			50			
Chloroethane	+++++	+++++	+++++	-0.7	+++++	+++++				30		
Trichlorofluoromethane	+++++	+++++	7.3			+++++			50			
Acrolein	+++++	+++++	+++++	1.0		+++++				30		
1,1-Dichloroethene	+++++	+++++	-3.7			+++++			50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	+++++	5.6			+++++			50			
Acetone	+++++	+++++	+++++	0.4		+++++				30		
Iodomethane	+++++	+++++	-3.8			+++++			50			
Carbon disulfide	+++++	+++++	0.7			+++++			50			
Methylene Chloride	+++++	+++++	+++++	-1.7		+++++				30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
2-Methyl-2-propanol	+++++	+++++	-14.2			+++++			50			
Acrylonitrile	+++++	+++++	+++++	-3.2		+++++				50		
trans-1,2-Dichloroethene	+++++	+++++	8.8			+++++			50			
Methyl tert-butyl ether	+++++	-14.4				+++++		50				
Hexane	+++++	+++++	+++++	14.6		+++++				30		
1,1-Dichloroethane	+++++	3.3				+++++		50				
Vinyl acetate	+++++	+++++	+++++	8.0		+++++				30		
Tert-butyl ethyl ether	+++++	+++++	+++++	5.3		+++++				30		
2,2-Dichloropropane	+++++	+++++	24.8			+++++			30			
cis-1,2-Dichloroethene	+++++	+++++	-7.6			+++++			50			
2-Butanone (MEK)	+++++	+++++	+++++	12.7		+++++				30		
Chlorobromomethane	+++++	+++++	2.7			+++++			50			
Chloroform	+++++	6.6				+++++		50				
1,1,1-Trichloroethane	23.8					+++++	50					
Carbon tetrachloride	+++++	+++++	-9.0			+++++			50			
1,1-Dichloropropene	+++++	+++++	5.1			+++++			30			
Benzene	+++++	10.0			+++++	+++++		50				
1,2-Dichloroethane	+++++	+++++	29.8			+++++			50			
Tert-amyl methyl ether	+++++	+++++	+++++	24.8	+++++	+++++				30		
Trichloroethene	+++++	16.5				+++++		50				
1,2-Dichloropropane	+++++	+++++	11.0			+++++			50			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
Dibromomethane	+++++	+++++	-1.3			+++++			50			
Dichlorobromomethane	+++++	+++++	28.1			+++++			30			
2-Chloroethyl vinyl ether	+++++	+++++	+++++	20.5		+++++				30		
cis-1,3-Dichloropropene	+++++	+++++	12.6			+++++			30			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	13.3		+++++				30		
Toluene	+++++	22.7		+++++	+++++	+++++		50				
trans-1,3-Dichloropropene	+++++	+++++	29.5			+++++			30			
1,1,2-Trichloroethane	+++++	+++++	5.0			+++++			50			
Tetrachloroethene	+++++	+++++	-0.3			+++++			50			
1,3-Dichloropropane	+++++	+++++	2.9			+++++			50			
2-Hexanone	+++++	+++++	+++++	12.8		+++++				30		
Chlorodibromomethane	+++++	+++++	29.3			+++++			30			
Ethylene Dibromide	+++++	16.4				+++++		50				
Chlorobenzene	+++++	+++++	21.6		+++++	+++++			50			
1,1,1,2-Tetrachloroethane	+++++	+++++	-13.2			+++++			50			
Ethylbenzene	+++++	5.9		+++++	+++++	+++++		50				
m-Xylene & p-Xylene	+++++	+++++	-6.9		+++++	+++++			50			
o-Xylene	+++++	+++++	+++++	7.6 +++++	+++++	+++++				30		
Styrene	+++++	+++++	+++++	13.5	+++++	+++++				30		
Bromoform	+++++	+++++	29.3			+++++			30			
Isopropylbenzene	+++++	+++++	+++++	6.3 +++++	+++++	+++++				30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
1,1,2,2-Tetrachloroethane	+++++	+++++	5.8		+++++	+++++			50			
Bromobenzene	+++++	+++++	+++++	-1.7		+++++				50		
trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	11.3		+++++				30		
1,2,3-Trichloropropane	+++++	+++++	6.8			+++++			50			
N-Propylbenzene	+++++	+++++	+++++	-11.4 +++++	+++++	+++++				50		
2-Chlorotoluene	+++++	+++++	-4.8			+++++			50			
1,3,5-Trimethylbenzene	+++++	+++++	6.9	+++++	+++++	+++++			30			
4-Chlorotoluene	+++++	+++++	-7.3			+++++			50			
tert-Butylbenzene	+++++	+++++	+++++	19.7	+++++	+++++				30		
sec-Butylbenzene	+++++	+++++	+++++	6.3 +++++	+++++	+++++				30		
1,3-Dichlorobenzene	+++++	+++++	7.8		+++++	+++++			50			
4-Isopropyltoluene	+++++	+++++	19.8	+++++	+++++	+++++			30			
1,4-Dichlorobenzene	+++++	+++++	19.7		+++++	+++++			50			
1,2,4-Trimethylbenzene	+++++	+++++	-4.5	+++++	+++++	+++++			50			
n-Butylbenzene	+++++	+++++	+++++	-4.1		+++++				30		
1,2-Dichlorobenzene	+++++	+++++	6.4		+++++	+++++			50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	0.2	+++++					30	
1,3,5-Trichlorobenzene	+++++	+++++	14.6		+++++	+++++			50			
1,2,4-Trichlorobenzene	+++++	+++++	16.6			+++++			50			
Hexachlorobutadiene	+++++	+++++	10.9		+++++	+++++			50			
Naphthalene	+++++	+++++	+++++	+++++	-0.3 +++++	+++++					30	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1 Analy Batch No.: 318234

SDG No.:

Instrument ID: TAC113 GC Column: DB-VRX ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/04/2019 16:17 Calibration End Date: 12/04/2019 20:42 Calibration ID: 28568

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 # LVL 11 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5 LVL 11	LVL 6
1,2,3-Trichlorobenzene	+++++	+++++	+++++	1.9		+++++				50		
Dibromofluoromethane (Surr)	-1.5					+++++	50					
1,2-Dichloroethane-d4 (Surr)	-1.5					+++++	50					
Trifluorotoluene (Surr)	7.7					+++++	50					
Toluene-d8 (Surr)	4.8					+++++	50					
4-Bromofluorobenzene (Surr)	-0.7					+++++	50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2651	0.2906	0.1000	11.0	10.0	9.6	30.0
Chloromethane	Qua2		0.3015	0.1000	9.23	10.0	-7.7	30.0
Vinyl chloride	Qua2		0.3213	0.1000	10.7	10.0	6.6	30.0
Bromomethane	Ave	0.2299	0.2385	0.1000	10.4	10.0	3.7	30.0
Chloroethane	Lin2		0.0624	0.0600	10.3	10.0	2.8	30.0
Trichlorofluoromethane	Ave	0.4882	0.5299	0.1000	10.9	10.0	8.5	30.0
Acrolein	Lin2		0.0213		67.9	60.0	13.2	30.0
1,1-Dichloroethene	Ave	0.2286	0.2637	0.1000	11.5	10.0	15.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2100	0.2260	0.1000	10.8	10.0	7.6	30.0
Acetone	Lin2		0.0411	0.0200	51.5	50.0	2.9	30.0
Iodomethane	Ave	0.3987	0.4565		11.4	10.0	14.5	30.0
Carbon disulfide	Ave	0.7205	0.8398	0.1000	11.7	10.0	16.6	30.0
Methylene Chloride	Lin2		0.2719	0.1000	10.4	10.0	4.1	30.0
2-Methyl-2-propanol	Ave	0.0061	0.0065		107	100	6.7	30.0
Acrylonitrile	Ave	0.0400	0.0416		104	100	4.0	30.0
trans-1,2-Dichloroethene	Ave	0.2845	0.3052	0.1000	10.7	10.0	7.3	30.0
Methyl tert-butyl ether	Ave	0.3654	0.4104	0.1000	11.2	10.0	12.3	30.0
Hexane	Lin1		0.4090		10.8	10.0	7.5	30.0
1,1-Dichloroethane	Ave	0.5012	0.5207	0.2000	10.4	10.0	3.9	30.0
Vinyl acetate	Qua2		0.0284		26.8	25.0	7.2	30.0
Tert-butyl ethyl ether	Qua2		0.2409		13.5	12.5	8.2	30.0
2,2-Dichloropropane	Lin1		0.3595		10.3	10.0	3.2	30.0
cis-1,2-Dichloroethene	Ave	0.2923	0.3226	0.1000	11.0	10.0	10.3	30.0
2-Butanone (MEK)	Qua1		0.0128*	0.0200	52.5	50.0	4.9	30.0
Chlorobromomethane	Ave	0.1546	0.1569		10.1	10.0	1.5	30.0
Chloroform	Ave	0.5085	0.5187	0.2000	10.2	10.0	2.0	30.0
1,1,1-Trichloroethane	Ave	0.4278	0.4691	0.1000	11.0	10.0	9.6	30.0
Carbon tetrachloride	Ave	0.3919	0.4290	0.1000	10.9	10.0	9.4	30.0
1,1-Dichloropropene	Lin1		0.4033		10.3	10.0	3.1	30.0
Benzene	Ave	1.108	1.139	0.5000	10.3	10.0	2.8	30.0
1,2-Dichloroethane	Ave	0.3199	0.2914	0.1000	9.11	10.0	-8.9	30.0
Tert-amyl methyl ether	Lin1		0.4756		12.4	12.5	-0.7	30.0
Trichloroethene	Ave	0.2855	0.2956	0.2000	10.4	10.0	3.5	30.0
1,2-Dichloropropane	Ave	0.2627	0.2648	0.1000	10.1	10.0	0.8	30.0
Dibromomethane	Ave	0.1215	0.1262		10.4	10.0	3.9	30.0
Dichlorobromomethane	Qua1		0.3238	0.2000	9.75	10.0	-2.5	30.0
2-Chloroethyl vinyl ether	Qua1		0.1079		10.5	10.0	4.7	30.0
cis-1,3-Dichloropropene	Lin1		0.4620	0.2000	10.9	10.0	8.6	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.0510*	0.0600	51.6	50.0	3.1	30.0
Toluene	Ave	1.595	1.492	0.4000	9.36	10.0	-6.4	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Lin1		0.3296	0.1000	9.63	10.0	-3.7	30.0
1,1,2-Trichloroethane	Ave	0.1860	0.1850	0.1000	9.94	10.0	-0.6	30.0
Tetrachloroethene	Ave	0.3061	0.3185	0.2000	10.4	10.0	4.0	30.0
1,3-Dichloropropane	Ave	0.3336	0.3385		10.1	10.0	1.5	30.0
2-Hexanone	Lin1		0.0468*	0.0600	53.3	50.0	6.6	30.0
Chlorodibromomethane	Qua1		0.2368	0.1000	10.1	10.0	0.6	30.0
Ethylene Dibromide	Ave	0.1742	0.1785	0.1000	10.2	10.0	2.5	30.0
Chlorobenzene	Ave	0.9832	0.9480	0.5000	9.64	10.0	-3.6	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3159	0.3461		11.0	10.0	9.6	30.0
Ethylbenzene	Ave	1.623	1.693	0.1000	10.4	10.0	4.3	30.0
m-Xylene & p-Xylene	Ave	1.179	1.308	0.1000	11.1	10.0	10.9	30.0
o-Xylene	Lin1		1.390	0.3000	10.1	10.0	1.1	30.0
Styrene	Qua1		0.9611	0.3000	10.3	10.0	2.7	30.0
Bromoform	Qua1		0.1148	0.1000	10.4	10.0	3.5	30.0
Isopropylbenzene	Lin1		1.721	0.1000	10.4	10.0	4.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.3972	0.3913	0.3000	9.85	10.0	-1.5	30.0
Bromobenzene	Ave	0.7071	0.7263		10.3	10.0	2.7	30.0
trans-1,4-Dichloro-2-butene	Qua1		0.0999		10.2	10.0	1.6	30.0
1,2,3-Trichloropropane	Ave	0.1168	0.1158		9.91	10.0	-0.9	30.0
N-Propylbenzene	Ave	3.614	3.905		10.8	10.0	8.1	30.0
2-Chlorotoluene	Ave	0.7452	0.7904		10.6	10.0	6.1	30.0
1,3,5-Trimethylbenzene	Lin2		2.881		10.7	10.0	6.6	30.0
4-Chlorotoluene	Ave	0.7399	0.7951		10.7	10.0	7.5	30.0
tert-Butylbenzene	Qua1		2.483		9.76	10.0	-2.4	30.0
sec-Butylbenzene	Lin1		3.691		10.3	10.0	3.0	30.0
1,3-Dichlorobenzene	Ave	1.532	1.563	0.6000	10.2	10.0	2.0	30.0
4-Isopropyltoluene	Qua1		3.253		10.3	10.0	2.8	30.0
1,4-Dichlorobenzene	Ave	1.589	1.537	0.5000	9.68	10.0	-3.2	30.0
1,2,4-Trimethylbenzene	Ave	2.755	2.969		10.8	10.0	7.8	30.0
n-Butylbenzene	Lin1		0.8120		10.7	10.0	6.6	30.0
1,2-Dichlorobenzene	Ave	1.368	1.337	0.4000	9.77	10.0	-2.3	30.0
1,2-Dibromo-3-Chloropropane	Qua2		0.0604	0.0500	10.8	10.0	8.0	30.0
1,3,5-Trichlorobenzene	Ave	1.274	1.335		10.5	10.0	4.8	30.0
1,2,4-Trichlorobenzene	Ave	0.9356	1.027	0.2000	11.0	10.0	9.8	30.0
Hexachlorobutadiene	Ave	0.6389	0.6655		10.4	10.0	4.2	30.0
Naphthalene	Lin1		1.331		10.6	10.0	6.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7472	0.8259		11.1	10.0	10.5	30.0
Dibromofluoromethane (Surr)	Ave	0.2571	0.2609		9.89	9.75	1.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2499	0.2404		9.38	9.75	-3.8	30.0
Trifluorotoluene (Surr)	Ave	1.275	1.258		9.87	10.0	-1.3	30.0
Toluene-d8 (Surr)	Ave	1.276	1.255		9.60	9.75	-1.6	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 580-318234/14 Calibration Date: 12/04/2019 21:35

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12041915b.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Bromofluorobenzene (Surr)	Ave	0.3782	0.3916		10.1	9.75	3.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVIS 580-318472/3 Calibration Date: 12/09/2019 10:28

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12091903.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2651	0.2151	0.1000	8.11	10.0	-18.9	20.0
Chloromethane	Qua2		0.3059	0.1000	9.37	10.0	-6.3	20.0
Vinyl chloride	Qua2		0.3042	0.1000	10.1	10.0	0.8	20.0
Bromomethane	Ave	0.2299	0.2451	0.1000	10.7	10.0	6.6	20.0
Chloroethane	Lin2		0.0658	0.0600	10.8	10.0	8.4	20.0
Trichlorofluoromethane	Ave	0.4882	0.4505	0.1000	9.23	10.0	-7.7	20.0
Acrolein	Lin2		0.0189		60.4	60.0	0.7	20.0
1,1-Dichloroethene	Ave	0.2286	0.2182	0.1000	9.55	10.0	-4.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2100	0.1932	0.1000	9.20	10.0	-8.0	20.0
Acetone	Lin2		0.0335	0.0200	41.6	50.0	-16.8	20.0
Iodomethane	Ave	0.3987	0.3831		9.61	10.0	-3.9	20.0
Carbon disulfide	Ave	0.7205	0.7377	0.1000	10.2	10.0	2.4	20.0
Methylene Chloride	Lin2		0.2586	0.1000	9.90	10.0	-1.0	20.0
2-Methyl-2-propanol	Ave	0.0061	0.0055		89.9	100	-10.1	20.0
Acrylonitrile	Ave	0.0400	0.0400		100	100	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2845	0.2791	0.1000	9.81	10.0	-1.9	20.0
Methyl tert-butyl ether	Ave	0.3654	0.3697	0.1000	10.1	10.0	1.2	20.0
Hexane	Lin1		0.3454		9.09	10.0	-9.1	20.0
1,1-Dichloroethane	Ave	0.5012	0.4965	0.2000	9.91	10.0	-0.9	20.0
Vinyl acetate	Qua2		0.0265		25.1	25.0	0.4	20.0
Tert-butyl ethyl ether	Qua2		0.2174		12.2	12.5	-2.1	20.0
2,2-Dichloropropane	Lin1		0.3517		10.1	10.0	0.9	20.0
cis-1,2-Dichloroethene	Ave	0.2923	0.2991	0.1000	10.2	10.0	2.3	20.0
2-Butanone (MEK)	Qua1		0.0115*	0.0200	47.1	50.0	-5.9	20.0
Chlorobromomethane	Ave	0.1546	0.1553		10.0	10.0	0.5	20.0
Chloroform	Ave	0.5085	0.5150	0.2000	10.1	10.0	1.3	20.0
1,1,1-Trichloroethane	Ave	0.4278	0.4334	0.1000	10.1	10.0	1.3	20.0
Carbon tetrachloride	Ave	0.3919	0.3930	0.1000	10.0	10.0	0.3	20.0
1,1-Dichloropropene	Lin1		0.3909		9.99	10.0	-0.1	20.0
Benzene	Ave	1.108	1.117	0.5000	10.1	10.0	0.9	20.0
1,2-Dichloroethane	Ave	0.3199	0.3010	0.1000	9.41	10.0	-5.9	20.0
Tert-amyl methyl ether	Lin1		0.4464		11.7	12.5	-6.7	20.0
Trichloroethene	Ave	0.2855	0.2842	0.2000	9.95	10.0	-0.5	20.0
1,2-Dichloropropane	Ave	0.2627	0.2570	0.1000	9.78	10.0	-2.2	20.0
Dibromomethane	Ave	0.1215	0.1219		10.0	10.0	0.3	20.0
Dichlorobromomethane	Qua1		0.3102	0.2000	9.33	10.0	-6.7	20.0
2-Chloroethyl vinyl ether	Qua1		0.0911		8.88	10.0	-11.2	20.0
cis-1,3-Dichloropropene	Lin1		0.4580	0.2000	10.8	10.0	7.7	20.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.0507*	0.0600	51.3	50.0	2.6	20.0
Toluene	Ave	1.595	1.529	0.4000	9.59	10.0	-4.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVIS 580-318472/3 Calibration Date: 12/09/2019 10:28

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12091903.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Lin1		0.3306	0.1000	9.66	10.0	-3.4	20.0
1,1,2-Trichloroethane	Ave	0.1860	0.1850	0.1000	9.95	10.0	-0.5	20.0
Tetrachloroethene	Ave	0.3061	0.3114	0.2000	10.2	10.0	1.7	20.0
1,3-Dichloropropane	Ave	0.3336	0.3333		9.99	10.0	-0.1	20.0
2-Hexanone	Lin1		0.0415*	0.0600	47.3	50.0	-5.5	20.0
Chlorodibromomethane	Qua1		0.2273	0.1000	9.66	10.0	-3.4	20.0
Ethylene Dibromide	Ave	0.1742	0.1730	0.1000	9.93	10.0	-0.7	20.0
Chlorobenzene	Ave	0.9832	0.9503	0.5000	9.67	10.0	-3.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3159	0.3640		11.5	10.0	15.2	20.0
Ethylbenzene	Ave	1.623	1.736	0.1000	10.7	10.0	7.0	20.0
m-Xylene & p-Xylene	Ave	1.179	1.317	0.1000	11.2	10.0	11.7	20.0
o-Xylene	Lin1		1.439	0.3000	10.5	10.0	4.7	20.0
Styrene	Qua1		0.9381	0.3000	10.0	10.0	0.2	20.0
Bromoform	Qua1		0.1074	0.1000	9.71	10.0	-2.9	20.0
Isopropylbenzene	Lin1		1.772	0.1000	10.7	10.0	7.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.3972	0.3954	0.3000	9.95	10.0	-0.5	20.0
Bromobenzene	Ave	0.7071	0.6832		9.66	10.0	-3.4	20.0
trans-1,4-Dichloro-2-butene	Qua1		0.0978		9.95	10.0	-0.5	20.0
1,2,3-Trichloropropane	Ave	0.1168	0.1142		9.78	10.0	-2.2	20.0
N-Propylbenzene	Ave	3.614	3.933		10.9	10.0	8.8	20.0
2-Chlorotoluene	Ave	0.7452	0.7735		10.4	10.0	3.8	20.0
1,3,5-Trimethylbenzene	Lin2		2.917		10.8	10.0	7.9	20.0
4-Chlorotoluene	Ave	0.7399	0.7704		10.4	10.0	4.1	20.0
tert-Butylbenzene	Qua1		2.516		9.90	10.0	-1.0	20.0
sec-Butylbenzene	Lin1		3.729		10.4	10.0	4.1	20.0
1,3-Dichlorobenzene	Ave	1.532	1.582	0.6000	10.3	10.0	3.2	20.0
4-Isopropyltoluene	Qua1		3.304		10.4	10.0	4.4	20.0
1,4-Dichlorobenzene	Ave	1.589	1.556	0.5000	9.79	10.0	-2.1	20.0
1,2,4-Trimethylbenzene	Ave	2.755	3.004		10.9	10.0	9.0	20.0
n-Butylbenzene	Lin1		0.8086		10.6	10.0	6.2	20.0
1,2-Dichlorobenzene	Ave	1.368	1.397	0.4000	10.2	10.0	2.2	20.0
1,2-Dibromo-3-Chloropropane	Qua2		0.0567	0.0500	10.2	10.0	1.7	20.0
1,3,5-Trichlorobenzene	Ave	1.274	1.342		10.5	10.0	5.4	20.0
1,2,4-Trichlorobenzene	Ave	0.9356	0.998	0.2000	10.7	10.0	6.6	20.0
Hexachlorobutadiene	Ave	0.6389	0.6547		10.2	10.0	2.5	20.0
Naphthalene	Lin1		1.304		10.4	10.0	4.2	20.0
1,2,3-Trichlorobenzene	Ave	0.7472	0.8125		10.9	10.0	8.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2571	0.2566		9.73	9.75	-0.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2499	0.2483		9.69	9.75	-0.7	20.0
Trifluorotoluene (Surr)	Ave	1.275	1.223		9.59	10.0	-4.1	20.0
Toluene-d8 (Surr)	Ave	1.276	1.309		10.0	9.75	2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVIS 580-318472/3 Calibration Date: 12/09/2019 10:28

Instrument ID: TAC113 Calib Start Date: 12/04/2019 16:17

GC Column: DB-VRX ID: 0.25(mm) Calib End Date: 12/04/2019 20:42

Lab File ID: 12091903.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Bromofluorobenzene (Surr)	Ave	0.3782	0.3839		9.90	9.75	1.5	20.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318472/7

Matrix: Water Lab File ID: 12091907.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 12:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.30	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
563-58-6	1,1-Dichloropropene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		0.50	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		0.30	
95-63-6	1,2,4-Trimethylbenzene	ND		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	
95-50-1	1,2-Dichlorobenzene	ND		0.30	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.50	
541-73-1	1,3-Dichlorobenzene	ND		0.30	
142-28-9	1,3-Dichloropropane	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.30	
594-20-7	2,2-Dichloropropane	ND		0.50	
95-49-8	2-Chlorotoluene	ND		0.50	
106-43-4	4-Chlorotoluene	ND		0.30	
99-87-6	4-Isopropyltoluene	ND		0.30	
71-43-2	Benzene	ND		0.20	
108-86-1	Bromobenzene	ND		0.20	
75-25-2	Bromoform	ND		0.50	
74-83-9	Bromomethane	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
74-97-5	Chlorobromomethane	ND		0.20	
124-48-1	Chlorodibromomethane	ND		0.20	
75-00-3	Chloroethane	ND		0.50	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-318472/7

Matrix: Water Lab File ID: 12091907.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 12:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	ND		0.20	
75-27-4	Dichlorobromomethane	ND		0.20	
75-71-8	Dichlorodifluoromethane	ND		0.40	
100-41-4	Ethylbenzene	ND		0.20	
106-93-4	Ethylene Dibromide	ND		0.10	
87-68-3	Hexachlorobutadiene	ND		0.50	
98-82-8	Isopropylbenzene	ND		1.0	
1634-04-4	Methyl tert-butyl ether	ND		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	ND		0.50	
91-20-3	Naphthalene	ND		1.0	
104-51-8	n-Butylbenzene	ND		0.50	
103-65-1	N-Propylbenzene	ND		0.30	
95-47-6	o-Xylene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		1.0	
100-42-5	Styrene	ND		0.50	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.50	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.50	
75-01-4	Vinyl chloride	ND		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	105		80-120
98-08-8	Trifluorotoluene (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318472/4

Matrix: Water Lab File ID: 12091904.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 10:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.48		0.30	
71-55-6	1,1,1-Trichloroethane	4.99		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.96		0.20	
79-00-5	1,1,2-Trichloroethane	4.96		0.20	
75-34-3	1,1-Dichloroethane	5.02		0.20	
75-35-4	1,1-Dichloroethene	4.85		0.20	
563-58-6	1,1-Dichloropropene	4.95		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.28		0.50	
96-18-4	1,2,3-Trichloropropane	4.88		0.20	
120-82-1	1,2,4-Trichlorobenzene	5.04		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.22		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.83		2.0	
95-50-1	1,2-Dichlorobenzene	5.03		0.30	
107-06-2	1,2-Dichloroethane	4.74		0.20	
78-87-5	1,2-Dichloropropane	4.85		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.12		0.50	
541-73-1	1,3-Dichlorobenzene	4.99		0.30	
142-28-9	1,3-Dichloropropane	5.00		0.20	
106-46-7	1,4-Dichlorobenzene	4.76		0.30	
594-20-7	2,2-Dichloropropane	4.78		0.50	
95-49-8	2-Chlorotoluene	5.02		0.50	
106-43-4	4-Chlorotoluene	5.06		0.30	
99-87-6	4-Isopropyltoluene	4.96		0.30	
71-43-2	Benzene	5.02		0.20	
108-86-1	Bromobenzene	4.71		0.20	
75-25-2	Bromoform	4.62		0.50	
74-83-9	Bromomethane	5.35		0.50	
56-23-5	Carbon tetrachloride	4.91		0.20	
108-90-7	Chlorobenzene	4.80		0.20	
74-97-5	Chlorobromomethane	5.00		0.20	
124-48-1	Chlorodibromomethane	4.60		0.20	
75-00-3	Chloroethane	5.23		0.50	
67-66-3	Chloroform	5.07		0.20	
74-87-3	Chloromethane	4.57		0.50	
156-59-2	cis-1,2-Dichloroethene	5.07		0.20	
10061-01-5	cis-1,3-Dichloropropene	5.13		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-318472/4

Matrix: Water Lab File ID: 12091904.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 10:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.92		0.20	
75-27-4	Dichlorobromomethane	4.46		0.20	
75-71-8	Dichlorodifluoromethane	4.61		0.40	
100-41-4	Ethylbenzene	5.15		0.20	
106-93-4	Ethylene Dibromide	4.97		0.10	
87-68-3	Hexachlorobutadiene	4.86		0.50	
98-82-8	Isopropylbenzene	5.08		1.0	
1634-04-4	Methyl tert-butyl ether	5.13		0.30	
75-09-2	Methylene Chloride	5.09		5.0	
179601-23-1	m-Xylene & p-Xylene	5.37		0.50	
91-20-3	Naphthalene	4.94		1.0	
104-51-8	n-Butylbenzene	5.01		0.50	
103-65-1	N-Propylbenzene	5.27		0.30	
95-47-6	o-Xylene	5.01		0.50	
135-98-8	sec-Butylbenzene	4.97		1.0	
100-42-5	Styrene	4.72		0.50	
98-06-6	tert-Butylbenzene	4.52		0.50	
127-18-4	Tetrachloroethene	5.06		0.50	
108-88-3	Toluene	4.77		0.20	
156-60-5	trans-1,2-Dichloroethene	4.90		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.59		0.20	
79-01-6	Trichloroethene	4.85		0.20	
75-69-4	Trichlorofluoromethane	4.78		0.50	
75-01-4	Vinyl chloride	5.09		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	97		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318472/5

Matrix: Water Lab File ID: 12091905.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 11:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.41		0.30	
71-55-6	1,1,1-Trichloroethane	4.90		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.90		0.20	
79-00-5	1,1,2-Trichloroethane	5.08		0.20	
75-34-3	1,1-Dichloroethane	4.93		0.20	
75-35-4	1,1-Dichloroethene	4.80		0.20	
563-58-6	1,1-Dichloropropene	4.90		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.11		0.50	
96-18-4	1,2,3-Trichloropropane	4.95		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.89		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.00		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.89		2.0	
95-50-1	1,2-Dichlorobenzene	4.88		0.30	
107-06-2	1,2-Dichloroethane	4.75		0.20	
78-87-5	1,2-Dichloropropane	4.85		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.90		0.50	
541-73-1	1,3-Dichlorobenzene	4.81		0.30	
142-28-9	1,3-Dichloropropane	5.09		0.20	
106-46-7	1,4-Dichlorobenzene	4.60		0.30	
594-20-7	2,2-Dichloropropane	4.61		0.50	
95-49-8	2-Chlorotoluene	4.85		0.50	
106-43-4	4-Chlorotoluene	4.91		0.30	
99-87-6	4-Isopropyltoluene	4.74		0.30	
71-43-2	Benzene	4.99		0.20	
108-86-1	Bromobenzene	4.65		0.20	
75-25-2	Bromoform	4.67		0.50	
74-83-9	Bromomethane	5.15		0.50	
56-23-5	Carbon tetrachloride	4.82		0.20	
108-90-7	Chlorobenzene	4.77		0.20	
74-97-5	Chlorobromomethane	4.99		0.20	
124-48-1	Chlorodibromomethane	4.62		0.20	
75-00-3	Chloroethane	5.10		0.50	
67-66-3	Chloroform	5.01		0.20	
74-87-3	Chloromethane	4.35		0.50	
156-59-2	cis-1,2-Dichloroethene	4.99		0.20	
10061-01-5	cis-1,3-Dichloropropene	5.16		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-318472/5

Matrix: Water Lab File ID: 12091905.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 12/09/2019 11:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-VRX ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 318472 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	5.04		0.20	
75-27-4	Dichlorobromomethane	4.46		0.20	
75-71-8	Dichlorodifluoromethane	4.39		0.40	
100-41-4	Ethylbenzene	5.12		0.20	
106-93-4	Ethylene Dibromide	5.07		0.10	
87-68-3	Hexachlorobutadiene	4.64		0.50	
98-82-8	Isopropylbenzene	5.01		1.0	
1634-04-4	Methyl tert-butyl ether	5.19		0.30	
75-09-2	Methylene Chloride	5.06		5.0	
179601-23-1	m-Xylene & p-Xylene	5.35		0.50	
91-20-3	Naphthalene	4.85		1.0	
104-51-8	n-Butylbenzene	4.82		0.50	
103-65-1	N-Propylbenzene	5.05		0.30	
95-47-6	o-Xylene	4.93		0.50	
135-98-8	sec-Butylbenzene	4.77		1.0	
100-42-5	Styrene	4.67		0.50	
98-06-6	tert-Butylbenzene	4.36		0.50	
127-18-4	Tetrachloroethene	4.98		0.50	
108-88-3	Toluene	4.76		0.20	
156-60-5	trans-1,2-Dichloroethene	4.80		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.67		0.20	
79-01-6	Trichloroethene	4.87		0.20	
75-69-4	Trichlorofluoromethane	4.65		0.50	
75-01-4	Vinyl chloride	4.88		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	94		80-120

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Start Date: 12/04/2019 15:51

Analysis Batch Number: 318234 End Date: 12/04/2019 21:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-318234/2		12/04/2019 15:51	1	12041902b.D	DB-VRX 0.25(mm)
STD 580-318234/3 IC		12/04/2019 16:17	1	12041903b.D	DB-VRX 0.25(mm)
STD 580-318234/4 IC		12/04/2019 16:43	1	12041904b.D	DB-VRX 0.25(mm)
STD 580-318234/5 IC		12/04/2019 17:10	1	12041905b.D	DB-VRX 0.25(mm)
STD 580-318234/6 IC		12/04/2019 17:36	1	12041906b.D	DB-VRX 0.25(mm)
STD 580-318234/7 IC		12/04/2019 18:03	1	12041907b.D	DB-VRX 0.25(mm)
STD 580-318234/8 IC		12/04/2019 18:30	1	12041908b.D	DB-VRX 0.25(mm)
STD 580-318234/9 IC		12/04/2019 18:56	1	12041909b.D	DB-VRX 0.25(mm)
ICIS 580-318234/10		12/04/2019 19:23	1	12041910b.D	DB-VRX 0.25(mm)
STD 580-318234/11 IC		12/04/2019 19:49	1	12041911b.D	DB-VRX 0.25(mm)
STD 580-318234/12 IC		12/04/2019 20:16	1	12041912b.D	DB-VRX 0.25(mm)
STD 580-318234/15 IC		12/04/2019 20:42	1	12041913b.D	DB-VRX 0.25(mm)
ICV 580-318234/14		12/04/2019 21:35	1	12041915b.D	DB-VRX 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Instrument ID: TAC113 Start Date: 12/09/2019 10:01

Analysis Batch Number: 318472 End Date: 12/09/2019 18:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-318472/2		12/09/2019 10:01	1	12091902.D	DB-VRX 0.25(mm)
CCVIS 580-318472/3		12/09/2019 10:28	1	12091903.D	DB-VRX 0.25(mm)
LCS 580-318472/4		12/09/2019 10:54	1	12091904.D	DB-VRX 0.25(mm)
LCSD 580-318472/5		12/09/2019 11:21	1	12091905.D	DB-VRX 0.25(mm)
CCVL 580-318472/6		12/09/2019 11:47	1		DB-VRX 0.25(mm)
MB 580-318472/7		12/09/2019 12:14	1	12091907.D	DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 12:40	1		DB-VRX 0.25(mm)
580-91241-5		12/09/2019 13:07	1	12091909.D	DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 13:33	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 14:00	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 14:26	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 14:53	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 15:19	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 15:46	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 16:12	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 16:39	1		DB-VRX 0.25(mm)
ZZZZZ		12/09/2019 17:05	1		DB-VRX 0.25(mm)
580-91241-1		12/09/2019 17:31	1	12091919.D	DB-VRX 0.25(mm)
580-91241-2		12/09/2019 17:58	1	12091920.D	DB-VRX 0.25(mm)
580-91241-3		12/09/2019 18:24	1	12091921.D	DB-VRX 0.25(mm)
580-91241-4		12/09/2019 18:51	1	12091922.D	DB-VRX 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Batch Number: 318234 Batch Start Date: 12/04/19 15:51 Batch Analyst: Overman, Derek S

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS/TFT 00011	VOAMasterMix 00046	VOAMasterSEC 00039	
BFB 580-318234/2		8260C		10 mL	10 mL	2 uL			
STD 580-318234/3 IC		8260C		10 mL	10 mL	2 uL	0.02 uL		
STD 580-318234/4 IC		8260C		10 mL	10 mL	2 uL	0.05 uL		
STD 580-318234/5 IC		8260C		10 mL	10 mL	2 uL	0.1 uL		
STD 580-318234/6 IC		8260C		10 mL	10 mL	2 uL	0.2 uL		
STD 580-318234/7 IC		8260C		10 mL	10 mL	2 uL	0.5 uL		
STD 580-318234/8 IC		8260C		10 mL	10 mL	2 uL	1 uL		
STD 580-318234/9 IC		8260C		10 mL	10 mL	2 uL	5 uL		
ICIS 580-318234/10		8260C		10 mL	10 mL	2 uL	10 uL		
STD 580-318234/11 IC		8260C		10 mL	10 mL	2 uL	20 uL		
STD 580-318234/12 IC		8260C		10 mL	10 mL	2 uL	50 uL		
ICV 580-318234/14		8260C		10 mL	10 mL	2 uL		10 uL	
STD 580-318234/15 IC		8260C		10 mL	10 mL	2 uL	100 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-91241-1

SDG No.:

Batch Number: 318472 Batch Start Date: 12/09/19 10:01 Batch Analyst: Limwiroj, Thanyawan 1

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00011	VOAMasterMix 00046	
BFB 580-318472/2		8260C		10 mL	10 mL		2 uL		
CCVIS 580-318472/3		8260C		10 mL	10 mL		2 uL	10 uL	
LCS 580-318472/4		8260C		10 mL	10 mL		2 uL	5 uL	
LCSD 580-318472/5		8260C		10 mL	10 mL		2 uL	5 uL	
MB 580-318472/7		8260C		10 mL	10 mL		2 uL		
580-91241-C-5	TB120519	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-91241-F-1	04Q19L4MW01AW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-91241-F-2	04Q19L4MW01BW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-91241-D-3	04Q19L4MW02AW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-91241-F-4	04Q19L4MW02BW	8260C	T	10 mL	10 mL	<2 SU	2 uL		

Batch Notes	
Vial Lot Number	0217701E

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8330B

Nitroaromatics and Nitramines (HPLC) by Method 8330B

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Synergi C18 ID: 4.6 (mm) GC Column (2): Zorbax CN 4.6 (mm)

Client Sample ID	Lab Sample ID	DNT1 #	DNT2 #
04Q19L4MW01AW	580-91241-1	84	
04Q19L4MW01BW	580-91241-2	85	
04Q19L4MW02AW	580-91241-3	84	
04Q19L4MW02AW	580-91241-3		106
04Q19L4MW02BW	580-91241-4	87	
04Q19L4MW02BW	580-91241-4		115 X
04Q19L4MW02BW DL	580-91241-4 DL	90	
04Q19L4MW02BW DL	580-91241-4 DL		104
	MB 320-344664/1-A	86	
	LCS 320-344664/2-A	88	
	LCSD 320-344664/3-A	83	

	QC LIMITS
DNT = 3,4-Dinitrotoluene	79-111

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: W0000011.D

Lab ID: LCS 320-344664/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.927	93	74-120	
1,3-Dinitrobenzene	1.00	0.966	97	72-123	
2,4,6-Trinitrotoluene	1.00	0.826	83	69-111	
2,4-Dinitrotoluene	1.00	0.923	92	70-119	
2,6-Dinitrotoluene	1.00	0.908	91	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.08	108	77-123	
2-Nitrotoluene	1.00	0.885	89	64-120	
3-Nitrotoluene	1.00	0.895	89	67-114	
4-Nitrotoluene	1.00	0.903	90	67-115	
4-Amino-2,6-dinitrotoluene	1.00	0.879	88	68-113	
HMX	1.00	1.04	104	67-115	
RDX	1.00	1.03	103	68-122	
Nitrobenzene	1.00	0.962	96	69-119	
Tetryl	1.00	0.931	93	66-105	
Nitroglycerin	5.00	4.54	91	85-115	
PETN	5.00	4.48	90	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: W0000012.D

Lab ID: LCSD 320-344664/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.925	93	0	29	74-120	
1,3-Dinitrobenzene	1.00	0.966	97	0	29	72-123	
2,4,6-Trinitrotoluene	1.00	0.825	83	0	28	69-111	
2,4-Dinitrotoluene	1.00	0.926	93	0	30	70-119	
2,6-Dinitrotoluene	1.00	0.912	91	0	29	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.05	105	3	27	77-123	
2-Nitrotoluene	1.00	0.873	87	1	36	64-120	
3-Nitrotoluene	1.00	0.903	90	1	31	67-114	
4-Nitrotoluene	1.00	0.917	92	2	32	67-115	
4-Amino-2,6-dinitrotoluene	1.00	0.890	89	1	30	68-113	
HMX	1.00	1.04	104	1	32	67-115	
RDX	1.00	1.03	103	0	32	68-122	
Nitrobenzene	1.00	0.964	96	0	31	69-119	
Tetryl	1.00	0.955	95	2	26	66-105	
Nitroglycerin	5.00	4.49	90	1	15	85-115	
PETN	5.00	4.44	89	1	15	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: MB 320-344664/1-A

Matrix: Water Date Extracted: 12/11/2019 09:04

Lab File ID:(1) W0000010.D Lab File ID:(2)

Date Analyzed:(1) 12/23/2019 23:46 Date Analyzed:(2)

Instrument ID:(1) LC11 Instrument ID:(2) LC9

GC Column:(1) Synergi C18 ID: 4.6(mm) GC Column:(2) Zorbax CN ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 320-344664/2-A	12/24/2019 00:39	
	LCSD 320-344664/3-A	12/24/2019 01:33	
04Q19L4MW01AW	580-91241-1	12/24/2019 05:07	
04Q19L4MW01BW	580-91241-2	12/24/2019 06:01	
04Q19L4MW02AW	580-91241-3	12/24/2019 06:55	12/14/2019 11:20
04Q19L4MW02BW	580-91241-4	12/24/2019 07:48	12/14/2019 12:27
04Q19L4MW02BW DL	580-91241-4 DL	12/24/2019 08:42	12/24/2019 08:20

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Sample No.: CCVRT 320-347379/3 Date Analyzed: 12/23/2019 21:59

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): W0000008.D Heated Purge: (Y/N) N

Calibration ID: 48472

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				29.24		
UPPER LIMIT				29.49		
LOWER LIMIT				28.99		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-347379/3		12/23/2019 21:59	W0000008.D	29.24		
MB 320-344664/1-A		12/23/2019 23:46	W0000010.D	29.21		
LCS 320-344664/2-A		12/24/2019 00:39	W0000011.D	29.24		
LCSD 320-344664/3-A		12/24/2019 01:33	W0000012.D	29.25		
580-91241-1	04Q19L4MW01AW	12/24/2019 05:07	W0000016.D	29.24		
580-91241-2	04Q19L4MW01BW	12/24/2019 06:01	W0000017.D	29.23		
580-91241-3	04Q19L4MW02AW	12/24/2019 06:55	W0000018.D	29.23		
580-91241-4	04Q19L4MW02BW	12/24/2019 07:48	W0000019.D	29.22		
580-91241-4 DL	04Q19L4MW02BW DL	12/24/2019 08:42	W0000020.D	29.24		
CCV 320-347379/57		12/24/2019 13:10	W0000025.D	29.22		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330B

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Sample No.: CCVRT 320-345107/3 Date Analyzed: 12/12/2019 20:24

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): L000003.D Heated Purge: (Y/N) N

Calibration ID: 48011

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				34.88		
UPPER LIMIT				35.13		
LOWER LIMIT				34.63		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-345107/3		12/12/2019 20:24	L000003.D	34.88		
CCV 320-345107/37		12/14/2019 10:13	L000037.D	34.94		
580-91241-3	04Q19L4MW02AW	12/14/2019 11:20	L000038.D	34.90		
580-91241-4	04Q19L4MW02BW	12/14/2019 12:27	L000039.D	34.88		
CCV 320-345107/46		12/14/2019 20:14	L000046.D	34.77		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330B

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Sample No.: CCVRT 320-347504/1 Date Analyzed: 12/24/2019 06:06

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): W000013.D Heated Purge: (Y/N) N

Calibration ID: 48557

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				34.92		
UPPER LIMIT				35.17		
LOWER LIMIT				34.67		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-347504/1		12/24/2019 06:06	W000013.D	34.92		
580-91241-4 DL	04Q19L4MW02BW DL	12/24/2019 08:20	W000015.D	34.96		
CCV 320-347504/4		12/24/2019 09:26	W000016.D	34.91		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330B

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Instrument ID (1): LC11 Instrument ID (2): LC9

Date Analyzed (1): 12/24/2019 06:55 Date Analyzed (2): 12/14/2019 11:20

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Zorbax CN ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		17.60	17.37	17.87	3.2		3.7
	2		38.82	38.28	39.40	3.1		
RDX	1		20.38	20.12	20.62	6.8		0.9
	2		28.51	27.75	29.29	6.7		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Instrument ID (1): LC11 Instrument ID (2): LC9

Date Analyzed (1): 12/24/2019 07:48 Date Analyzed (2): 12/14/2019 12:27

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Zorbax CN ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		17.60	17.37	17.87	6.7		2.0
	2		38.82	38.28	39.40	6.6		
RDX	1		20.37	20.12	20.62	30		0.8
	2		28.50	27.75	29.29	30		
2,4,6-Trinitrotoluene	1		27.84	27.60	28.10	0.18		26.8
	2		35.98	35.49	36.55	0.14		
2,4-Dinitrotoluene	1		31.24	30.92	31.54	0.36		12.2
	2		29.53	28.81	30.31	0.40		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW DL Lab Sample ID: 580-91241-4 DL

Instrument ID (1): LC11 Instrument ID (2): LC9

Date Analyzed (1): 12/24/2019 08:42 Date Analyzed (2): 12/24/2019 08:20

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Zorbax CN ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		17.59	17.37	17.87	7.9		21.1
	2		38.83	38.23	39.35	6.4		
RDX	1		20.40	20.12	20.62	36		15.7
	2		28.56	27.68	29.22	31		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01AW Lab Sample ID: 580-91241-1

Matrix: Water Lab File ID: W0000016.D

Analysis Method: 8330B Date Collected: 12/05/2019 12:50

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 941(mL) Date Analyzed: 12/24/2019 05:07

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	ND		0.11	
121-14-2	2,4-Dinitrotoluene	ND		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.21	
88-72-2	2-Nitrotoluene	ND		0.53	
99-08-1	3-Nitrotoluene	ND		0.53	
99-99-0	4-Nitrotoluene	ND		0.53	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	ND		0.11	
121-82-4	RDX	ND		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.69	
78-11-5	PETN	ND		0.69	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01BW Lab Sample ID: 580-91241-2

Matrix: Water Lab File ID: W0000017.D

Analysis Method: 8330B Date Collected: 12/05/2019 13:32

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 938.1(mL) Date Analyzed: 12/24/2019 06:01

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	ND		0.11	
121-14-2	2,4-Dinitrotoluene	ND		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.21	
88-72-2	2-Nitrotoluene	ND		0.53	
99-08-1	3-Nitrotoluene	ND		0.53	
99-99-0	4-Nitrotoluene	ND		0.53	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	ND		0.11	
121-82-4	RDX	ND		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.69	
78-11-5	PETN	ND		0.69	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	85		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Matrix: Water Lab File ID: L000038.D

Analysis Method: 8330B Date Collected: 12/05/2019 14:07

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 917.3(mL) Date Analyzed: 12/14/2019 11:20

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345107 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	106		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Matrix: Water Lab File ID: W0000018.D

Analysis Method: 8330B Date Collected: 12/05/2019 14:07

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 917.3(mL) Date Analyzed: 12/24/2019 06:55

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	ND		0.11	
121-14-2	2,4-Dinitrotoluene	ND		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.22	
88-72-2	2-Nitrotoluene	ND		0.55	
99-08-1	3-Nitrotoluene	ND		0.55	
99-99-0	4-Nitrotoluene	ND		0.55	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	3.2		0.11	
121-82-4	RDX	6.8		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.71	
78-11-5	PETN	ND		0.71	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Matrix: Water Lab File ID: L000039.D

Analysis Method: 8330B Date Collected: 12/05/2019 15:05

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 923.7(mL) Date Analyzed: 12/14/2019 12:27

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345107 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	115	X	79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Matrix: Water Lab File ID: W0000019.D

Analysis Method: 8330B Date Collected: 12/05/2019 15:05

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 923.7(mL) Date Analyzed: 12/24/2019 07:48

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.11	
99-65-0	1,3-Dinitrobenzene	ND		0.11	
118-96-7	2,4,6-Trinitrotoluene	0.18		0.11	
121-14-2	2,4-Dinitrotoluene	0.36		0.11	
606-20-2	2,6-Dinitrotoluene	ND		0.11	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.22	
88-72-2	2-Nitrotoluene	ND		0.54	
99-08-1	3-Nitrotoluene	ND		0.54	
99-99-0	4-Nitrotoluene	ND		0.54	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.11	
2691-41-0	HMX	6.7		0.11	
98-95-3	Nitrobenzene	ND		0.11	
479-45-8	Tetryl	ND		0.11	
55-63-0	Nitroglycerin	ND		0.70	
78-11-5	PETN	ND		0.70	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	87		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW DL Lab Sample ID: 580-91241-4 DL

Matrix: Water Lab File ID: W000015.D

Analysis Method: 8330B Date Collected: 12/05/2019 15:05

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 923.7(mL) Date Analyzed: 12/24/2019 08:20

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347504 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	104		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW DL Lab Sample ID: 580-91241-4 DL

Matrix: Water Lab File ID: W0000020.D

Analysis Method: 8330B Date Collected: 12/05/2019 15:05

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 923.7(mL) Date Analyzed: 12/24/2019 08:42

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	RDX	36		0.54	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
HMX	17.595	17.566	17.592	17.577	17.581	17.597	17.580				17.331 - 17.831	17.584
RDX	20.265	20.246	20.248	20.250	20.241	20.247	20.230				19.991 - 20.491	20.247
1,3,5-Trinitrobenzene	21.995	21.993	21.992	21.987	21.984	21.984	21.970				21.734 - 22.234	21.986
1,3-Dinitrobenzene	24.288	24.280	24.265	24.270	24.261	24.267	24.247				24.011 - 24.511	24.268
3,5-Dinitroaniline	25.215	25.193	25.192	25.197	25.181	25.194	25.173				24.931 - 25.431	25.192
Nitrobenzene	25.945	25.943	25.932	25.937	25.914	25.920	25.903				25.664 - 26.164	25.928
Tetryl	26.271	26.270	26.245	26.250	26.237	26.247	26.240				25.987 - 26.487	26.251
Nitroglycerin		26.916	26.922	26.910	26.894	26.904	26.900				26.644 - 27.144	26.908
2,4,6-Trinitrotoluene	27.505	27.490	27.488	27.497	27.474	27.484	+++++				27.224 - 27.724	27.490
4-Amino-2,6-dinitrotoluene	28.411	28.436	28.415	28.423	28.387	28.390	28.397				28.047 - 28.727	28.408
2-Amino-4,6-dinitrotoluene	29.048	29.050	29.028	29.053	29.007	29.010	29.017				28.627 - 29.387	29.030
2,6-Dinitrotoluene	30.405	30.413	30.385	30.410	30.367	30.364	30.387				30.067 - 30.667	30.390
2,4-Dinitrotoluene	30.805	30.810	30.792	30.813	30.767	30.770	30.790				30.457 - 31.077	30.792
2-Nitrotoluene	33.995	33.996	33.978	33.980	33.937	33.940	33.980				33.607 - 34.267	33.972
4-Nitrotoluene	35.338	35.316	35.338	35.353	35.301	35.307	35.350				34.941 - 35.661	35.329
3-Nitrotoluene	36.944	36.920	36.875	36.920	36.877	36.887	36.930				36.477 - 37.277	36.908
PETN	37.444	37.496	37.485	37.533	37.494	37.507	37.570				37.084 - 37.904	37.504
3,4-Dinitrotoluene	28.831	28.830	28.825	28.827	28.837	28.807	+++++				28.587 - 29.087	28.826

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
HMX	71.000 64.560	67.100 65.105	66.400 58.170	65.560	Ave		65.4135714				5.9		20.0			
RDX	79.800 79.530	80.800 79.630	80.500 71.512	80.000	Lin2	15.6911495	77.9570750							0.9980		0.9900
1,3,5-Trinitrobenzene	213.20 209.79	209.90 211.78	208.85 196.57	209.62	Lin2	35.2040066	206.584007							0.9990		0.9900
1,3-Dinitrobenzene	204.40 200.08	202.00 201.87	201.00 187.35	200.34	Lin2	40.6376708	197.329889							0.9990		0.9900
3,5-Dinitroaniline	149.00 145.62	143.60 146.94	144.70 136.01	145.50	Lin2	26.9889177	142.988898							0.9990		0.9900
Nitrobenzene	112.00 111.22	111.80 112.64	111.55 104.16	110.36	Lin2	14.9319617	109.706904							0.9990		0.9900
Tetryl	82.000 78.380	77.300 79.920	78.350 75.118	77.520	Lin2	19.0449344	77.3168015							0.9990		0.9900
Nitroglycerin	 91.960	92.000 92.915	90.600 85.922	90.980	Lin2	19.3314431	90.1270034							0.9990		0.9900
2,4,6-Trinitrotoluene	96.200 92.380	93.500 94.190	92.700 +++++	92.520	Ave		93.5816667				1.6		20.0			
4-Amino-2,6-dinitrotoluene	81.200 83.560	80.500 85.055	84.050 79.508	83.120	Lin2	-10.263799	82.9950129							0.9990		0.9900
2-Amino-4,6-dinitrotoluene	114.00 116.43	112.40 118.03	115.95 111.09	115.02	Lin2	-8.6970565	115.182680							0.9990		0.9900
2,6-Dinitrotoluene	76.400 71.180	73.800 72.405	72.900 67.682	71.100	Lin2	31.3303016	70.4774533							0.9990		0.9900
2,4-Dinitrotoluene	137.20 130.42	131.50 132.75	132.10 124.59	130.24	Lin2	38.5811483	129.124014							0.9990		0.9900
2-Nitrotoluene	1273.8 1187.9	1234.2 1205.9	1243.7 1147.0	1181.5	Lin2	496.648627	1183.09400							0.9990		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
4-Nitrotoluene	1635.2 1592.6	1587.7 1620.6	1539.1 1536.9	1549.7	Lin2	294.034611	1563.99766							0.9990		0.9900
3-Nitrotoluene	72.000 65.020	67.100 65.855	65.350 62.138	64.660	Lin2	38.7454320	63.8755025							1.0000		0.9900
PETN	62.800 54.110	57.700 54.155	46.250 52.304	53.880	Lin2	49.3694193	51.7275764							0.9930		0.9900
3,4-Dinitrotoluene	74.000 75.830	69.900 76.610	76.300 +++++	74.900	Lin2	-16.694424	75.6612255							0.9990		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-346162/4	O0000022.D
Level 2	STD2 320-346162/5	O0000023.D
Level 3	STD3 320-346162/6	O0000024.D
Level 4	STD4 320-346162/7	O0000025.D
Level 5	STD5 320-346162/8	O0000026.D
Level 6	STD6 320-346162/9	O0000027.D
Level 7	STD7 320-346162/13	O0000028.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
HMX	Ave	355 13021	671 29085	1328	3278	6456	5.00 200	10.0 500	20.0	50.0	100
RDX	Lin2	399 15926	808 35756	1610	4000	7953	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Lin2	1066 42356	2099 98286	4177	10481	20979	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Lin2	1022 40374	2020 93673	4020	10017	20008	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Lin2	745 29387	1436 68006	2894	7275	14562	5.00 200	10.0 500	20.0	50.0	100
Nitrobenzene	Lin2	560 22527	1118 52081	2231	5518	11122	5.00 200	10.0 500	20.0	50.0	100
Tetryl	Lin2	410 15984	773 37559	1567	3876	7838	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Lin2	 18583	920 42961	1812	4549	9196	 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	481 18838	935 +++++	1854	4626	9238	5.00 200	10.0 +++++	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Lin2	406 17011	805 39754	1681	4156	8356	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Lin2	570 23605	1124 55544	2319	5751	11643	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Lin2	382 14481	738 33841	1458	3555	7118	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Lin2	686 26549	1315 62297	2642	6512	13042	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Lin2	6369 241181	12342 573483	24873	59074	118786	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Lin2	8176 324119	15877 768470	30781	77486	159257	5.00 200	10.0 500	20.0	50.0	100

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 346162

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/17/2019 22:04 Calibration End Date: 12/18/2019 03:25 Calibration ID: 48472

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Nitrotoluene	Lin2	360 13171	671 31069	1307	3233	6502	5.00 200	10.0 500	20.0	50.0	100
PETN	Lin2	314 10831	577 26152	925	2694	5411	5.00 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Lin2	370 15322	699 +++++	1526	3745	7583	5.00 200	10.0 +++++	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 336275

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/05/2019 21:31 Calibration End Date: 11/06/2019 04:11 Calibration ID: 48011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-336275/4	E000004.D
Level 2	STD2 320-336275/5	E000005.D
Level 3	STD3 320-336275/6	E000006.D
Level 4	STD4 320-336275/7	E000007.D
Level 5	STD5 320-336275/8	E000008.D
Level 6	STD6 320-336275/9	E000009.D
Level 7	STD7 320-336275/10	E000010.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Nitrobenzene	20.217	20.214	20.213	20.225	20.226	20.211	20.184				19.776 - 20.676	20.213
Ethylene glycol dinitrate		20.524	20.513	20.498	20.553	20.454	20.544				20.263 - 20.843	20.514
1,3-Dinitrobenzene	22.600	22.581	22.603	22.615	22.613	22.611	22.587				22.183 - 23.043	22.601
1,3,5-Trinitrobenzene	24.594	24.604	24.590	24.595	24.613	24.621	24.594				24.243 - 24.983	24.602
2-Nitrotoluene	26.857	26.824	26.833	26.818	26.836	26.827	26.801				26.186 - 27.486	26.828
4-Nitrotoluene	26.857	26.824	26.833	26.818	26.836	26.827	26.801				26.186 - 27.486	26.828
3-Nitrotoluene	27.297	27.397	27.370	27.335	27.353	27.361	27.327				26.623 - 28.083	27.349
3,5-Dinitroaniline	28.250	28.304	28.267	28.281	28.296	28.301	28.274				27.586 - 29.006	28.282
RDX	28.930	28.964	28.987	28.988	29.000	29.001	28.971				28.230 - 29.770	28.977
2,4-Dinitrotoluene	30.020	30.051	30.030	30.031	30.046	30.047	30.027				29.296 - 30.796	30.036
2,6-Dinitrotoluene	30.940	30.894	30.943	30.905	30.926	30.937	30.917				30.186 - 31.666	30.923
2-Amino-4,6-dinitrotoluene	33.020	33.007	33.003	32.985	33.020	33.021	33.001				32.340 - 33.700	33.008
4-Amino-2,6-dinitrotoluene	33.480	33.504	33.507	33.515	33.546	33.547	33.521				32.876 - 34.216	33.517
2,4,6-Trinitrotoluene	36.640	36.627	36.610	36.621	36.620	36.621	36.604				36.090 - 37.150	36.620
HMX	39.273	39.284	39.270	39.268	39.273	39.277	39.270				38.713 - 39.833	39.274
Nitroglycerin		41.554	41.570	41.548	41.553	41.561	41.557				41.013 - 42.093	41.557
Tetryl	43.420	43.454	43.430	43.431	43.436	43.444	43.444				42.866 - 44.006	43.437
PETN		50.141	50.153	50.148	50.156	50.164	50.157				49.666 - 50.646	50.153
3,4-Dinitrotoluene	35.517	35.561	35.487	35.515	35.516	35.527	35.511				34.886 - 36.146	35.519

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 336275

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/05/2019 21:31 Calibration End Date: 11/06/2019 04:11 Calibration ID: 48011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-336275/4	E000004.D
Level 2	STD2 320-336275/5	E000005.D
Level 3	STD3 320-336275/6	E000006.D
Level 4	STD4 320-336275/7	E000007.D
Level 5	STD5 320-336275/8	E000008.D
Level 6	STD6 320-336275/9	E000009.D
Level 7	STD7 320-336275/10	E000010.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Nitrobenzene	53.800 46.890	50.000 46.455	47.550 42.626	46.640	Ave		47.7087143				7.2		20.0			
Ethylene glycol dinitrate	 68.730	82.800 73.625	76.400 64.768	71.480	Ave		72.9671667				8.6		20.0			
1,3-Dinitrobenzene	102.20 97.610	100.10 97.060	97.750 90.574	98.020	Ave		97.6162857				3.7		20.0			
1,3,5-Trinitrobenzene	85.200 78.130	81.100 78.410	79.600 74.248	78.600	Ave		79.3268571				4.2		20.0			
2-Nitrotoluene	59.000 55.470	58.700 55.870	58.900 51.908	55.800	Ave		56.5211429				4.6		20.0			
4-Nitrotoluene	59.000 55.470	58.700 55.870	58.900 51.908	55.800	Ave		56.5211429				4.6		20.0			
3-Nitrotoluene	38.800 34.760	37.100 34.965	37.900 32.850	35.460	Ave		35.9764286				5.7		20.0			
3,5-Dinitroaniline	75.600 71.020	74.800 70.275	74.200 66.956	72.180	Ave		72.1472857				4.2		20.0			
RDX	44.600 42.620	43.600 42.955	46.300 40.060	43.980	Ave		43.4450000				4.4		20.0			
2,4-Dinitrotoluene	88.400 84.680	88.600 85.755	88.500 80.874	85.980	Ave		86.1127143				3.2		20.0			
2,6-Dinitrotoluene	67.600 52.120	60.200 52.735	58.400 49.486	54.120	Ave		56.3801429				10.9		20.0			
2-Amino-4,6-dinitrotoluene	74.200 70.370	72.700 70.285	73.100 67.956	71.780	Ave		71.4844286				2.9		20.0			
4-Amino-2,6-dinitrotoluene	59.400 63.770	61.500 62.640	65.450 61.640	64.820	Ave		62.7457143				3.4		20.0			
2,4,6-Trinitrotoluene	71.200 64.870	65.800 66.740	65.200 64.322	65.600	Ave		66.2474286				3.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 336275

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/05/2019 21:31 Calibration End Date: 11/06/2019 04:11 Calibration ID: 48011

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
HMX	62.400 55.640	58.500 56.005	55.250 53.582	55.840	Ave		56.7452857				5.1		20.0			
Nitroglycerin	 69.340	69.300 71.780	65.350 68.388	69.600	Ave		68.9596667				3.0		20.0			
Tetryl	113.40 107.12	109.60 108.87	107.60 105.62	107.34	Ave		108.506857				2.3		20.0			
PETN	 116.09	117.60 118.61	114.10 114.11	117.42	Ave		116.320167				1.6		20.0			
3,4-Dinitrotoluene	45.600 38.510	40.100 40.085	39.700 38.444	40.140	Ave		40.3684286				6.0		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 336275

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/05/2019 21:31 Calibration End Date: 11/06/2019 04:11 Calibration ID: 48011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-336275/4	E000004.D
Level 2	STD2 320-336275/5	E000005.D
Level 3	STD3 320-336275/6	E000006.D
Level 4	STD4 320-336275/7	E000007.D
Level 5	STD5 320-336275/8	E000008.D
Level 6	STD6 320-336275/9	E000009.D
Level 7	STD7 320-336275/10	E000010.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Nitrobenzene	Ave	269 9291	500 21313	951	2332	4689	5.00 200	10.0 500	20.0	50.0	100
Ethylene glycol dinitrate	Ave	 14725	828 32384	1528	3574	6873	 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	511 19412	1001 45287	1955	4901	9761	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	426 15682	811 37124	1592	3930	7813	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Ave	295 11174	587 25954	1178	2790	5547	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Ave	295 11174	587 25954	1178	2790	5547	5.00 200	10.0 500	20.0	50.0	100
3-Nitrotoluene	Ave	194 6993	371 16425	758	1773	3476	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	378 14055	748 33478	1484	3609	7102	5.00 200	10.0 500	20.0	50.0	100
RDX	Ave	223 8591	436 20030	926	2199	4262	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	442 17151	886 40437	1770	4299	8468	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	338 10547	602 24743	1168	2706	5212	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	371 14057	727 33978	1462	3589	7037	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	297 12528	615 30820	1309	3241	6377	5.00 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	356 13348	658 32161	1304	3280	6487	5.00 200	10.0 500	20.0	50.0	100
HMX	Ave	312 11201	585 26791	1105	2792	5564	5.00 200	10.0 500	20.0	50.0	100

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 336275

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/05/2019 21:31 Calibration End Date: 11/06/2019 04:11 Calibration ID: 48011

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Nitroglycerin	Ave	14356	693 34194	1307	3480	6934	200	10.0 500	20.0	50.0	100
Tetryl	Ave	567 21774	1096 52809	2152	5367	10712	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	23721	1176 57053	2282	5871	11609	200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	228 8017	401 19222	794	2007	3851	5.00 200	10.0 500	20.0	50.0	100

Curve Type Legend:
Ave = Average by Height

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 347499

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/23/2019 20:06 Calibration End Date: 12/24/2019 02:46 Calibration ID: 48557

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-347499/4	W000004.D
Level 2	STD2 320-347499/5	W000005.D
Level 3	STD3 320-347499/6	W000006.D
Level 4	STD4 320-347499/7	W000007.D
Level 5	STD5 320-347499/8	W000008.D
Level 6	STD6 320-347499/9	W000009.D
Level 7	STD7 320-347499/10	W000010.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Nitrobenzene	19.953	19.907	19.922	19.931	19.906	19.895	19.886				19.456 - 20.356	19.914
1,3-Dinitrobenzene	22.319	22.257	22.265	22.265	22.246	22.235	22.222				21.816 - 22.676	22.258
1,3,5-Trinitrobenzene	24.233	24.290	24.222	24.248	24.219	24.205	24.192				23.849 - 24.589	24.230
2-Nitrotoluene	26.476	26.444	26.425	26.441	26.423	26.405	26.386				25.773 - 27.073	26.429
4-Nitrotoluene	26.476	26.444	26.425	26.441	26.423	26.405	26.386				25.773 - 27.073	26.429
3-Nitrotoluene	27.046	27.044	26.958	26.995	26.949	26.929	26.899				26.219 - 27.679	26.974
3,5-Dinitroaniline	27.799	27.804	27.792	27.788	27.786	27.785	27.762				27.076 - 28.496	27.788
RDX	28.456	28.477	28.488	28.465	28.496	28.469	28.446				27.726 - 29.266	28.471
2,4-Dinitrotoluene	29.586	29.590	29.585	29.578	29.579	29.565	29.549				28.829 - 30.329	29.576
2,6-Dinitrotoluene	30.449	30.474	30.455	30.445	30.439	30.429	30.409				29.699 - 31.179	30.443
2-Amino-4,6-dinitrotoluene	32.409	32.460	32.435	32.425	32.409	32.425	32.402				31.729 - 33.089	32.424
4-Amino-2,6-dinitrotoluene	32.946	32.937	32.955	32.941	32.946	32.942	32.906				32.276 - 33.616	32.939
2,4,6-Trinitrotoluene	36.039	35.993	36.045	36.024	36.006	36.002	35.982				35.476 - 36.536	36.013
HMX	38.819	38.800	38.818	38.814	38.809	38.805	38.799				38.249 - 39.369	38.809
Nitroglycerin	41.159	41.133	41.141	41.131	41.116	41.109	41.106				40.576 - 41.656	41.128
Tetryl	43.119	43.080	43.071	43.071	43.063	43.055	43.056				42.493 - 43.633	43.074
PETN	49.879	49.880	49.871	49.878	49.889	49.882	49.886				49.399 - 50.379	49.881
3,4-Dinitrotoluene	34.946	34.954	34.925	34.968	34.966	34.969	34.932				34.336 - 35.596	34.951

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 347499

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/23/2019 20:06 Calibration End Date: 12/24/2019 02:46 Calibration ID: 48557

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-347499/4	W000004.D
Level 2	STD2 320-347499/5	W000005.D
Level 3	STD3 320-347499/6	W000006.D
Level 4	STD4 320-347499/7	W000007.D
Level 5	STD5 320-347499/8	W000008.D
Level 6	STD6 320-347499/9	W000009.D
Level 7	STD7 320-347499/10	W000010.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Nitrobenzene	57.200 47.850	51.400 48.125	48.900 43.912	48.480	Lin2	53.1097934	46.4733586							0.9990		0.9900
1,3-Dinitrobenzene	107.80 101.71	104.30 102.89	102.70 94.742	102.52	Ave		102.380286				3.8		20.0			
1,3,5-Trinitrobenzene	87.600 84.480	85.500 85.555	84.100 79.552	84.320	Ave		84.4438571				2.9		20.0			
2-Nitrotoluene	66.600 59.340	61.300 59.840	60.650 54.958	58.780	Ave		60.2097143				5.8		20.0			
4-Nitrotoluene	66.600 59.340	61.300 59.840	60.650 54.958	58.780	Ave		60.2097143				5.8		20.0			
3-Nitrotoluene	41.400 37.040	38.100 37.260	38.500 34.674	36.400	Ave		37.6248571				5.5		20.0			
3,5-Dinitroaniline	81.200 77.250	77.600 77.405	77.900 71.236	77.540	Ave		77.1615714				3.8		20.0			
RDX	52.000 45.820	45.600 45.960	48.600 42.014	45.680	Ave		46.5248571				6.6		20.0			
2,4-Dinitrotoluene	98.400 92.540	93.700 93.070	94.850 86.290	92.900	Ave		93.1071429				3.9		20.0			
2,6-Dinitrotoluene	68.200 59.280	63.400 59.480	62.500 54.776	59.640	Ave		61.0394286				6.9		20.0			
2-Amino-4,6-dinitrotoluene	83.000 77.670	75.600 78.160	78.250 72.400	77.940	Ave		77.5742857				4.1		20.0			
4-Amino-2,6-dinitrotoluene	78.800 69.240	65.700 69.545	70.250 65.112	69.600	Ave		69.7495714				6.4		20.0			
2,4,6-Trinitrotoluene	1437.6 1832.0	1843.9 1872.4	1851.9 1769.7	1820.3	Ave		1775.38914				8.6		20.0			
HMX	63.600 60.050	63.200 60.605	60.050 56.286	60.420	Ave		60.6015714				4.0		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 347499

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/23/2019 20:06 Calibration End Date: 12/24/2019 02:46 Calibration ID: 48557

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Nitroglycerin	67.600 74.710	67.900 74.915	70.600 71.028	74.480	Ave		71.6047143				4.4		20.0			
Tetryl	85.800 81.110	83.200 82.700	81.150 77.774	80.280	Lin2	28.4207394	80.1450248							1.0000		0.9900
PETN	107.00 127.93	122.50 128.79	121.15 122.92	126.82	Ave		122.444000				6.1		20.0			
3,4-Dinitrotoluene	49.000 45.470	47.700 45.925	46.000 42.912	45.480	Ave		46.0695714				4.2		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 347499

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/23/2019 20:06 Calibration End Date: 12/24/2019 02:46 Calibration ID: 48557

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-347499/4	W000004.D
Level 2	STD2 320-347499/5	W000005.D
Level 3	STD3 320-347499/6	W000006.D
Level 4	STD4 320-347499/7	W000007.D
Level 5	STD5 320-347499/8	W000008.D
Level 6	STD6 320-347499/9	W000009.D
Level 7	STD7 320-347499/10	W000010.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Nitrobenzene	Lin2	286 9625	514 21956	978	2424	4785	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	539 20578	1043 47371	2054	5126	10171	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	438 17111	855 39776	1682	4216	8448	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Ave	333 11968	613 27479	1213	2939	5934	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Ave	333 11968	613 27479	1213	2939	5934	5.00 200	10.0 500	20.0	50.0	100
3-Nitrotoluene	Ave	207 7452	381 17337	770	1820	3704	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	406 15481	776 35618	1558	3877	7725	5.00 200	10.0 500	20.0	50.0	100
RDX	Ave	260 9192	456 21007	972	2284	4582	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	492 18614	937 43145	1897	4645	9254	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	341 11896	634 27388	1250	2982	5928	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	415 15632	756 36200	1565	3897	7767	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	394 13909	657 32556	1405	3480	6924	5.00 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	7188 374482	18439 884837	37037	91013	183203	5.00 200	10.0 500	20.0	50.0	100
HMX	Ave	318 12121	632 28143	1201	3021	6005	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Ave	338 14983	679 35514	1412	3724	7471	5.00 200	10.0 500	20.0	50.0	100

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 347499

SDG No.:

Instrument ID: LC9 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/23/2019 20:06 Calibration End Date: 12/24/2019 02:46 Calibration ID: 48557

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Tetryl	Lin2	429 16540	832 38887	1623	4014	8111	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	535 25758	1225 61459	2423	6341	12793	5.00 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	245 9185	477 21456	920	2274	4547	5.00 200	10.0 500	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-346162/12 Calibration Date: 12/18/2019 05:13

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: O0000030.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	60.15		184	200	-8.1	20.0
RDX	Lin2		74.01		190	200	-5.2	20.0
1,3,5-Trinitrobenzene	Lin2		202.2		196	200	-2.2	20.0
1,3-Dinitrobenzene	Lin2		187.6		190	200	-5.0	20.0
3,5-Dinitroaniline	Lin2		138.7		194	200	-3.1	20.0
Nitrobenzene	Lin2		102.3		186	200	-6.8	20.0
Tetryl	Lin2		69.56		180	200	-10.2	20.0
Nitroglycerin	Lin2		93.80		208	200	4.0	20.0
2,4,6-Trinitrotoluene	Ave	93.58	79.75		170	200	-14.8	20.0
4-Amino-2,6-dinitrotoluene	Lin2		78.64		190	200	-5.2	20.0
2-Amino-4,6-dinitrotoluene	Lin2		100.8		175	200	-12.4	20.0
2,6-Dinitrotoluene	Lin2		66.09		187	200	-6.5	20.0
2,4-Dinitrotoluene	Lin2		124.2		192	200	-4.0	20.0
2-Nitrotoluene	Lin2		1091		184	200	-8.0	20.0
4-Nitrotoluene	Lin2		1431		183	200	-8.6	20.0
3-Nitrotoluene	Lin2		63.29		198	200	-1.2	20.0
PETN	Lin2		49.13		189	200	-5.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-346162/12 Calibration Date: 12/18/2019 05:13

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: O0000030.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.60	17.33	17.83
RDX	20.24	19.99	20.49
1,3,5-Trinitrobenzene	21.98	21.73	22.23
1,3-Dinitrobenzene	24.25	24.01	24.51
3,5-Dinitroaniline	25.17	24.93	25.43
Nitrobenzene	25.90	25.66	26.16
Tetryl	26.23	25.99	26.49
Nitroglycerin	26.88	26.64	27.14
2,4,6-Trinitrotoluene	27.46	27.22	27.72
4-Amino-2,6-dinitrotoluene	28.37	28.05	28.73
2-Amino-4,6-dinitrotoluene	29.00	28.63	29.39
2,6-Dinitrotoluene	30.35	30.07	30.67
2,4-Dinitrotoluene	30.75	30.46	31.08
2-Nitrotoluene	33.92	33.61	34.27
4-Nitrotoluene	35.28	34.94	35.66
3-Nitrotoluene	36.86	36.48	37.28
PETN	37.50	37.08	37.90

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347379/3 Calibration Date: 12/23/2019 21:59

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: W0000008.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		94.08		46.7	50.0	-6.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347379/3 Calibration Date: 12/23/2019 21:59

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: W0000008.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.63	19.38	19.88

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347379/3 Calibration Date: 12/23/2019 21:59

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: W0000008.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	63.60		48.6	50.0	-2.8	20.0
RDX	Lin2		74.58		47.6	50.0	-4.7	20.0
1,3,5-Trinitrobenzene	Lin2		187.4		45.2	50.0	-9.6	20.0
1,3-Dinitrobenzene	Lin2		193.1		48.7	50.0	-2.6	20.0
3,5-Dinitroaniline	Lin2		143.6		50.0	50.0	0.0	20.0
Nitrobenzene	Lin2		108.8		49.5	50.0	-1.1	20.0
Tetryl	Lin2		85.24		54.9	50.0	9.8	20.0
Nitroglycerin	Lin2		90.92		50.2	50.0	0.5	20.0
2,4,6-Trinitrotoluene	Ave	93.58	89.70		47.9	50.0	-4.1	20.0
4-Amino-2,6-dinitrotoluene	Lin2		79.48		48.0	50.0	-4.0	20.0
2-Amino-4,6-dinitrotoluene	Lin2		114.0		49.5	50.0	-0.9	20.0
2,6-Dinitrotoluene	Lin2		68.18		47.9	50.0	-4.1	20.0
2,4-Dinitrotoluene	Lin2		126.6		48.7	50.0	-2.5	20.0
2-Nitrotoluene	Lin2		1183		49.6	50.0	-0.8	20.0
4-Nitrotoluene	Lin2		1584		50.5	50.0	0.9	20.0
3-Nitrotoluene	Lin2		62.32		48.2	50.0	-3.6	20.0
PETN	Lin2		56.60		53.8	50.0	7.5	20.0
3,4-Dinitrotoluene	Lin2		73.38		48.7	50.0	-2.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347379/3 Calibration Date: 12/23/2019 21:59

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: W0000008.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.62	17.37	17.87
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.20	21.95	22.45
1,3-Dinitrobenzene	24.68	24.43	24.93
3,5-Dinitroaniline	25.59	25.34	25.84
Nitrobenzene	26.37	26.12	26.62
Tetryl	26.59	26.34	26.84
Nitroglycerin	27.31	27.06	27.56
2,4,6-Trinitrotoluene	27.85	27.60	28.10
4-Amino-2,6-dinitrotoluene	28.84	28.50	29.18
2-Amino-4,6-dinitrotoluene	29.46	29.08	29.84
2,6-Dinitrotoluene	30.85	30.55	31.15
2,4-Dinitrotoluene	31.23	30.92	31.54
2-Nitrotoluene	34.48	34.15	34.81
4-Nitrotoluene	35.84	35.48	36.20
3-Nitrotoluene	37.44	37.04	37.84
PETN	37.98	37.57	38.39
3,4-Dinitrotoluene	29.24	28.99	29.49

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347379/57 Calibration Date: 12/24/2019 13:10

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: W0000025.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		91.52		45.4	50.0	-9.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347379/57 Calibration Date: 12/24/2019 13:10

Instrument ID: LC11 Calib Start Date: 11/06/2019 02:34

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 11/06/2019 10:37

Lab File ID: W0000025.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.62	19.37	19.87

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347379/57 Calibration Date: 12/24/2019 13:10

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: W0000025.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	65.41	63.74		48.7	50.0	-2.6	20.0
RDX	Lin2		75.00		47.9	50.0	-4.2	20.0
1,3,5-Trinitrobenzene	Lin2		189.2		45.6	50.0	-8.8	20.0
1,3-Dinitrobenzene	Lin2		194.1		49.0	50.0	-2.1	20.0
3,5-Dinitroaniline	Lin2		144.7		50.4	50.0	0.8	20.0
Nitrobenzene	Lin2		108.8		49.5	50.0	-1.1	20.0
Tetryl	Lin2		86.72		55.8	50.0	11.7	20.0
Nitroglycerin	Lin2		89.94		49.7	50.0	-0.6	20.0
2,4,6-Trinitrotoluene	Ave	93.58	90.34		48.3	50.0	-3.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		79.94		48.3	50.0	-3.4	20.0
2-Amino-4,6-dinitrotoluene	Lin2		114.9		50.0	50.0	-0.0	20.0
2,6-Dinitrotoluene	Lin2		69.18		48.6	50.0	-2.7	20.0
2,4-Dinitrotoluene	Lin2		128.1		49.3	50.0	-1.4	20.0
2-Nitrotoluene	Lin2		1153		48.3	50.0	-3.4	20.0
4-Nitrotoluene	Lin2		1559		49.6	50.0	-0.7	20.0
3-Nitrotoluene	Lin2		62.22		48.1	50.0	-3.8	20.0
PETN	Lin2		54.84		52.1	50.0	4.1	20.0
3,4-Dinitrotoluene	Lin2		74.06		49.2	50.0	-1.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347379/57 Calibration Date: 12/24/2019 13:10

Instrument ID: LC11 Calib Start Date: 12/17/2019 22:04

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 12/18/2019 03:25

Lab File ID: W0000025.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.59	17.34	17.84
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.19	21.94	22.44
1,3-Dinitrobenzene	24.66	24.41	24.91
3,5-Dinitroaniline	25.57	25.32	25.82
Nitrobenzene	26.35	26.10	26.60
Tetryl	26.58	26.33	26.83
Nitroglycerin	27.28	27.03	27.53
2,4,6-Trinitrotoluene	27.83	27.58	28.08
4-Amino-2,6-dinitrotoluene	28.83	28.49	29.17
2-Amino-4,6-dinitrotoluene	29.45	29.07	29.83
2,6-Dinitrotoluene	30.83	30.53	31.13
2,4-Dinitrotoluene	31.22	30.91	31.53
2-Nitrotoluene	34.47	34.14	34.80
4-Nitrotoluene	35.83	35.47	36.19
3-Nitrotoluene	37.43	37.03	37.83
PETN	38.00	37.59	38.41
3,4-Dinitrotoluene	29.22	28.97	29.47

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-336275/12 Calibration Date: 11/06/2019 06:25

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: E000012.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	47.71	51.55		216	200	8.1	20.0
Ethylene glycol dinitrate	Ave	72.97	77.58		213	200	6.3	20.0
1,3-Dinitrobenzene	Ave	97.62	106.4		218	200	9.0	20.0
1,3,5-Trinitrobenzene	Ave	79.33	78.43		198	200	-1.1	20.0
2-Nitrotoluene	Ave	56.52	59.41		210	200	5.1	20.0
4-Nitrotoluene	Ave	56.52	59.41		210	200	5.1	20.0
3-Nitrotoluene	Ave	35.98	38.85		216	200	8.0	20.0
3,5-Dinitroaniline	Ave	72.15	69.68		193	200	-3.4	20.0
RDX	Ave	43.45	45.04		207	200	3.7	20.0
2,4-Dinitrotoluene	Ave	86.11	93.23		217	200	8.3	20.0
2,6-Dinitrotoluene	Ave	56.38	56.33		200	200	-0.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	71.48	75.71		212	200	5.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	62.75	64.92		207	200	3.5	20.0
2,4,6-Trinitrotoluene	Ave	66.25	66.39		200	200	0.2	20.0
HMX	Ave	56.75	59.21		209	200	4.3	20.0
Nitroglycerin	Ave	68.96	71.79		208	200	4.1	20.0
Tetryl	Ave	108.5	108.9		201	200	0.4	20.0
PETN	Ave	116.3	105.5		181	200	-9.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-336275/12 Calibration Date: 11/06/2019 06:25

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: E000012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	20.21	19.78	20.68
Ethylene glycol dinitrate	20.41	20.26	20.84
1,3-Dinitrobenzene	22.60	22.18	23.04
1,3,5-Trinitrobenzene	24.60	24.24	24.98
2-Nitrotoluene	26.82	26.19	27.49
4-Nitrotoluene	26.82	26.19	27.49
3-Nitrotoluene	27.36	26.62	28.08
3,5-Dinitroaniline	28.29	27.59	29.01
RDX	28.99	28.23	29.77
2,4-Dinitrotoluene	30.04	29.30	30.80
2,6-Dinitrotoluene	30.94	30.19	31.67
2-Amino-4,6-dinitrotoluene	33.01	32.34	33.70
4-Amino-2,6-dinitrotoluene	33.53	32.88	34.22
2,4,6-Trinitrotoluene	36.61	36.09	37.15
HMX	39.27	38.71	39.83
Nitroglycerin	41.55	41.01	42.09
Tetryl	43.43	42.87	44.01
PETN	50.16	49.67	50.65

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-345107/3 Calibration Date: 12/12/2019 20:24

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	47.71	47.46		99.5	100	-0.5	20.0
Ethylene glycol dinitrate	Ave	72.97	87.78		120	100	20.3*	20.0
1,3-Dinitrobenzene	Ave	97.62	99.41		102	100	1.8	20.0
1,3,5-Trinitrobenzene	Ave	79.33	80.54		102	100	1.5	20.0
2-Nitrotoluene	Ave	56.52	57.15		101	100	1.1	20.0
4-Nitrotoluene	Ave	56.52	57.15		101	100	1.1	20.0
3-Nitrotoluene	Ave	35.98	36.36		101	100	1.1	20.0
3,5-Dinitroaniline	Ave	72.15	73.54		102	100	1.9	20.0
RDX	Ave	43.45	44.14		102	100	1.6	20.0
2,4-Dinitrotoluene	Ave	86.11	86.85		101	100	0.9	20.0
2,6-Dinitrotoluene	Ave	56.38	55.48		98.4	100	-1.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	71.48	73.23		102	100	2.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	62.75	66.03		105	100	5.2	20.0
2,4,6-Trinitrotoluene	Ave	66.25	60.90		91.9	100	-8.1	20.0
HMX	Ave	56.75	54.62		96.3	100	-3.7	20.0
Nitroglycerin	Ave	68.96	68.55		99.4	100	-0.6	20.0
Tetryl	Ave	108.5	108.1		99.6	100	-0.4	20.0
PETN	Ave	116.3	117.1		101	100	0.7	20.0
3,4-Dinitrotoluene	Ave	40.37	41.17		102	100	2.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-345107/3 Calibration Date: 12/12/2019 20:24

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.86	19.41	20.31
Ethylene glycol dinitrate	19.94	19.65	20.23
1,3-Dinitrobenzene	22.21	21.78	22.64
1,3,5-Trinitrobenzene	24.17	23.80	24.54
2-Nitrotoluene	26.36	25.71	27.01
4-Nitrotoluene	26.36	25.71	27.01
3-Nitrotoluene	26.87	26.14	27.60
3,5-Dinitroaniline	27.75	27.04	28.46
RDX	28.42	27.65	29.19
2,4-Dinitrotoluene	29.50	28.75	30.25
2,6-Dinitrotoluene	30.38	29.64	31.12
2-Amino-4,6-dinitrotoluene	32.37	31.69	33.05
4-Amino-2,6-dinitrotoluene	32.89	32.22	33.56
2,4,6-Trinitrotoluene	35.93	35.40	36.46
HMX	38.79	38.23	39.35
Nitroglycerin	41.09	40.55	41.63
Tetryl	43.06	42.49	43.63
PETN	49.86	49.37	50.35
3,4-Dinitrotoluene	34.88	34.25	35.51

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345107/37 Calibration Date: 12/14/2019 10:13

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000037.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	47.71	46.66		97.8	100	-2.2	20.0
1,3-Dinitrobenzene	Ave	97.62	103.1		106	100	5.6	20.0
1,3,5-Trinitrobenzene	Ave	79.33	83.41		105	100	5.1	20.0
2-Nitrotoluene	Ave	56.52	56.69		100	100	0.3	20.0
4-Nitrotoluene	Ave	56.52	56.69		100	100	0.3	20.0
3-Nitrotoluene	Ave	35.98	34.76		96.6	100	-3.4	20.0
3,5-Dinitroaniline	Ave	72.15	77.02		107	100	6.8	20.0
RDX	Ave	43.45	45.87		106	100	5.6	20.0
2,4-Dinitrotoluene	Ave	86.11	91.45		106	100	6.2	20.0
2,6-Dinitrotoluene	Ave	56.38	58.33		103	100	3.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	71.48	76.92		108	100	7.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	62.75	67.59		108	100	7.7	20.0
2,4,6-Trinitrotoluene	Ave	66.25	64.69		97.6	100	-2.4	20.0
HMX	Ave	56.75	58.95		104	100	3.9	20.0
Nitroglycerin	Ave	68.96	71.36		103	100	3.5	20.0
Tetryl	Ave	108.5	113.4		105	100	4.5	20.0
PETN	Ave	116.3	124.8		107	100	7.2	20.0
Ethylene glycol dinitrate	Ave	72.97				100		
3,4-Dinitrotoluene	Ave	40.37	43.30		107	100	7.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345107/37 Calibration Date: 12/14/2019 10:13

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000037.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.91	19.46	20.36
1,3-Dinitrobenzene	22.27	21.84	22.70
1,3,5-Trinitrobenzene	24.19	23.82	24.56
2-Nitrotoluene	26.41	25.76	27.06
4-Nitrotoluene	26.41	25.76	27.06
3-Nitrotoluene	26.92	26.19	27.65
3,5-Dinitroaniline	27.82	27.11	28.53
RDX	28.52	27.75	29.29
2,4-Dinitrotoluene	29.56	28.81	30.31
2,6-Dinitrotoluene	30.44	29.70	31.18
2-Amino-4,6-dinitrotoluene	32.45	31.77	33.13
4-Amino-2,6-dinitrotoluene	32.97	32.30	33.64
2,4,6-Trinitrotoluene	36.02	35.49	36.55
HMX	38.84	38.28	39.40
Nitroglycerin	41.12	40.58	41.66
Tetryl	43.08	42.51	43.65
PETN	49.88	49.39	50.37
Ethylene glycol dinitrate			
3,4-Dinitrotoluene	34.94	34.31	35.57

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345107/46 Calibration Date: 12/14/2019 20:14

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000046.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	47.71	48.78		51.1	50.0	2.2	20.0
1,3-Dinitrobenzene	Ave	97.62	102.5		52.5	50.0	5.0	20.0
1,3,5-Trinitrobenzene	Ave	79.33	83.28		52.5	50.0	5.0	20.0
2-Nitrotoluene	Ave	56.52	58.88		52.1	50.0	4.2	20.0
4-Nitrotoluene	Ave	56.52	58.88		52.1	50.0	4.2	20.0
3-Nitrotoluene	Ave	35.98	36.32		50.5	50.0	1.0	20.0
3,5-Dinitroaniline	Ave	72.15	76.62		53.1	50.0	6.2	20.0
RDX	Ave	43.45	45.92		52.8	50.0	5.7	20.0
2,4-Dinitrotoluene	Ave	86.11	90.82		52.7	50.0	5.5	20.0
2,6-Dinitrotoluene	Ave	56.38	58.26		51.7	50.0	3.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	71.48	76.70		53.6	50.0	7.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	62.75	67.28		53.6	50.0	7.2	20.0
2,4,6-Trinitrotoluene	Ave	66.25	61.66		46.5	50.0	-6.9	20.0
HMX	Ave	56.75	57.24		50.4	50.0	0.9	20.0
Nitroglycerin	Ave	68.96	67.02		48.6	50.0	-2.8	20.0
Tetryl	Ave	108.5	113.7		52.4	50.0	4.8	20.0
PETN	Ave	116.3	125.1		53.8	50.0	7.6	20.0
Ethylene glycol dinitrate	Ave	72.97				50.0		
3,4-Dinitrotoluene	Ave	40.37	42.86		53.1	50.0	6.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345107/46 Calibration Date: 12/14/2019 20:14

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: L000046.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.85	19.40	20.30
1,3-Dinitrobenzene	22.17	21.74	22.60
1,3,5-Trinitrobenzene	24.10	23.73	24.47
2-Nitrotoluene	26.29	25.64	26.94
4-Nitrotoluene	26.29	25.64	26.94
3-Nitrotoluene	26.82	26.09	27.55
3,5-Dinitroaniline	27.71	27.00	28.42
RDX	28.40	27.63	29.17
2,4-Dinitrotoluene	29.45	28.70	30.20
2,6-Dinitrotoluene	30.32	29.58	31.06
2-Amino-4,6-dinitrotoluene	32.30	31.62	32.98
4-Amino-2,6-dinitrotoluene	32.80	32.13	33.47
2,4,6-Trinitrotoluene	35.81	35.28	36.34
HMX	38.71	38.15	39.27
Nitroglycerin	41.01	40.47	41.55
Tetryl	42.98	42.41	43.55
PETN	49.83	49.34	50.32
Ethylene glycol dinitrate			
3,4-Dinitrotoluene	34.77	34.14	35.40

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-347499/12 Calibration Date: 12/24/2019 05:00

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000012.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Lin2		44.05		188	200	-5.8	20.0
1,3-Dinitrobenzene	Ave	102.4	95.57		187	200	-6.7	20.0
1,3,5-Trinitrobenzene	Ave	84.44	79.62		189	200	-5.7	20.0
2-Nitrotoluene	Ave	60.21	54.46		181	200	-9.5	20.0
4-Nitrotoluene	Ave	60.21	54.46		181	200	-9.5	20.0
3-Nitrotoluene	Ave	37.62	36.14		192	200	-4.0	20.0
3,5-Dinitroaniline	Ave	77.16	73.74		191	200	-4.4	20.0
RDX	Ave	46.52	42.78		184	200	-8.0	20.0
2,4-Dinitrotoluene	Ave	93.11	87.52		188	200	-6.0	20.0
2,6-Dinitrotoluene	Ave	61.04	55.84		183	200	-8.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	77.57	72.68		187	200	-6.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	69.75	65.17		187	200	-6.6	20.0
2,4,6-Trinitrotoluene	Ave	1775	1579		178	200	-11.0	20.0
HMX	Ave	60.60	55.68		184	200	-8.1	20.0
Nitroglycerin	Ave	71.60	76.16		213	200	6.4	20.0
Tetryl	Lin2		72.43		180	200	-9.8	20.0
PETN	Ave	122.4	116.8		191	200	-4.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-347499/12 Calibration Date: 12/24/2019 05:00

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.91	19.48	20.38
1,3-Dinitrobenzene	22.25	21.84	22.70
1,3,5-Trinitrobenzene	24.21	23.88	24.62
2-Nitrotoluene	26.40	25.79	27.09
4-Nitrotoluene	26.40	25.79	27.09
3-Nitrotoluene	26.93	26.27	27.73
3,5-Dinitroaniline	27.77	27.08	28.50
RDX	28.46	27.70	29.24
2,4-Dinitrotoluene	29.55	28.83	30.33
2,6-Dinitrotoluene	30.42	29.71	31.19
2-Amino-4,6-dinitrotoluene	32.40	31.75	33.11
4-Amino-2,6-dinitrotoluene	32.92	32.27	33.61
2,4,6-Trinitrotoluene	35.99	35.49	36.55
HMX	38.80	38.25	39.37
Nitroglycerin	41.10	40.59	41.67
Tetryl	43.06	42.50	43.64
PETN	49.88	49.39	50.37

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347504/1 Calibration Date: 12/24/2019 06:06

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: W000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	72.97	87.78		52.7	50.0	20.3*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347504/1 Calibration Date: 12/24/2019 06:06

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: W000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.96	19.67	20.25

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347504/1 Calibration Date: 12/24/2019 06:06

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Lin2		47.58		50.0	50.0	0.1	20.0
1,3-Dinitrobenzene	Ave	102.4	103.0		50.3	50.0	0.6	20.0
1,3,5-Trinitrobenzene	Ave	84.44	84.76		50.2	50.0	0.4	20.0
2-Nitrotoluene	Ave	60.21	58.54		48.6	50.0	-2.8	20.0
4-Nitrotoluene	Ave	60.21	58.54		48.6	50.0	-2.8	20.0
3-Nitrotoluene	Ave	37.62	36.62		48.7	50.0	-2.7	20.0
3,5-Dinitroaniline	Ave	77.16	77.50		50.2	50.0	0.4	20.0
RDX	Ave	46.52	45.70		49.1	50.0	-1.8	20.0
2,4-Dinitrotoluene	Ave	93.11	91.66		49.2	50.0	-1.6	20.0
2,6-Dinitrotoluene	Ave	61.04	58.70		48.1	50.0	-3.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	77.57	76.28		49.2	50.0	-1.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	69.75	68.26		48.9	50.0	-2.1	20.0
2,4,6-Trinitrotoluene	Ave	1775	1722		48.5	50.0	-3.0	20.0
HMX	Ave	60.60	58.98		48.7	50.0	-2.7	20.0
Nitroglycerin	Ave	71.60	71.52		49.9	50.0	-0.1	20.0
Tetryl	Lin2		79.28		49.1	50.0	-1.8	20.0
PETN	Ave	122.4	123.5		50.4	50.0	0.9	20.0
3,4-Dinitrotoluene	Ave	46.07	43.74		47.5	50.0	-5.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVRT 320-347504/1 Calibration Date: 12/24/2019 06:06

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.92	19.47	20.37
1,3-Dinitrobenzene	22.25	21.82	22.68
1,3,5-Trinitrobenzene	24.22	23.85	24.59
2-Nitrotoluene	26.40	25.75	27.05
4-Nitrotoluene	26.40	25.75	27.05
3-Nitrotoluene	26.89	26.16	27.62
3,5-Dinitroaniline	27.76	27.05	28.47
RDX	28.45	27.68	29.22
2,4-Dinitrotoluene	29.53	28.78	30.28
2,6-Dinitrotoluene	30.41	29.67	31.15
2-Amino-4,6-dinitrotoluene	32.37	31.69	33.05
4-Amino-2,6-dinitrotoluene	32.88	32.21	33.55
2,4,6-Trinitrotoluene	35.97	35.44	36.50
HMX	38.79	38.23	39.35
Nitroglycerin	41.09	40.55	41.63
Tetryl	43.04	42.47	43.61
PETN	49.88	49.39	50.37
3,4-Dinitrotoluene	34.92	34.29	35.55

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347504/4 Calibration Date: 12/24/2019 09:26

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: W000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	72.97	86.28		51.8	50.0	18.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347504/4 Calibration Date: 12/24/2019 09:26

Instrument ID: LC9 Calib Start Date: 11/05/2019 21:31

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/06/2019 04:11

Lab File ID: W000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.98	19.69	20.27

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347504/4 Calibration Date: 12/24/2019 09:26

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Lin2		47.10		49.5	50.0	-0.9	20.0
1,3-Dinitrobenzene	Ave	102.4	102.8		50.2	50.0	0.4	20.0
1,3,5-Trinitrobenzene	Ave	84.44	84.58		50.1	50.0	0.2	20.0
2-Nitrotoluene	Ave	60.21	58.02		48.2	50.0	-3.6	20.0
4-Nitrotoluene	Ave	60.21	58.02		48.2	50.0	-3.6	20.0
3-Nitrotoluene	Ave	37.62	36.08		47.9	50.0	-4.1	20.0
3,5-Dinitroaniline	Ave	77.16	78.10		50.6	50.0	1.2	20.0
RDX	Ave	46.52	46.72		50.2	50.0	0.4	20.0
2,4-Dinitrotoluene	Ave	93.11	93.36		50.1	50.0	0.3	20.0
2,6-Dinitrotoluene	Ave	61.04	60.04		49.2	50.0	-1.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	77.57	77.78		50.1	50.0	0.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	69.75	68.74		49.3	50.0	-1.4	20.0
2,4,6-Trinitrotoluene	Ave	1775	1775		50.0	50.0	-0.0	20.0
HMX	Ave	60.60	60.36		49.8	50.0	-0.4	20.0
Nitroglycerin	Ave	71.60	72.78		50.8	50.0	1.6	20.0
Tetryl	Lin2		81.40		50.4	50.0	0.9	20.0
PETN	Ave	122.4	125.3		51.2	50.0	2.3	20.0
3,4-Dinitrotoluene	Ave	46.07	45.44		49.3	50.0	-1.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-347504/4 Calibration Date: 12/24/2019 09:26

Instrument ID: LC9 Calib Start Date: 12/23/2019 20:06

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 12/24/2019 02:46

Lab File ID: W000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	19.89	19.44	20.34
1,3-Dinitrobenzene	22.24	21.81	22.67
1,3,5-Trinitrobenzene	24.19	23.82	24.56
2-Nitrotoluene	26.39	25.74	27.04
4-Nitrotoluene	26.39	25.74	27.04
3-Nitrotoluene	26.95	26.22	27.68
3,5-Dinitroaniline	27.76	27.05	28.47
RDX	28.45	27.68	29.22
2,4-Dinitrotoluene	29.54	28.79	30.29
2,6-Dinitrotoluene	30.39	29.65	31.13
2-Amino-4,6-dinitrotoluene	32.38	31.70	33.06
4-Amino-2,6-dinitrotoluene	32.91	32.24	33.58
2,4,6-Trinitrotoluene	35.98	35.45	36.51
HMX	38.79	38.23	39.35
Nitroglycerin	41.10	40.56	41.64
Tetryl	43.04	42.47	43.61
PETN	49.88	49.39	50.37
3,4-Dinitrotoluene	34.91	34.28	35.54

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-344664/1-A

Matrix: Water Lab File ID: W0000010.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 1000(mL) Date Analyzed: 12/23/2019 23:46

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.10	
99-65-0	1,3-Dinitrobenzene	ND		0.10	
118-96-7	2,4,6-Trinitrotoluene	ND		0.10	
121-14-2	2,4-Dinitrotoluene	ND		0.10	
606-20-2	2,6-Dinitrotoluene	ND		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.20	
88-72-2	2-Nitrotoluene	ND		0.50	
99-08-1	3-Nitrotoluene	ND		0.50	
99-99-0	4-Nitrotoluene	ND		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.10	
2691-41-0	HMX	ND		0.10	
121-82-4	RDX	ND		0.10	
98-95-3	Nitrobenzene	ND		0.10	
479-45-8	Tetryl	ND		0.10	
55-63-0	Nitroglycerin	ND		0.65	
78-11-5	PETN	ND		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	86		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-344664/2-A

Matrix: Water Lab File ID: W0000011.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 1000(mL) Date Analyzed: 12/24/2019 00:39

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.927		0.10	
99-65-0	1,3-Dinitrobenzene	0.966		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.826		0.10	
121-14-2	2,4-Dinitrotoluene	0.923		0.10	
606-20-2	2,6-Dinitrotoluene	0.908		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.08		0.20	
88-72-2	2-Nitrotoluene	0.885		0.50	
99-08-1	3-Nitrotoluene	0.895		0.50	
99-99-0	4-Nitrotoluene	0.903		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.879		0.10	
2691-41-0	HMX	1.04		0.10	
121-82-4	RDX	1.03		0.10	
98-95-3	Nitrobenzene	0.962		0.10	
479-45-8	Tetryl	0.931		0.10	
55-63-0	Nitroglycerin	4.54		0.65	
78-11-5	PETN	4.48		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	88		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-344664/3-A

Matrix: Water Lab File ID: W0000012.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 12/11/2019 09:04

Sample wt/vol: 1000(mL) Date Analyzed: 12/24/2019 01:33

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 347379 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.925		0.10	
99-65-0	1,3-Dinitrobenzene	0.966		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.825		0.10	
121-14-2	2,4-Dinitrotoluene	0.926		0.10	
606-20-2	2,6-Dinitrotoluene	0.912		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.05		0.20	
88-72-2	2-Nitrotoluene	0.873		0.50	
99-08-1	3-Nitrotoluene	0.903		0.50	
99-99-0	4-Nitrotoluene	0.917		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.890		0.10	
2691-41-0	HMX	1.04		0.10	
121-82-4	RDX	1.03		0.10	
98-95-3	Nitrobenzene	0.964		0.10	
479-45-8	Tetryl	0.955		0.10	
55-63-0	Nitroglycerin	4.49		0.65	
78-11-5	PETN	4.44		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	83		79-111

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Start Date: 12/17/2019 22:04

Analysis Batch Number: 346162 End Date: 12/18/2019 05:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-346162/4 IC		12/17/2019 22:04	1	O0000022.D	Synergi C18 4.6(mm)
STD2 320-346162/5 IC		12/17/2019 22:57	1	O0000023.D	Synergi C18 4.6(mm)
STD3 320-346162/6 IC		12/17/2019 23:51	1	O0000024.D	Synergi C18 4.6(mm)
STD4 320-346162/7 IC		12/18/2019 00:45	1	O0000025.D	Synergi C18 4.6(mm)
STD5 320-346162/8 IC		12/18/2019 01:38	1	O0000026.D	Synergi C18 4.6(mm)
STD6 320-346162/9 IC		12/18/2019 02:32	1	O0000027.D	Synergi C18 4.6(mm)
STD7 320-346162/13 IC		12/18/2019 03:25	1	O0000028.D	Synergi C18 4.6(mm)
ICV 320-346162/12		12/18/2019 05:13	1	O0000030.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC11 Start Date: 12/23/2019 21:59

Analysis Batch Number: 347379 End Date: 12/24/2019 13:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-347379/3		12/23/2019 21:59	1	W0000008.D	Synergi C18 4.6(mm)
MB 320-344664/1-A		12/23/2019 23:46	1	W0000010.D	Synergi C18 4.6(mm)
LCS 320-344664/2-A		12/24/2019 00:39	1	W0000011.D	Synergi C18 4.6(mm)
LCSD 320-344664/3-A		12/24/2019 01:33	1	W0000012.D	Synergi C18 4.6(mm)
ZZZZZ		12/24/2019 02:26	1		Synergi C18 4.6(mm)
ZZZZZ		12/24/2019 03:20	1		Synergi C18 4.6(mm)
ZZZZZ		12/24/2019 04:14	1		Synergi C18 4.6(mm)
580-91241-1		12/24/2019 05:07	1	W0000016.D	Synergi C18 4.6(mm)
580-91241-2		12/24/2019 06:01	1	W0000017.D	Synergi C18 4.6(mm)
580-91241-3		12/24/2019 06:55	1	W0000018.D	Synergi C18 4.6(mm)
580-91241-4		12/24/2019 07:48	1	W0000019.D	Synergi C18 4.6(mm)
580-91241-4 DL		12/24/2019 08:42	5	W0000020.D	Synergi C18 4.6(mm)
CCV 320-347379/57		12/24/2019 13:10	1	W0000025.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Start Date: 11/05/2019 21:31

Analysis Batch Number: 336275 End Date: 11/06/2019 06:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-336275/4 IC		11/05/2019 21:31	1	E000004.D	Zorbax CN 4.6(mm)
STD2 320-336275/5 IC		11/05/2019 22:38	1	E000005.D	Zorbax CN 4.6(mm)
STD3 320-336275/6 IC		11/05/2019 23:44	1	E000006.D	Zorbax CN 4.6(mm)
STD4 320-336275/7 IC		11/06/2019 00:51	1	E000007.D	Zorbax CN 4.6(mm)
STD5 320-336275/8 IC		11/06/2019 01:58	1	E000008.D	Zorbax CN 4.6(mm)
STD6 320-336275/9 IC		11/06/2019 03:04	1	E000009.D	Zorbax CN 4.6(mm)
STD7 320-336275/10 IC		11/06/2019 04:11	1	E000010.D	Zorbax CN 4.6(mm)
ICV 320-336275/12		11/06/2019 06:25	1	E000012.D	Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Start Date: 12/12/2019 20:24

Analysis Batch Number: 345107 End Date: 12/14/2019 20:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-345107/3		12/12/2019 20:24	1	L000003.D	Zorbax CN 4.6(mm)
CCV 320-345107/15		12/13/2019 09:45	1		Zorbax CN 4.6(mm)
CCV 320-345107/37		12/14/2019 10:13	1	L000037.D	Zorbax CN 4.6(mm)
580-91241-3		12/14/2019 11:20	1	L000038.D	Zorbax CN 4.6(mm)
580-91241-4		12/14/2019 12:27	1	L000039.D	Zorbax CN 4.6(mm)
CCV 320-345107/46		12/14/2019 20:14	1	L000046.D	Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Start Date: 12/23/2019 20:06

Analysis Batch Number: 347499 End Date: 12/24/2019 05:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-347499/4 IC		12/23/2019 20:06	1	W000004.D	Zorbax CN 4.6(mm)
STD2 320-347499/5 IC		12/23/2019 21:12	1	W000005.D	Zorbax CN 4.6(mm)
STD3 320-347499/6 IC		12/23/2019 22:19	1	W000006.D	Zorbax CN 4.6(mm)
STD4 320-347499/7 IC		12/23/2019 23:26	1	W000007.D	Zorbax CN 4.6(mm)
STD5 320-347499/8 IC		12/24/2019 00:33	1	W000008.D	Zorbax CN 4.6(mm)
STD6 320-347499/9 IC		12/24/2019 01:39	1	W000009.D	Zorbax CN 4.6(mm)
STD7 320-347499/10 IC		12/24/2019 02:46	1	W000010.D	Zorbax CN 4.6(mm)
ICV 320-347499/12		12/24/2019 05:00	1	W000012.D	Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: LC9 Start Date: 12/24/2019 06:06

Analysis Batch Number: 347504 End Date: 12/24/2019 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-347504/1		12/24/2019 06:06	1	W000013.D	Zorbax CN 4.6(mm)
580-91241-4 DL		12/24/2019 08:20	5	W000015.D	Zorbax CN 4.6(mm)
CCV 320-347504/4		12/24/2019 09:26	1	W000016.D	Zorbax CN 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91241-1

SDG No.:

Batch Number: 344664 Batch Start Date: 12/11/19 09:01 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date: 12/11/19 18:52

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00127	HP8330SP 00113
MB 320-344664/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-344664/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
LCSD 320-344664/3		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
580-91241-B-1	04Q19L4MW01AW	8330-Prep, 8330B	T	1453.8 g	512.76 g	941 mL	20 mL	50 uL	
580-91241-B-2	04Q19L4MW01BW	8330-Prep, 8330B	T	1446.0 g	507.88 g	938.1 mL	20 mL	50 uL	
580-91241-A-3	04Q19L4MW02AW	8330-Prep, 8330B	T	1424.6 g	507.32 g	917.3 mL	20 mL	50 uL	
580-91241-A-4	04Q19L4MW02BW	8330-Prep, 8330B	T	1429.9 g	506.21 g	923.7 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPNGPETNSP 00082	AnalysisComment				
MB 320-344664/1		8330-Prep, 8330B			SPE 3 Port 5				
LCS 320-344664/2		8330-Prep, 8330B		100 uL	SPE 3 Port 6				
LCSD 320-344664/3		8330-Prep, 8330B		100 uL	SPE 3 Port 1				
580-91241-B-1	04Q19L4MW01AW	8330-Prep, 8330B	T		SPE 4 Port 3				
580-91241-B-2	04Q19L4MW01BW	8330-Prep, 8330B	T		SPE 4 Port 4				
580-91241-A-3	04Q19L4MW02AW	8330-Prep, 8330B	T		SPE 4 Port 5				
580-91241-A-4	04Q19L4MW02BW	8330-Prep, 8330B	T		SPE 4 Port 6				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91241-1

SDG No.:

Batch Number: 344664 Batch Start Date: 12/11/19 09:01 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date: 12/11/19 18:52

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00114 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Labels match client ID; 2ml pipette ID lot#09202019
Analyst ID - Concentration	WL 12/11/19
Date of Clean up	12/11/19
Date Dilution Performed	12/11/19
Analyst ID - Dilution	WL
Filter ID	R9CA01442
Date of Final Volume	12/11/19
Vendor lot number	0.1% HOAc/ACN_00114
Millipore Water Dispense Date	12/5/19
Pipette/Syringe/Dispenser ID	48487M
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	JFA 12/11/19
Solvent	0.1% HOAc/ACN
SPE Cartridge Lot ID	005039142A

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento
Dilution Report Form – LC Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is 1 mL.
Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	Amount of "daughter" sample (mL) to be added to solvent	Amount of Solvent (mL) Method 8330: Water Method DAT: 1.3g/L CaCl2
2X	2.5	2.5
5X	1	4
10X	0.5	4.5
20X	0.25	4.75
50X	0.1	4.9
100X	0.05	4.95
200X	2.5*	2.5
500X	1*	4
1000X	0.5*	4.5

* *Volume of 100x dilution used to make a serial dilution*

Table 2: Sample Dilutions Made

Sample ID	Dilution made	Analyst	Date
580-91241-4	5 ~~10~~ x AJC 12/23/19	AJC	23 Dec. 2019
~~320-56947-23~~ AC 12/18/19			
			AJC 12/26/19

Q:\FORMS\QA-DIL-001-LC.doc QA-DIL-001-LC r1 ERS 10/30/2013

Method 6850

Perchlorate by LC/MS or LC/MS/MS by Method 6850

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2019.12.10_Perc_011.d

Lab ID: LCS 320-344342/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	5.60	112	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2019.12.10_Perc_012.d

Lab ID: INF 320-344342/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	5.65	113	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab File ID: 2019.12.10_Perc_010.d Lab Sample ID: MB 320-344342/1-A

Matrix: Water Date Extracted: 12/09/2019 19:27

Instrument ID: A5 Date Analyzed: 12/10/2019 12:25

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-344342/2-A	2019.12.10_Perc_011.d	12/10/2019 12:39
04Q19L4MW01AW	580-91241-1	2019.12.10_Perc_032.d	12/10/2019 17:20
04Q19L4MW01BW	580-91241-2	2019.12.15.PercAA_038.d	12/15/2019 23:18
04Q19L4MW02AW	580-91241-3	2019.12.15.PercAA_039.d	12/15/2019 23:31
04Q19L4MW02BW	580-91241-4	2019.12.15.PercAA_040.d	12/15/2019 23:44

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 11/23/2019 15:10

Calibration ID: 48221

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		44182243	9.98				
UPPER LIMIT		66273365	10.98				
LOWER LIMIT		22091122	8.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 320-341105/1		44183900	9.76				
ICV 320-341105/11		46968402	10.04				
CCV 320-344441/1 CCVIS		22565278	9.89				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Sample No.: CCV 320-344441/1 Date Analyzed: 12/10/2019 11:45

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm)

Lab File ID (Standard): 2019.12.10_Perc_007 Heated Purge: (Y/N) N

Calibration ID: 48221

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		22565278	9.89				
UPPER LIMIT		33847917	10.89				
LOWER LIMIT		11282639	8.89				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 320-344441/2		23248581	9.92				
CCB 320-344441/3		23291781	9.96				
MB 320-344342/1-A		23501738	9.97				
LCS 320-344342/2-A		21545282	9.96				
INF 320-344342/3-A		21314525	9.91				
CCV 320-344441/16		22355779	9.95				
580-91241-1	04Q19L4MW01AW	21090488	9.95				
CCV 320-344441/32		22068096	9.96				
CCVL 320-344441/33		22663494	9.99				
CCB 320-344441/34		22591343	9.97				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 12/13/2019 17:33

Calibration ID: 48421

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		41928574	10.71				
UPPER LIMIT		62892861	11.71				
LOWER LIMIT		20964287	9.71				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-345262/10		44510255	10.64				
ICV 320-345262/11		42691266	10.62				
CCV 320-345699/1 CCVIS		28341438	10.60				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Sample No.: CCV 320-345699/1 Date Analyzed: 12/15/2019 22:37

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm)

Lab File ID (Standard): 2019.12.15.PercAA_0 Heated Purge: (Y/N) N

Calibration ID: 48421

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		28341438	10.60				
UPPER LIMIT		42512157	11.60				
LOWER LIMIT		14170719	9.60				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 320-345699/2		31038073	10.75				
CCB 320-345699/3		27473598	10.83				
580-91241-2	04Q19L4MW01BW	26260184	10.60				
580-91241-3	04Q19L4MW02AW	493289*	10.88				
580-91241-4	04Q19L4MW02BW	453508*	10.62				
CCV 320-345699/8		27688713	10.62				
CCVL 320-345699/9		30431831	10.57				
CCB 320-345699/10		27066755	10.86				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01AW Lab Sample ID: 580-91241-1

Matrix: Water Lab File ID: 2019.12.10_Perc_032.d

Analysis Method: 6850 Date Collected: 12/05/2019 12:50

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 17:20

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	1.6		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW01BW Lab Sample ID: 580-91241-2

Matrix: Water Lab File ID: 2019.12.15.PercAA_038.d

Analysis Method: 6850 Date Collected: 12/05/2019 13:32

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/15/2019 23:18

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345699 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02AW Lab Sample ID: 580-91241-3

Matrix: Water Lab File ID: 2019.12.15.PercAA_039.d

Analysis Method: 6850 Date Collected: 12/05/2019 14:07

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/15/2019 23:31

Con. Extract Vol.: 4.00(mL) Dilution Factor: 50

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345699 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	220		25	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: 04Q19L4MW02BW Lab Sample ID: 580-91241-4

Matrix: Water Lab File ID: 2019.12.15.PercAA_040.d

Analysis Method: 6850 Date Collected: 12/05/2019 15:05

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/15/2019 23:44

Con. Extract Vol.: 4.00(mL) Dilution Factor: 50

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345699 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	560		25	

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 341105

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/23/2019 13:36 Calibration End Date: 11/23/2019 15:10 Calibration ID: 48221

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-341105/2	2019.11.23.ICAL_008.d
Level 2	STD02 320-341105/3	2019.11.23.ICAL_009.d
Level 3	STD03 320-341105/4	2019.11.23.ICAL_010.d
Level 4	STD04 320-341105/5	2019.11.23.ICAL_011.d
Level 5	STD05 320-341105/6	2019.11.23.ICAL_012.d
Level 6	STD06 320-341105/7	2019.11.23.ICAL_013.d
Level 7	STD07 320-341105/8	2019.11.23.ICAL_014.d
Level 8	STD08 320-341105/9	2019.11.23.ICAL_015.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.0202 1.0403	1.0566 1.0306	1.0814 1.0453	0.9990	1.0314	Ave		1.0381				2.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 341105

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/23/2019 13:36 Calibration End Date: 11/23/2019 15:10 Calibration ID: 48221

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-341105/2	2019.11.23.ICAL_008.d
Level 2	STD02 320-341105/3	2019.11.23.ICAL_009.d
Level 3	STD03 320-341105/4	2019.11.23.ICAL_010.d
Level 4	STD04 320-341105/5	2019.11.23.ICAL_011.d
Level 5	STD05 320-341105/6	2019.11.23.ICAL_012.d
Level 6	STD06 320-341105/7	2019.11.23.ICAL_013.d
Level 7	STD07 320-341105/8	2019.11.23.ICAL_014.d
Level 8	STD08 320-341105/9	2019.11.23.ICAL_015.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	674390 22978447	1154976 45184354	2391461 82499411	4602678	9631308	0.150 5.00	0.250 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

Calibration / Perchlorate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

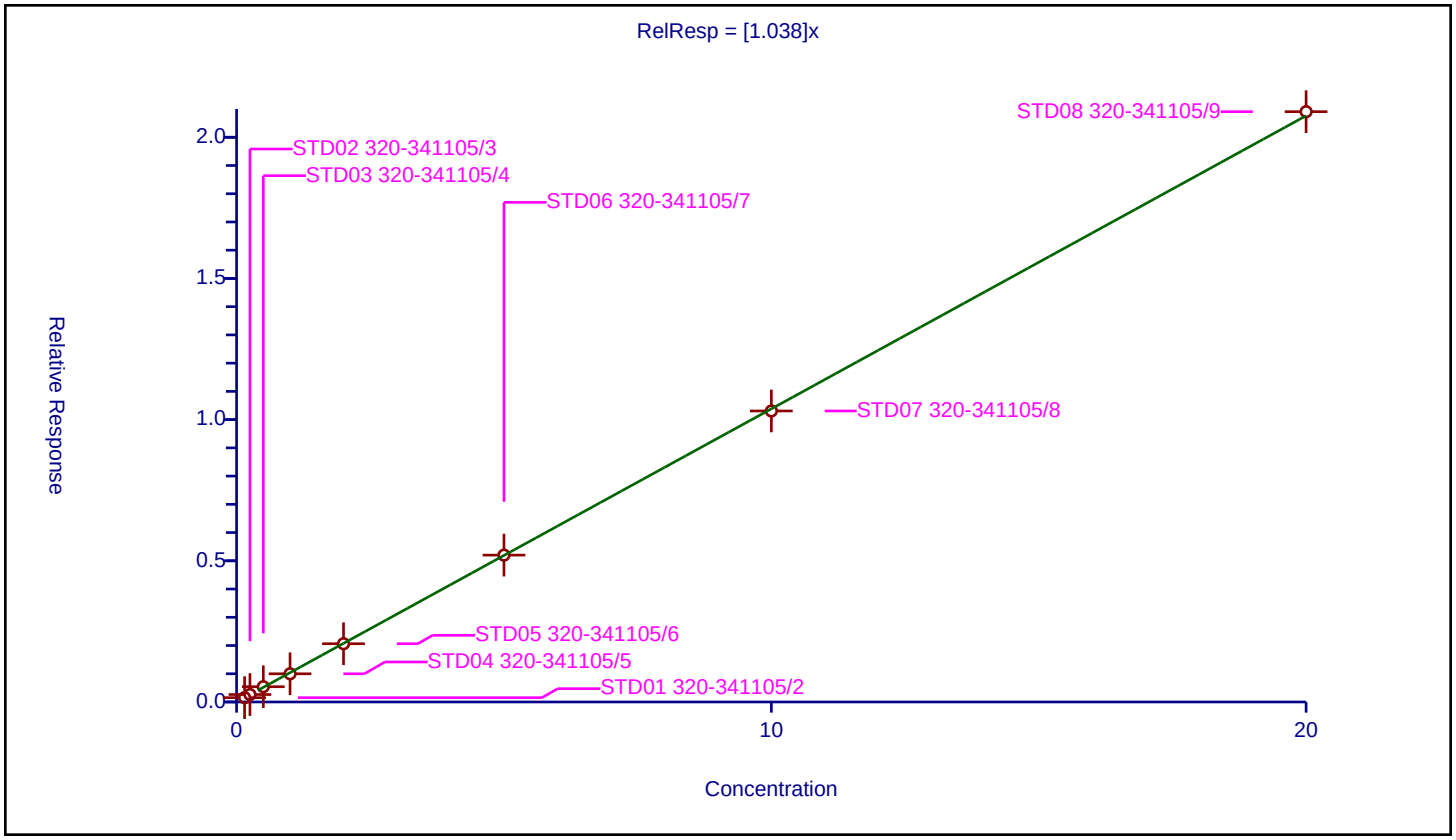
Curve Coefficients

Intercept:	0
Slope:	1.038

Error Coefficients

Standard Error:	36800000
Relative Standard Error:	2.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 320-341105/2	0.15	0.153032	10.033747	44217306.0	1.020213	Y
2	STD02 320-341105/3	0.25	0.264147	10.033747	43872346.0	1.056587	Y
3	STD03 320-341105/4	0.5	0.540695	10.033747	44378645.0	1.08139	Y
4	STD04 320-341105/5	1.0	0.998966	10.033747	46229931.0	0.998966	Y
5	STD05 320-341105/6	2.0	2.062742	10.033747	46849336.0	1.031371	Y
6	STD06 320-341105/7	5.0	5.201503	10.033747	44325634.0	1.040301	Y
7	STD07 320-341105/8	10.0	10.306444	10.033747	43988826.0	1.030644	Y
8	STD08 320-341105/9	20.0	20.905646	10.033747	39595917.0	1.045282	Y



FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 345262

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/13/2019 15:59 Calibration End Date: 12/13/2019 17:33 Calibration ID: 48421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-345262/2	2019.12.13.Perc_ICALA_008.d
Level 2	STD02 320-345262/3	2019.12.13.Perc_ICALA_009.d
Level 3	STD03 320-345262/4	2019.12.13.Perc_ICALA_010.d
Level 4	STD04 320-345262/5	2019.12.13.Perc_ICALA_011.d
Level 5	STD05 320-345262/6	2019.12.13.Perc_ICALA_012.d
Level 6	STD06 320-345262/7	2019.12.13.Perc_ICALA_013.d
Level 7	STD07 320-345262/8	2019.12.13.Perc_ICALA_014.d
Level 8	STD08 320-345262/9	2019.12.13.Perc_ICALA_015.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.9875 0.9981	1.0028 1.0430	1.0262 1.0190	1.0412	1.0189	Ave		1.0171				2.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1 Analy Batch No.: 345262

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/13/2019 15:59 Calibration End Date: 12/13/2019 17:33 Calibration ID: 48421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-345262/2	2019.12.13.Perc_ICALA_008.d
Level 2	STD02 320-345262/3	2019.12.13.Perc_ICALA_009.d
Level 3	STD03 320-345262/4	2019.12.13.Perc_ICALA_010.d
Level 4	STD04 320-345262/5	2019.12.13.Perc_ICALA_011.d
Level 5	STD05 320-345262/6	2019.12.13.Perc_ICALA_012.d
Level 6	STD06 320-345262/7	2019.12.13.Perc_ICALA_013.d
Level 7	STD07 320-345262/8	2019.12.13.Perc_ICALA_014.d
Level 8	STD08 320-345262/9	2019.12.13.Perc_ICALA_015.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	623934 21290829	1071720 45518430	2161379 74775903	4328257	8709328	0.150 5.00	0.250 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

Calibration / Perchlorate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

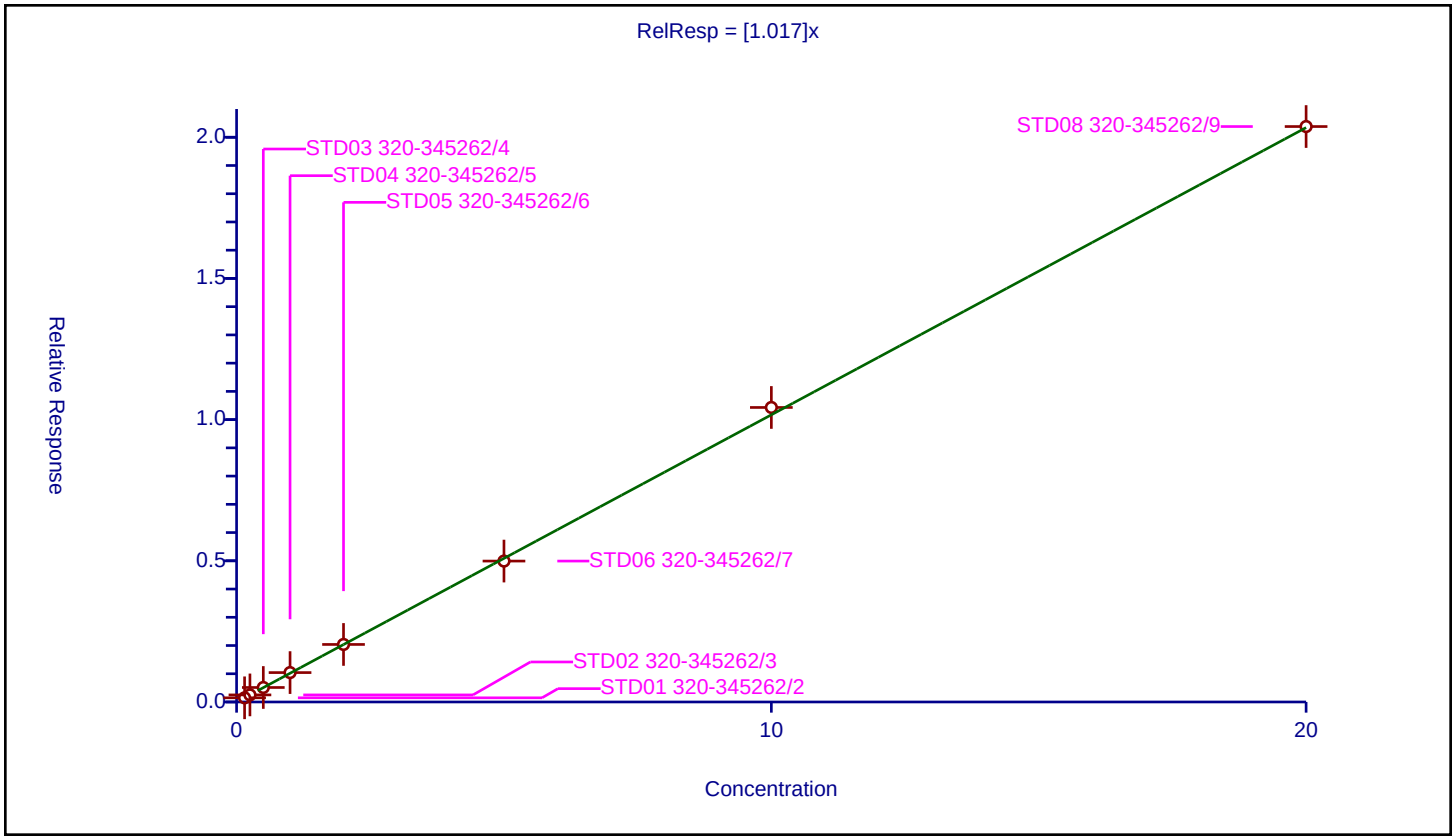
Curve Coefficients

Intercept:	0
Slope:	1.017

Error Coefficients

Standard Error:	34300000
Relative Standard Error:	2.0
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD01 320-345262/2	0.15	0.148121	10.033747	42265289.0	0.987476	Y
2	STD02 320-345262/3	0.25	0.250698	10.033747	42893642.0	1.002794	Y
3	STD03 320-345262/4	0.5	0.513093	10.033747	42266642.0	1.026187	Y
4	STD04 320-345262/5	1.0	1.041172	10.033747	41711300.0	1.041172	Y
5	STD05 320-345262/6	2.0	2.037792	10.033747	42883280.0	1.018896	Y
6	STD06 320-345262/7	5.0	4.990561	10.033747	42806167.0	0.998112	Y
7	STD07 320-345262/8	10.0	10.430385	10.033747	43787495.0	1.043038	Y
8	STD08 320-345262/9	20.0	20.379928	10.033747	36814776.0	1.018996	Y



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-341105/11 Calibration Date: 11/23/2019 15:37

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.11.23.ICAL_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	0.9233		4.45	5.00	-11.1	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-344441/1 Calibration Date: 12/10/2019 11:45

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.187		2.29	2.00	14.4	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVL 320-344441/2 Calibration Date: 12/10/2019 11:58

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_008.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.222		0.589	0.500	17.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-344441/16 Calibration Date: 12/10/2019 15:06

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_022.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.183		2.28	2.00	13.9	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-344441/32 Calibration Date: 12/10/2019 18:54

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_039.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.149		2.21	2.00	10.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVL 320-344441/33 Calibration Date: 12/10/2019 19:08

Instrument ID: A5 Calib Start Date: 11/23/2019 13:36

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 11/23/2019 15:10

Lab File ID: 2019.12.10_Perc_040.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.038	1.191		0.573	0.500	14.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: ICV 320-345262/11 Calibration Date: 12/13/2019 18:00

Instrument ID: A5 Calib Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 12/13/2019 17:33

Lab File ID: 2019.12.13.Perc_ICALA_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.017	0.9137		4.49	5.00	-10.2	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345699/1 Calibration Date: 12/15/2019 22:37

Instrument ID: A5 Calib Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 12/13/2019 17:33

Lab File ID: 2019.12.15.PercAA_035.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.017	1.149		2.26	2.00	13.0	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVL 320-345699/2 Calibration Date: 12/15/2019 22:51

Instrument ID: A5 Calib Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 12/13/2019 17:33

Lab File ID: 2019.12.15.PercAA_036.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.017	1.149		0.565	0.500	13.0	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCV 320-345699/8 Calibration Date: 12/16/2019 00:11

Instrument ID: A5 Calib Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 12/13/2019 17:33

Lab File ID: 2019.12.15.PercAA_042.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.017	1.165		2.29	2.00	14.5	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Lab Sample ID: CCVL 320-345699/9 Calibration Date: 12/16/2019 00:25

Instrument ID: A5 Calib Start Date: 12/13/2019 15:59

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 12/13/2019 17:33

Lab File ID: 2019.12.15.PercAA_043.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	1.017	1.194		0.587	0.500	17.4	50.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-344342/1-A

Matrix: Water Lab File ID: 2019.12.10_Perc_010.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:25

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-344441/3

Matrix: Water Lab File ID: 2019.12.10_Perc_009.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/10/2019 12:12

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-344441/34

Matrix: Water Lab File ID: 2019.12.10_Perc_041.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/10/2019 19:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-345262/10

Matrix: Water Lab File ID: 2019.12.13.Perc_ICALA_016.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/13/2019 17:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345262 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-345699/3

Matrix: Water Lab File ID: 2019.12.15.PercAA_037.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/15/2019 23:04

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345699 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-345699/10

Matrix: Water Lab File ID: 2019.12.15.PercAA_044.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/16/2019 00:38

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345699 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-341105/1

Matrix: Water Lab File ID: 2019.11.23.ICAL_007.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 11/23/2019 13:23

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 341105 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-345262/1

Matrix: Water Lab File ID: 2019.12.13.Perc_ICALA_007.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/13/2019 15:46

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 345262 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-344342/2-A

Matrix: Water Lab File ID: 2019.12.10_Perc_011.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:39

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	5.60		0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 320-344342/3-A

Matrix: Water Lab File ID: 2019.12.10_Perc_012.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 12/09/2019 19:27

Sample wt/vol: 4.00(mL) Date Analyzed: 12/10/2019 12:52

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 344441 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	5.65		0.50	

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Start Date: 11/23/2019 13:23

Analysis Batch Number: 341105 End Date: 11/23/2019 15:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICB 320-341105/1		11/23/2019 13:23	1	2019.11.23.ICAL 007.d	Anion HR 4.6(mm)
STD01 320-341105/2 IC		11/23/2019 13:36	1	2019.11.23.ICAL 008.d	Anion HR 4.6(mm)
STD02 320-341105/3 IC		11/23/2019 13:50	1	2019.11.23.ICAL 009.d	Anion HR 4.6(mm)
STD03 320-341105/4 IC		11/23/2019 14:03	1	2019.11.23.ICAL 010.d	Anion HR 4.6(mm)
STD04 320-341105/5 IC		11/23/2019 14:17	1	2019.11.23.ICAL 011.d	Anion HR 4.6(mm)
STD05 320-341105/6 ICISAV		11/23/2019 14:30	1	2019.11.23.ICAL 012.d	Anion HR 4.6(mm)
STD06 320-341105/7 IC		11/23/2019 14:43	1	2019.11.23.ICAL 013.d	Anion HR 4.6(mm)
STD07 320-341105/8 IC		11/23/2019 14:57	1	2019.11.23.ICAL 014.d	Anion HR 4.6(mm)
STD08 320-341105/9 IC		11/23/2019 15:10	1	2019.11.23.ICAL 015.d	Anion HR 4.6(mm)
CCB 320-341105/10		11/23/2019 15:24	1		Anion HR 4.6(mm)
ICV 320-341105/11		11/23/2019 15:37	1	2019.11.23.ICAL 017.d	Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Start Date: 12/10/2019 11:45

Analysis Batch Number: 344441 End Date: 12/10/2019 19:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-344441/1 CCVIS		12/10/2019 11:45	1	2019.12.10_Perc 007.d	Anion HR 4.6(mm)
CCVL 320-344441/2		12/10/2019 11:58	1	2019.12.10_Perc 008.d	Anion HR 4.6(mm)
CCB 320-344441/3		12/10/2019 12:12	1	2019.12.10_Perc 009.d	Anion HR 4.6(mm)
MB 320-344342/1-A		12/10/2019 12:25	1	2019.12.10_Perc 010.d	Anion HR 4.6(mm)
LCS 320-344342/2-A		12/10/2019 12:39	1	2019.12.10_Perc 011.d	Anion HR 4.6(mm)
INF 320-344342/3-A		12/10/2019 12:52	1	2019.12.10_Perc 012.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:05	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:19	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:32	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:46	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 13:59	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 14:13	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 14:26	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 14:39	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 14:53	1		Anion HR 4.6(mm)
CCV 320-344441/16		12/10/2019 15:06	1	2019.12.10_Perc 022.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:20	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:33	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 15:46	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:00	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:13	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:27	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:40	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 16:54	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:07	1		Anion HR 4.6(mm)
580-91241-1		12/10/2019 17:20	1	2019.12.10_Perc 032.d	Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:34	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 17:47	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:01	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:14	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:28	1		Anion HR 4.6(mm)
ZZZZZ		12/10/2019 18:41	1		Anion HR 4.6(mm)
CCV 320-344441/32		12/10/2019 18:54	1	2019.12.10_Perc 039.d	Anion HR 4.6(mm)
CCVL 320-344441/33		12/10/2019 19:08	1	2019.12.10_Perc 040.d	Anion HR 4.6(mm)
CCB 320-344441/34		12/10/2019 19:21	1	2019.12.10_Perc 041.d	Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Start Date: 12/13/2019 15:46

Analysis Batch Number: 345262 End Date: 12/13/2019 18:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICB 320-345262/1		12/13/2019 15:46	1	2019.12.13.Perc ICALA 007.d	Anion HR 4.6(mm)
STD01 320-345262/2 IC		12/13/2019 15:59	1	2019.12.13.Perc ICALA 008.d	Anion HR 4.6(mm)
STD02 320-345262/3 IC		12/13/2019 16:13	1	2019.12.13.Perc ICALA 009.d	Anion HR 4.6(mm)
STD03 320-345262/4 IC		12/13/2019 16:26	1	2019.12.13.Perc ICALA 010.d	Anion HR 4.6(mm)
STD04 320-345262/5 IC		12/13/2019 16:40	1	2019.12.13.Perc ICALA 011.d	Anion HR 4.6(mm)
STD05 320-345262/6 ICISAV		12/13/2019 16:53	1	2019.12.13.Perc ICALA 012.d	Anion HR 4.6(mm)
STD06 320-345262/7 IC		12/13/2019 17:06	1	2019.12.13.Perc ICALA 013.d	Anion HR 4.6(mm)
STD07 320-345262/8 IC		12/13/2019 17:20	1	2019.12.13.Perc ICALA 014.d	Anion HR 4.6(mm)
STD08 320-345262/9 IC		12/13/2019 17:33	1	2019.12.13.Perc ICALA 015.d	Anion HR 4.6(mm)
CCB 320-345262/10		12/13/2019 17:47	1	2019.12.13.Perc ICALA 016.d	Anion HR 4.6(mm)
ICV 320-345262/11		12/13/2019 18:00	1	2019.12.13.Perc ICALA 017.d	Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-91241-1

SDG No.:

Instrument ID: A5 Start Date: 12/15/2019 22:37

Analysis Batch Number: 345699 End Date: 12/16/2019 00:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-345699/1 CCVIS		12/15/2019 22:37	1	2019.12.15.PercAA 035.d	Anion HR 4.6(mm)
CCVL 320-345699/2		12/15/2019 22:51	1	2019.12.15.PercAA 036.d	Anion HR 4.6(mm)
CCB 320-345699/3		12/15/2019 23:04	1	2019.12.15.PercAA 037.d	Anion HR 4.6(mm)
580-91241-2		12/15/2019 23:18	1	2019.12.15.PercAA 038.d	Anion HR 4.6(mm)
580-91241-3		12/15/2019 23:31	50	2019.12.15.PercAA 039.d	Anion HR 4.6(mm)
580-91241-4		12/15/2019 23:44	50	2019.12.15.PercAA 040.d	Anion HR 4.6(mm)
ZZZZZ		12/15/2019 23:58	1		Anion HR 4.6(mm)
CCV 320-345699/8		12/16/2019 00:11	1	2019.12.15.PercAA 042.d	Anion HR 4.6(mm)
CCVL 320-345699/9		12/16/2019 00:25	1	2019.12.15.PercAA 043.d	Anion HR 4.6(mm)
CCB 320-345699/10		12/16/2019 00:38	1	2019.12.15.PercAA 044.d	Anion HR 4.6(mm)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-91241-1

SDG No.:

Batch Number: 344342 Batch Start Date: 12/09/19 19:26 Batch Analyst: Arauz, Horacio J

Batch Method: Filtration Batch End Date: 12/09/19 22:24

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00045	LC6850SP 00065		
MB 320-344342/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-344342/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-344342/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
580-91241-C-1	04Q19L4MW01AW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
580-91241-C-2	04Q19L4MW01BW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
580-91241-C-3	04Q19L4MW02AW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
580-91241-C-4	04Q19L4MW02BW	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			

Batch Notes	
BA/AG/H Cartridge ID	190815
Filter #2 ID	R9HA53233
Filter ID	.45um R8MA86520
Interference check solution ID	1822561
Internal Standard ID#	1796912
Pipette/Syringe/Dispenser ID	O30845G
Analyst ID - IS Reagent Drop	HJA
Analyst ID - IS Reagent Drop Witness	JER
Analyst ID - TA Reagent Drop	HJA
Analyst ID - TA Reagent Drop Witness	JER
Reagent Water ID	11-20-19

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Test America – Sacramento

Sample Dilution Record

Method ID 6B5D

Analyst (Print Name) Inna Kuniyak **Reagent ID** HPLC_H2O_00222

Date 12/11/2019

Job #	Sample #	Original F.V. (uL)	Aliquot (uL)	Dilution F.V. (uL)	Dilution Factor
580-91241	3	4000	30	1500	50X
↓	4	4000	30	1500	50X

IK 12/11/19

Comments:

Subcontract Data

Shipping and Receiving Documents

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Matt Randall and Scott Brausten
Company: PBS Engineering and Environmental
Address: 4412 SW Corbett Ave
City: Portland
State, Zip: OR, 97239
Phone:
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com
Project Name: Camp Bonneville
Site:

Sampler: Matt R. & Sam V.
Phone: 360-601-7712
Lab PM: Cruz, Sheri L
E-Mail: sheri.cruz@testamericainc.com
Carrier Tracking No(s):

COC No: 580-31510-10297.1
Page: Page 1 of 1
Job #:

Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 58011152
SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	~~8260B~~ Full list Explosives	~~8330A Nitroaromatics and Nitramines~~ VOCs	Total Number of containers	Special Instructions/Note:
Preservation Code:											
04Q19L4MW01AW	12/5/19	1250	G	W	Y	N	X	X	X	6	
04Q19L4MW01BW		1332									
04Q19L4MW02AW		1407									
04Q19L4MW02BW		1505									

580-91241 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Data Package III

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	12/5/19	PBS	Received by:	12/6/19 1150	M.E.
Relinquished by:	12/6/19 1250	M.E.	Received by:	12/6/19 1350	TAL PDX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.3, 2.4

Ver: 08/04/2016

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Matt R. & Sam V.	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone: 360-601-7712	E-Mail: sheri.cruz@testamericainc.com		Page: Page 1 of 1
Company: PBS Engineering and Environmental				Job #:

Address: 4412 SW Corbett Ave	Due Date Requested:
City: Portland	TAT Requested (days):
State, Zip: OR, 97239	
Phone:	PO #: Purchase Order not required
Email: matt.randall@pbsusa.com or Scott.Braunsten@pbsusa.com	WO #:
Project Name: Camp Bonneville	Project #: 58011152
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850 Perchlorate	Full List Explosives + VOCs		Total Number of containers	Special Instructions/Note:
			Preservation Code:								
04Q19L4MW01AW	12/5/19	1250	G	W	Y	N	X	X	X	6	
04Q19L4MW01BW		1352									
04Q19L4MW02AW		1407									
04Q19L4MW02BW		1505									

580-91241 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify): Data Package III

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/5/19	PBS		12/6/19 1150	M.E.
2		12/6/19 1250	M.E.		12/6/19 1250	TAL
3		12/6/19 1700	TAL		12.7.19 0930	TAS

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3, 2.4, 7=1.8

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-72886.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-91241-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 12/24/2019			Preservation Codes:
City: West Sacramento	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	8330B/8330_SPE_P_IVWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
04Q19L4MW01AW (580-91241-1)	12/5/19	12:50 Pacific		Water			X	X	3	
04Q19L4MW01BW (580-91241-2)	12/5/19	13:32 Pacific		Water			X	X	3	
04Q19L4MW02AW (580-91241-3)	12/5/19	14:07 Pacific		Water			X	X	3	
04Q19L4MW02BW (580-91241-4)	12/5/19	15:05 Pacific		Water			X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/6/19 1700	TAPOR		12/7/19 - 9:40	ETHSAC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.: 619528	Cooler Temperature(s) °C and Other Remarks: OBS 5.3 Corr 5.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-91241-1

Login Number: 91241
List Number: 1
Creator: O'Connell, Jason I

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

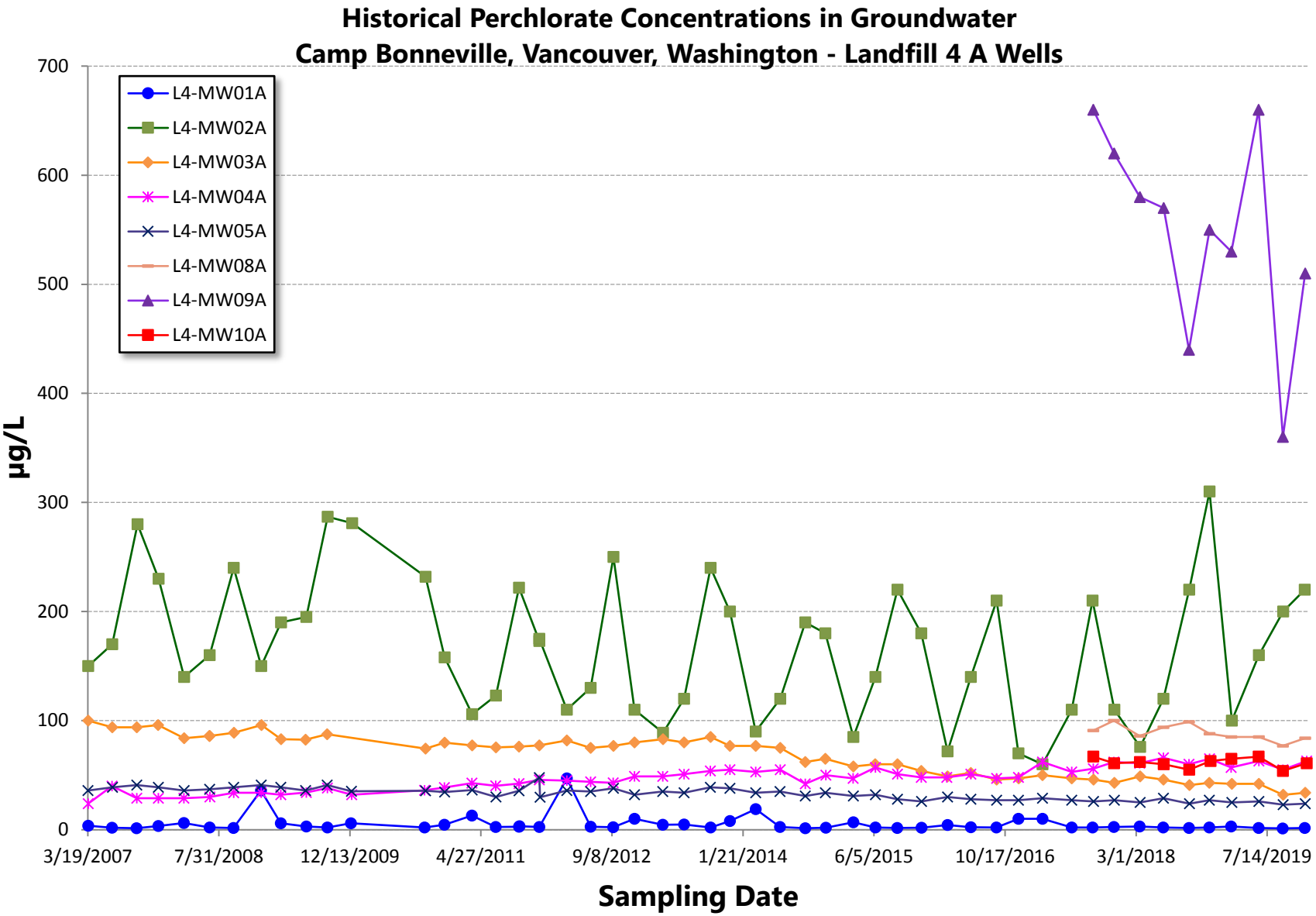
Job Number: 580-91241-1

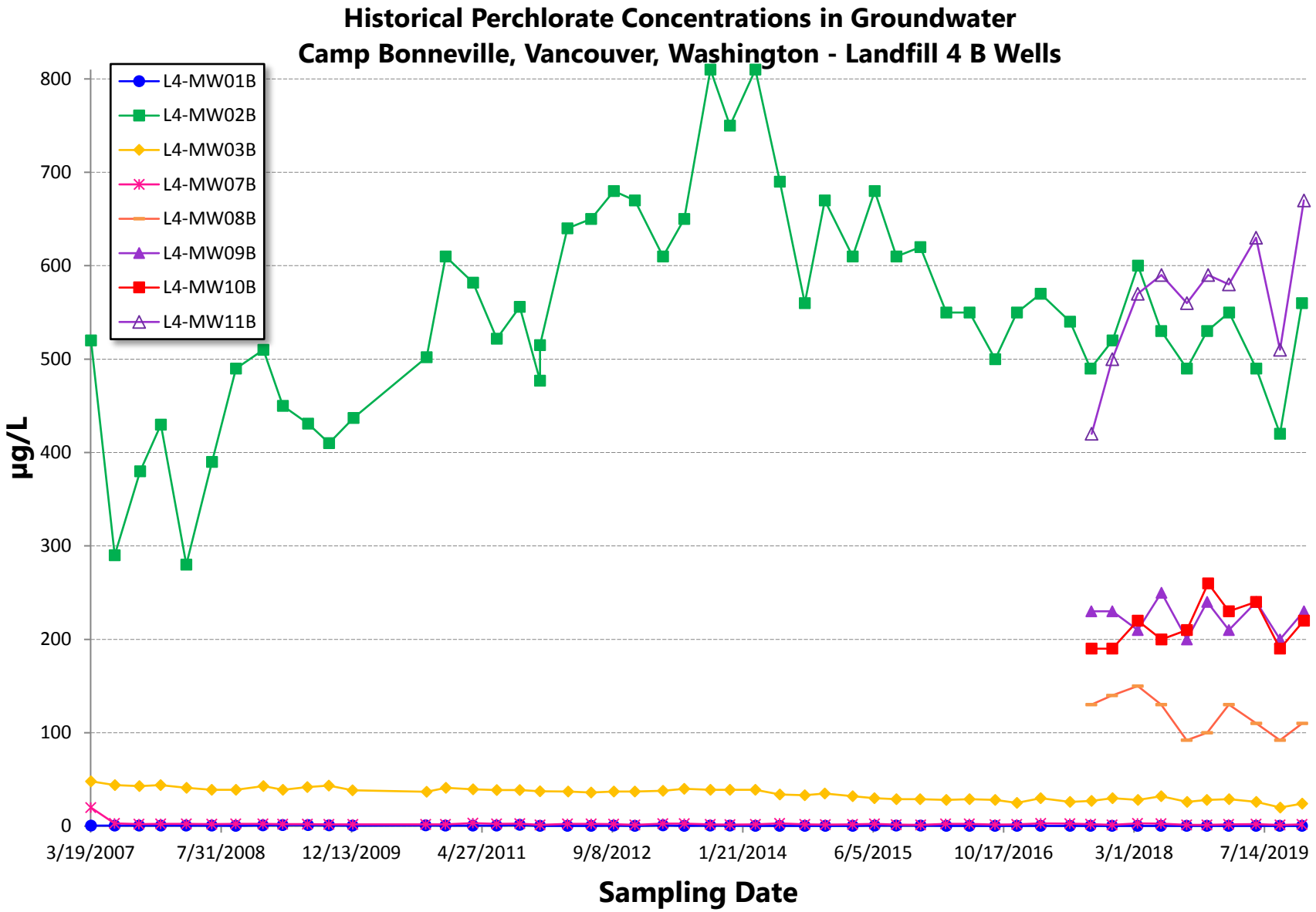
Login Number: 91241
List Number: 2
Creator: Kintaudi, Pauline W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 12/09/19 02:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	619528
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	Ob: 5.3c Corr: 5.7c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix D
Trend Graphs

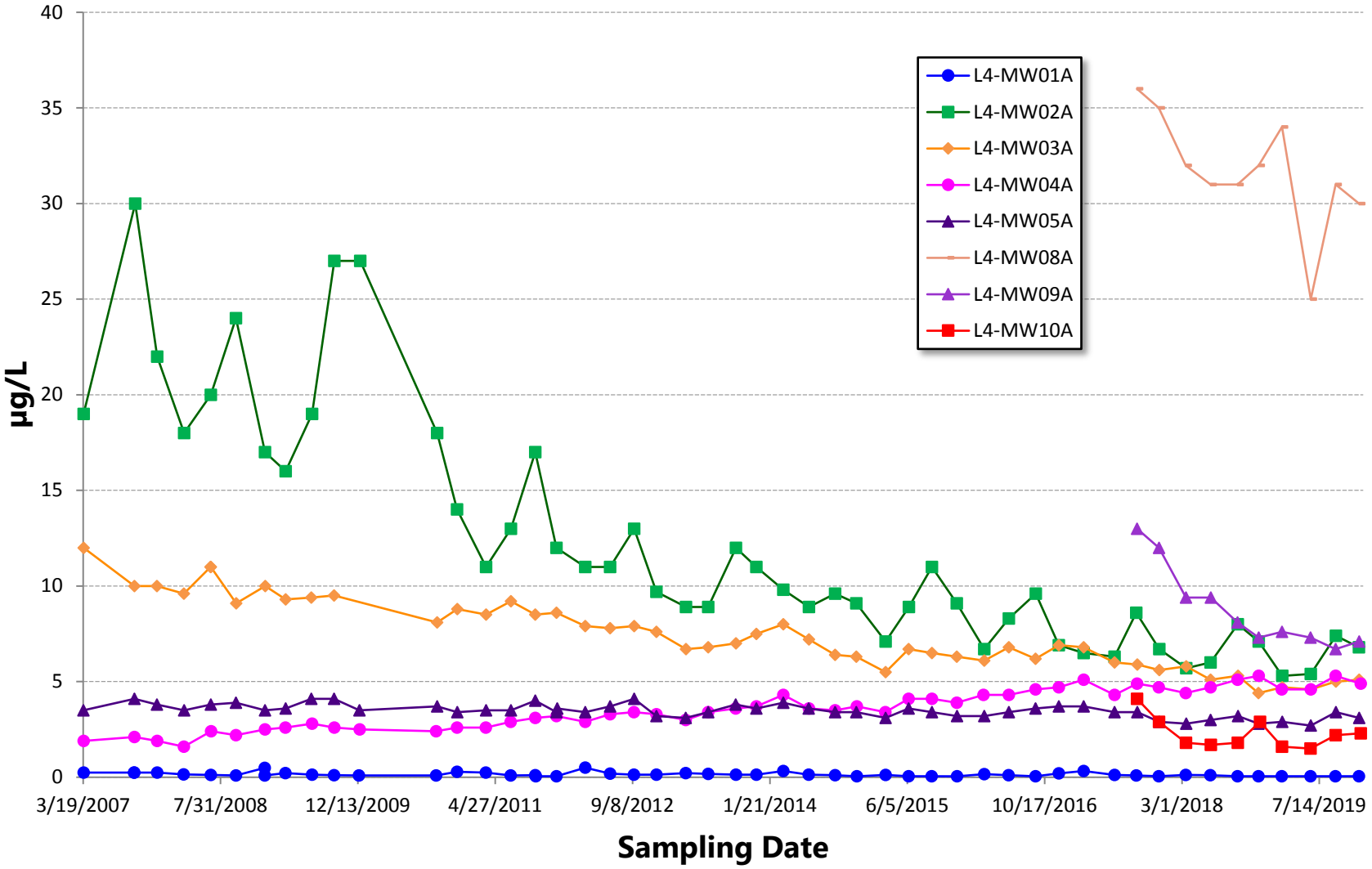

Historical Perchlorate Concentrations in Groundwater
Camp Bonneville, Vancouver, Washington - Landfill 4 A Wells
L4-MW01A
L4-MW02A
L4-MW03A
L4-MW04A
L4-MW05A
L4-MW08A
L4-MW09A
L4-MW10A
µg/L
700
600
500
400
300
200
100
0
3/19/2007
7/31/2008
12/13/2009
4/27/2011
9/8/2012
1/21/2014
6/5/2015
10/17/2016
3/1/2018
7/14/2019
Sampling Date



PBS

March 2020
PBS Project 76151.009

Historical RDX Concentrations in Groundwater
Camp Bonneville, Vancouver, Washington - Landfill 4 A Wells



PBS

March 2020
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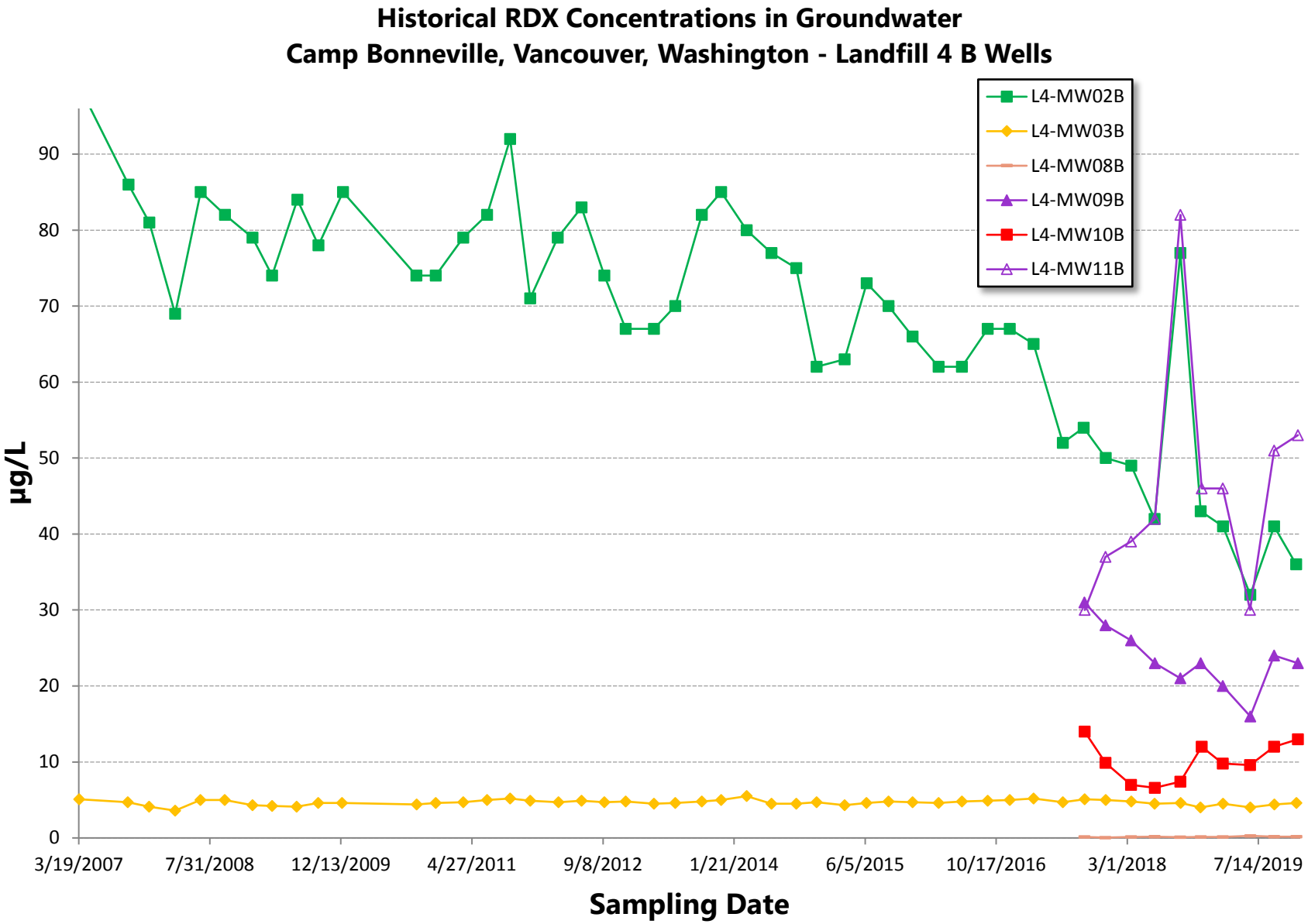
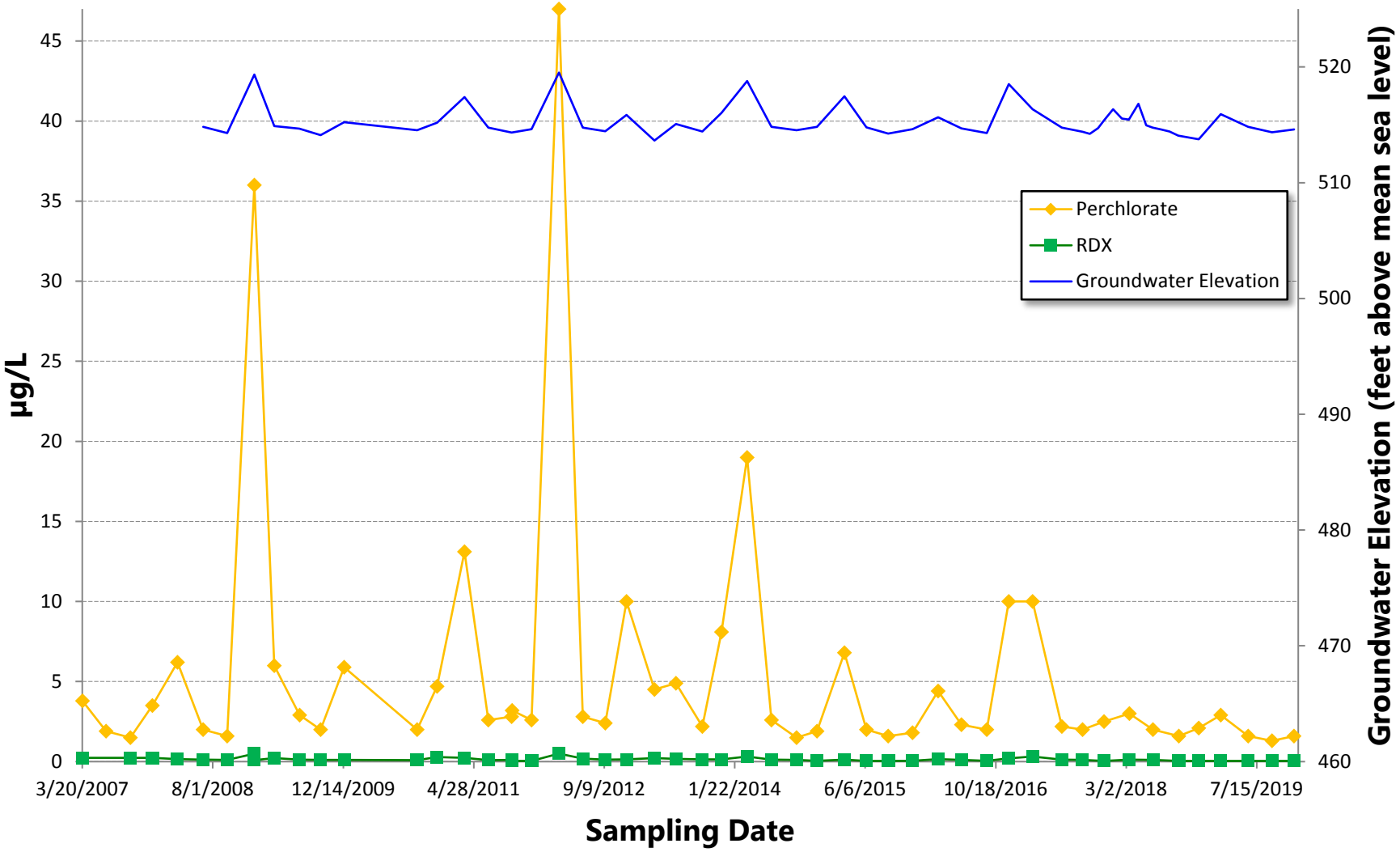


PBS

March 2020
PBS Project 76151.009

Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW01A



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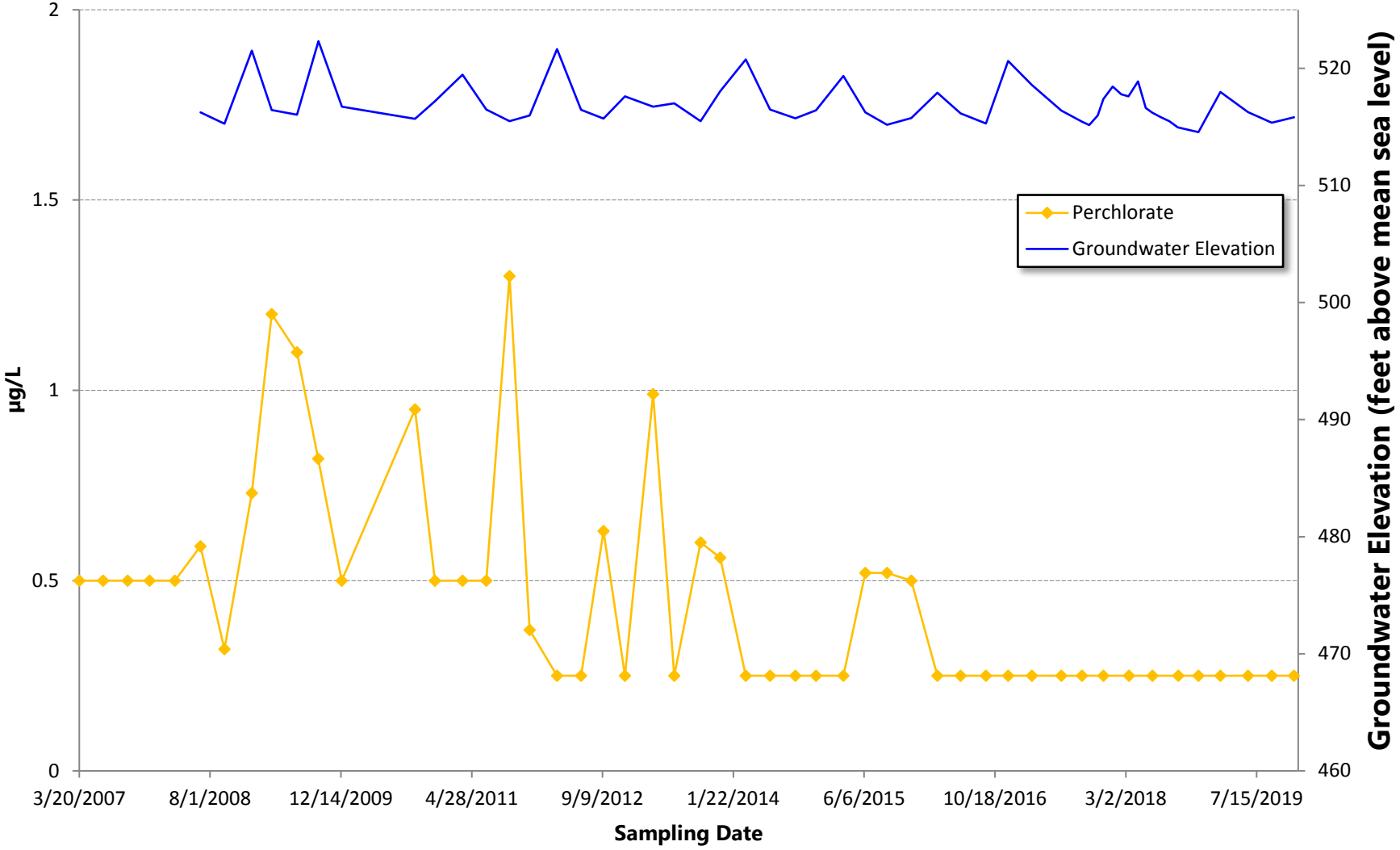
March 2020
PBS Project 76151.009

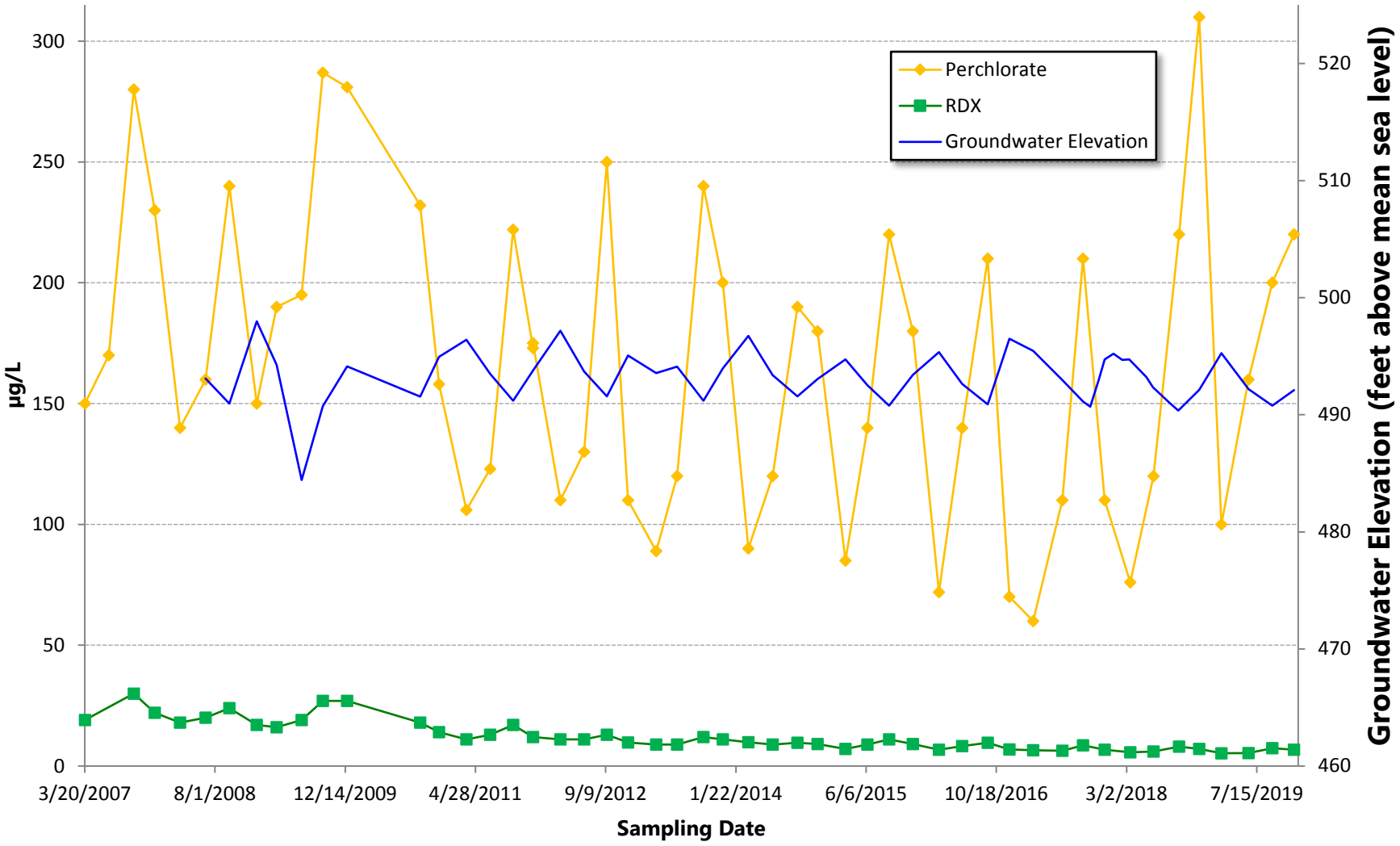
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW01B



PBS

March 2020
PBS Project 76151.009

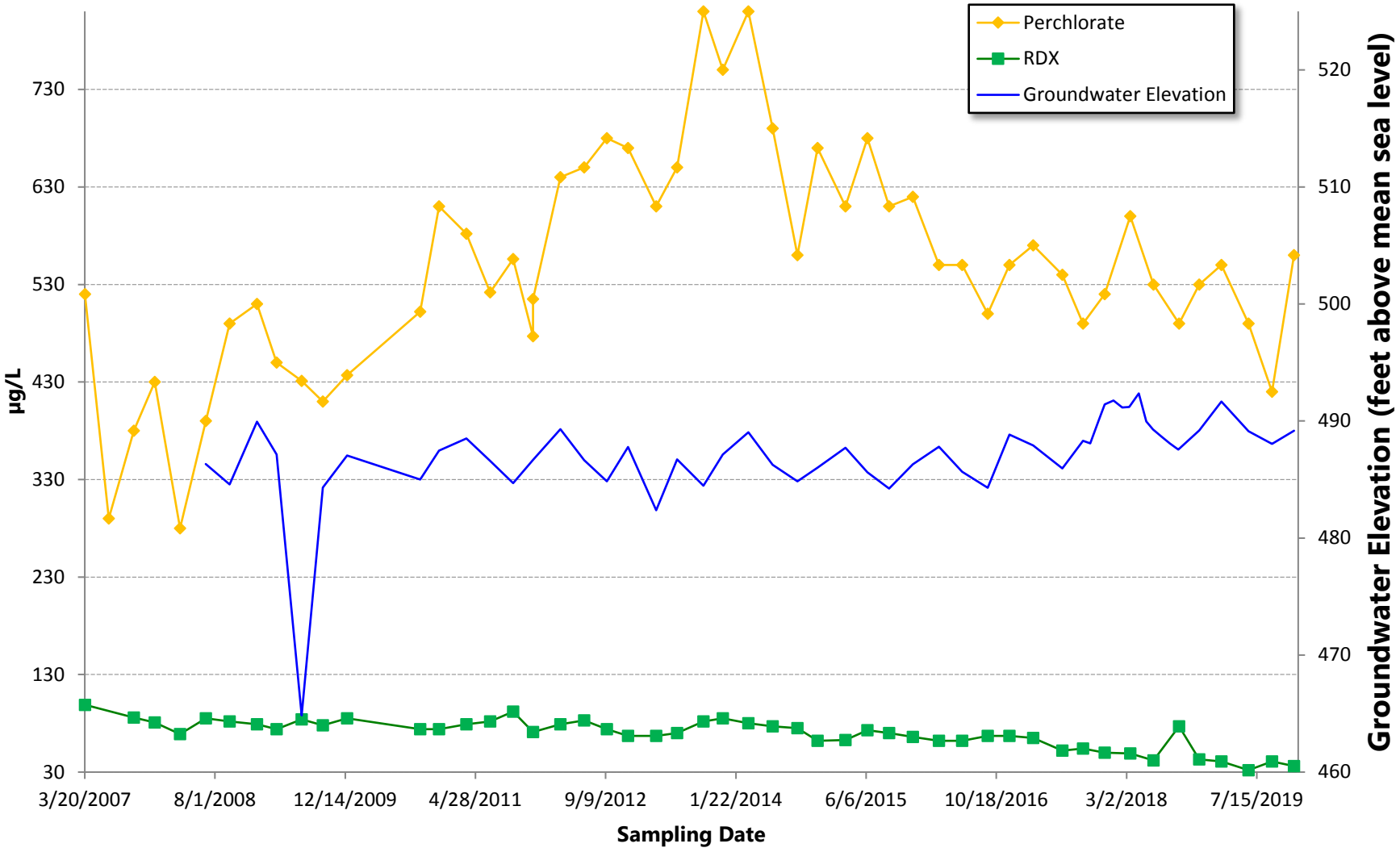
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW02A



PBS

March 2020
PBS Project 76151.009

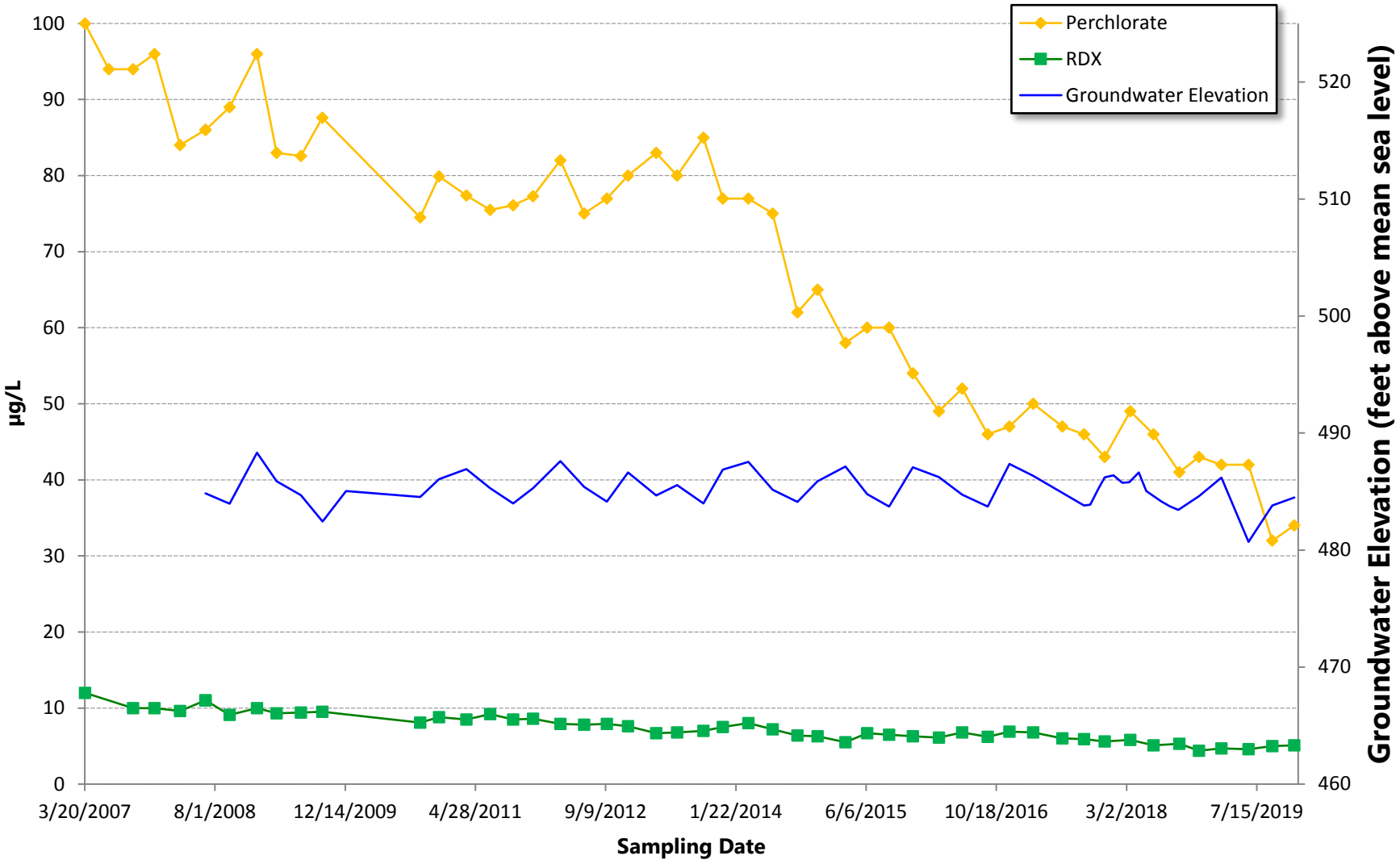
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW02B



PBS

March 2020
PBS Project 76151.009

Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW03A



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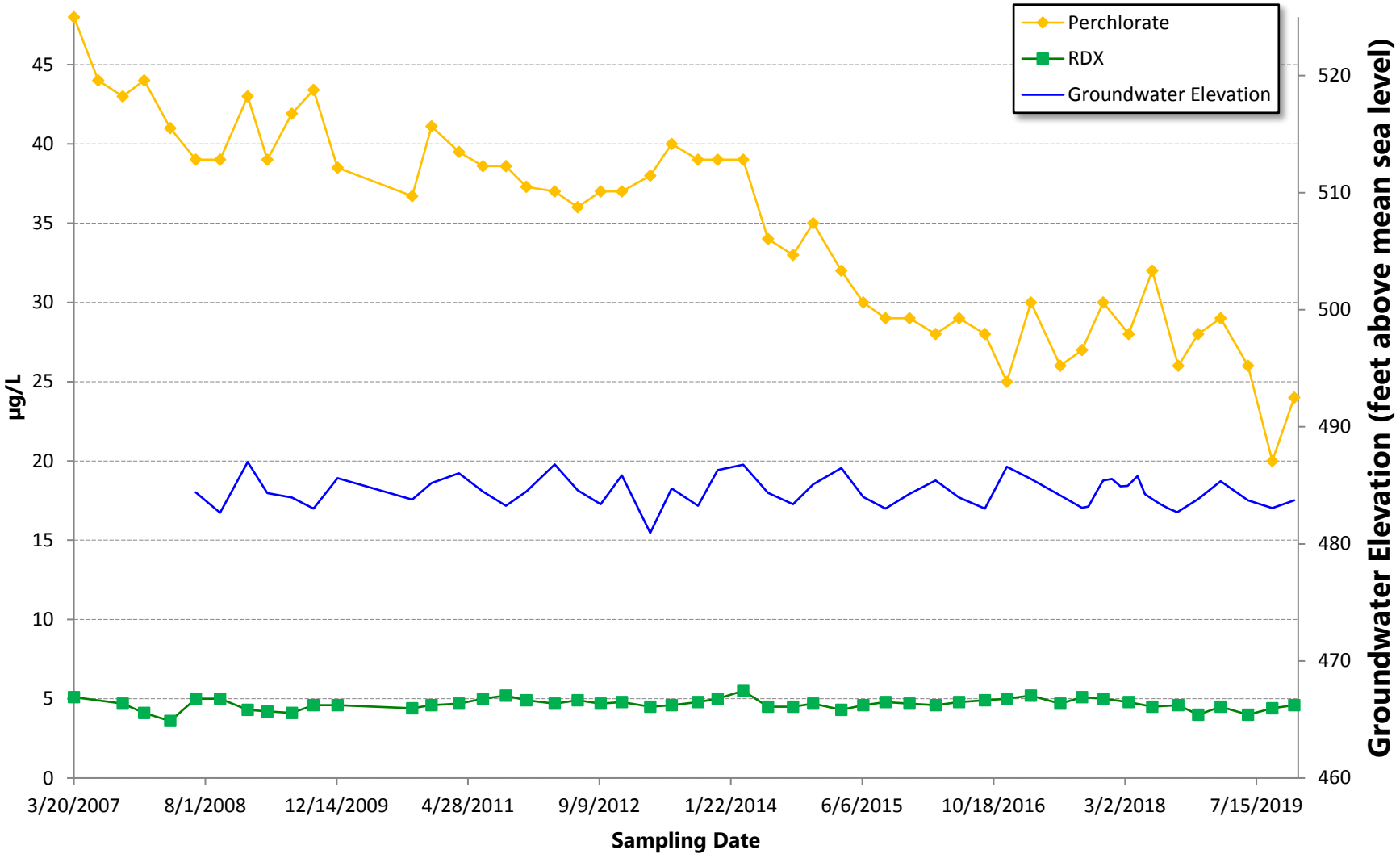
March 2020
PBS Project 76151.009

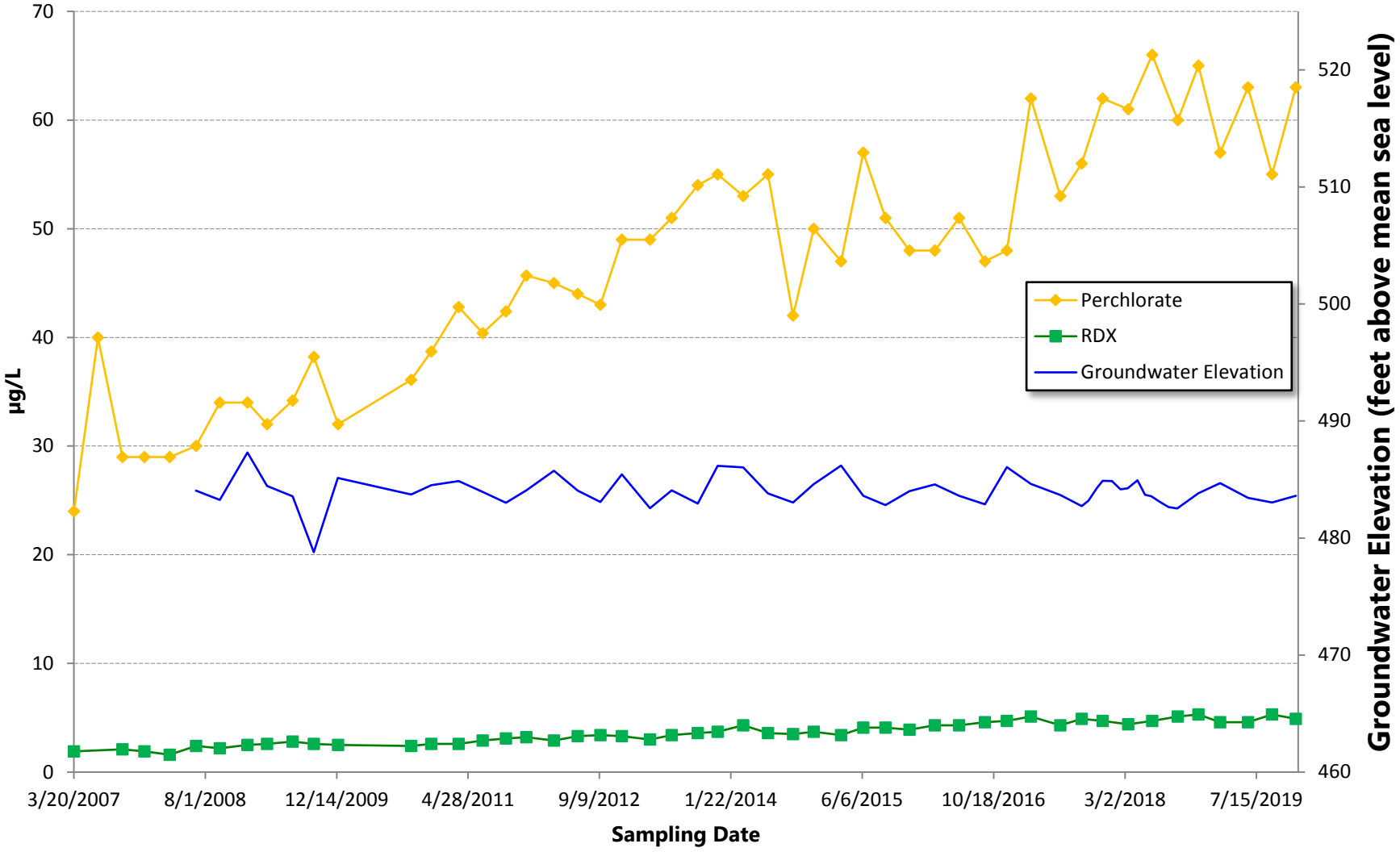
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW03B



PBS

March 2020
PBS Project 76151.009

Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW04A



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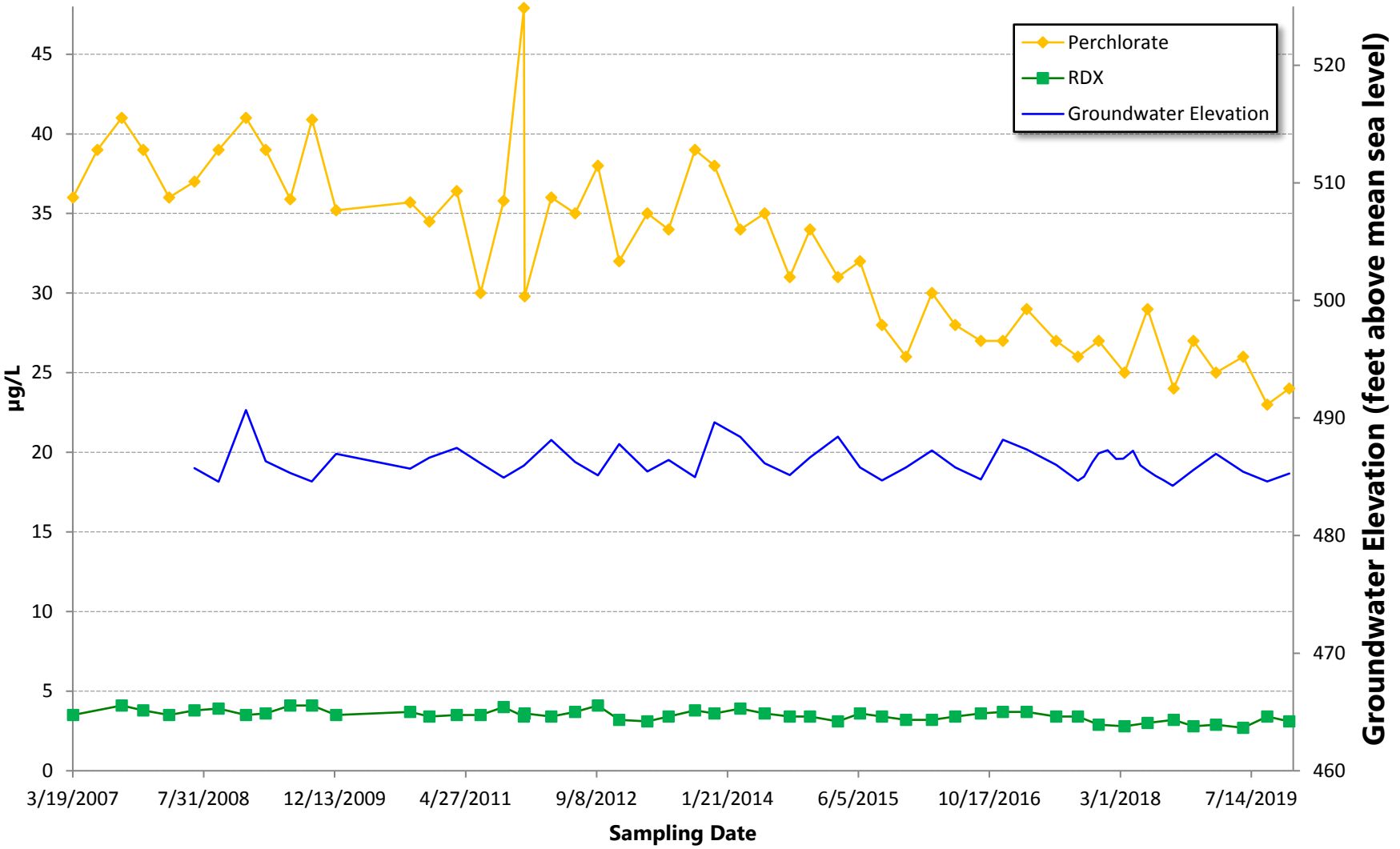
March 2020
PBS Project 76151.009

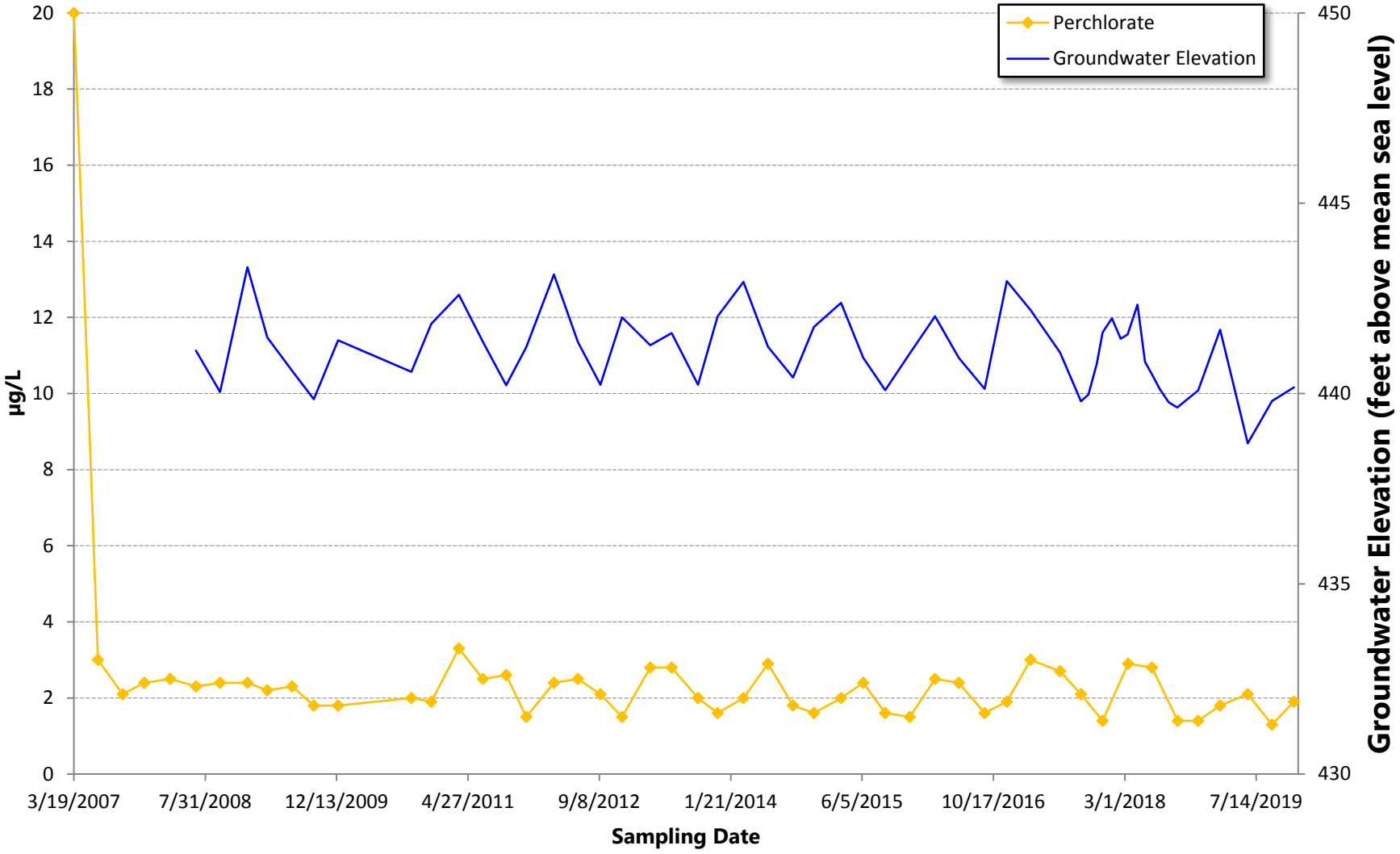
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW05A



PBS

March 2020
PBS Project 76151.009

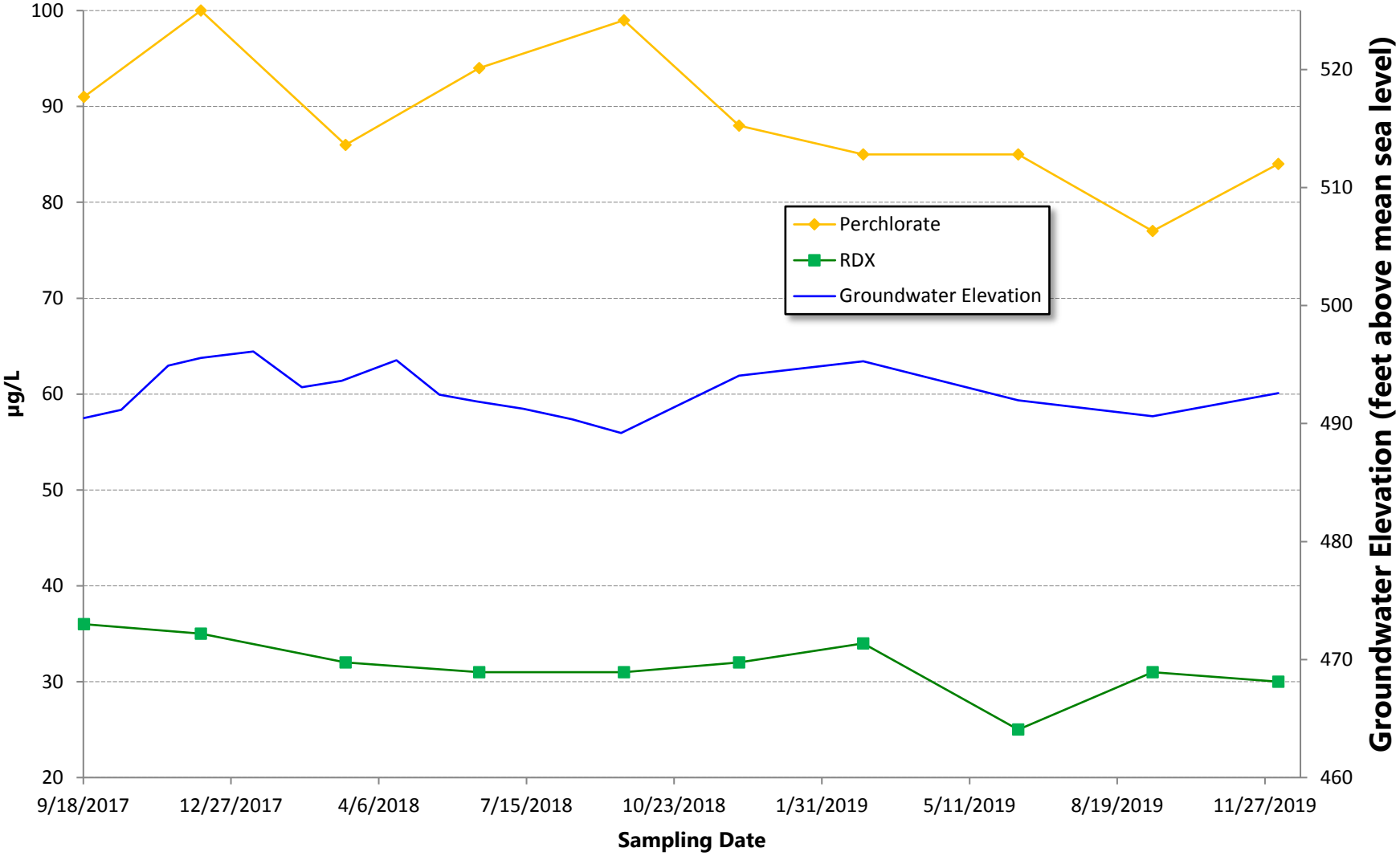
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW07B



PBS

March 2020
PBS Project 76151.009

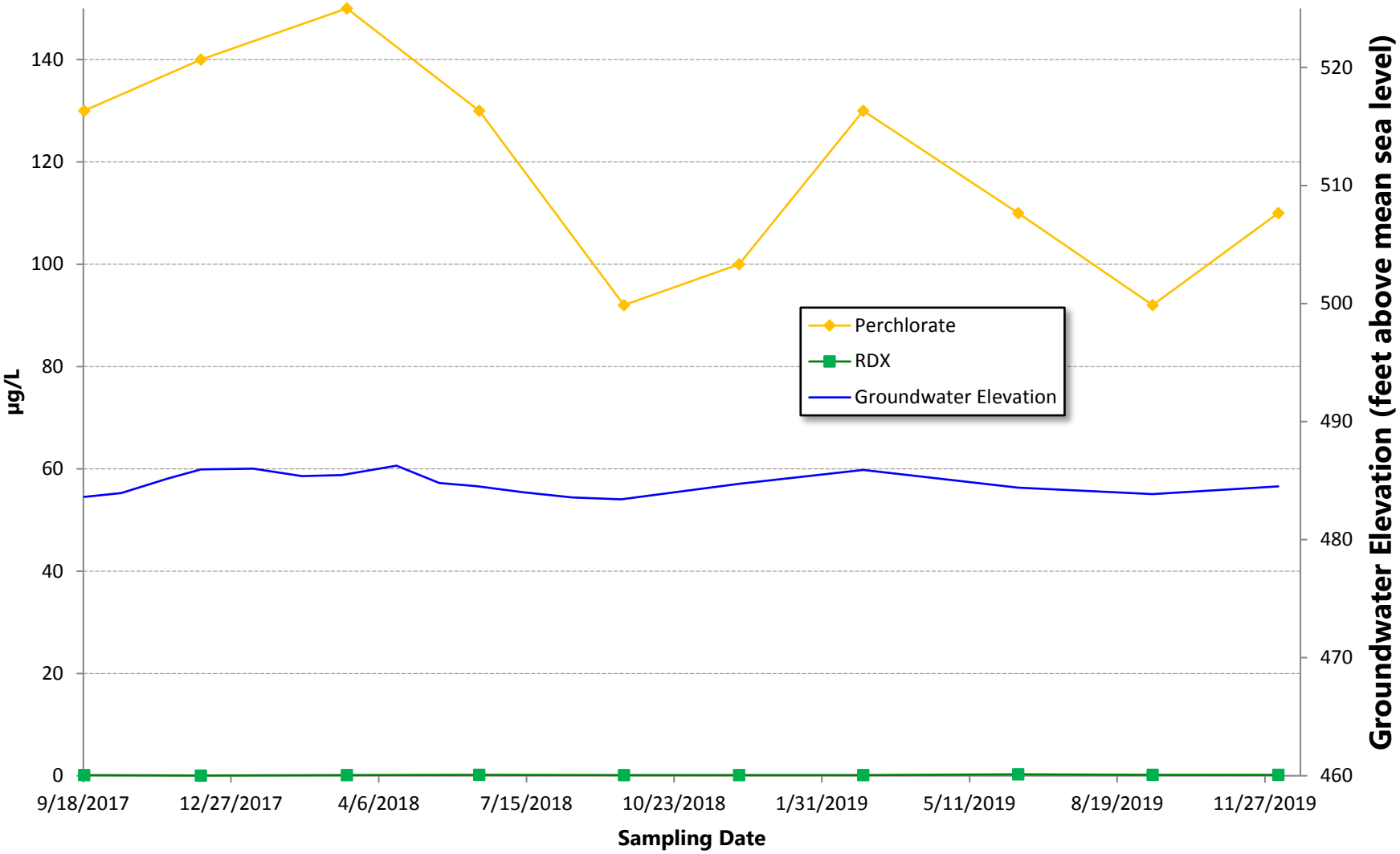
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW08A



PBS

March 2020
PBS Project 76151.009

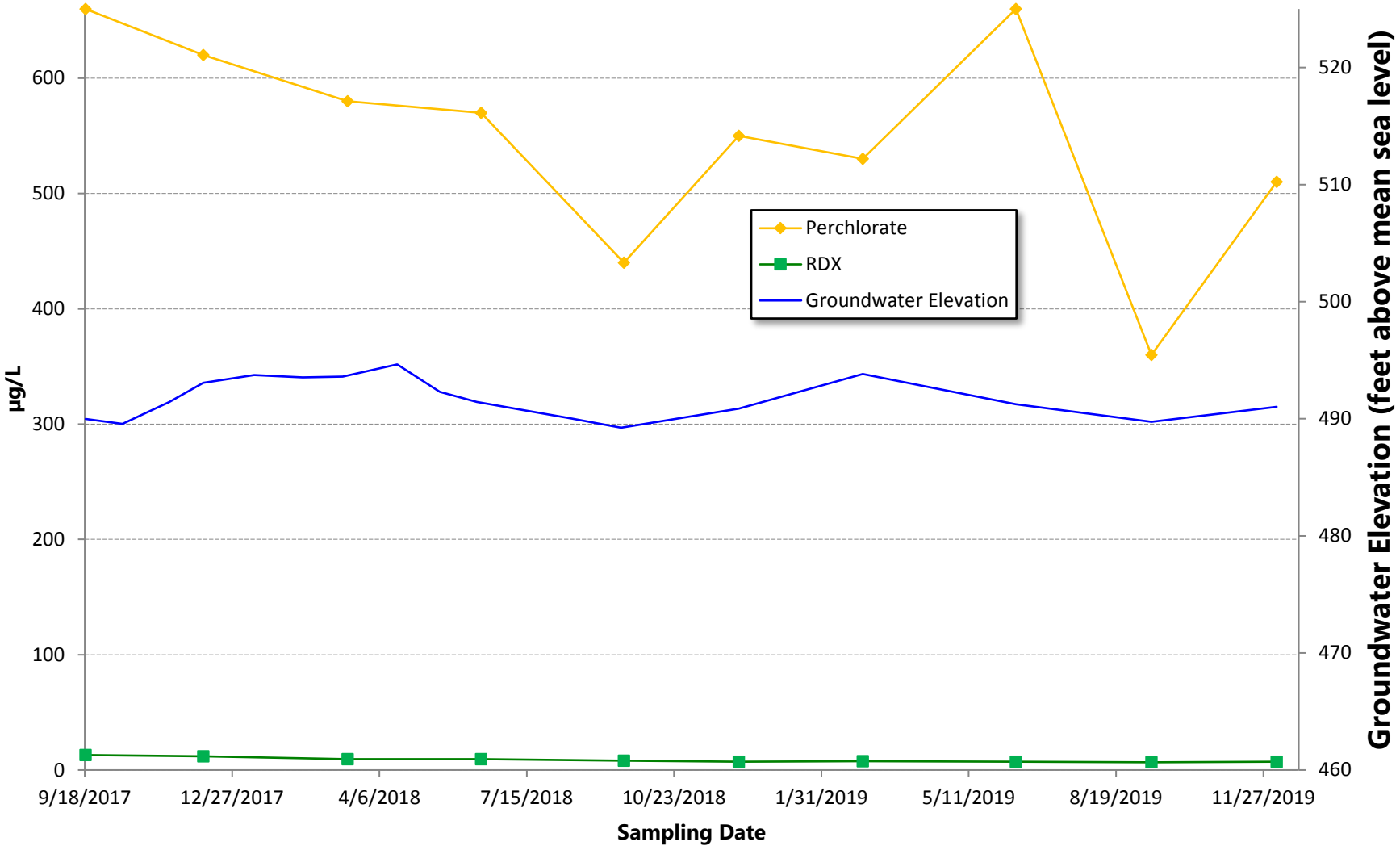
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW08B



PBS

March 2020
PBS Project 76151.009

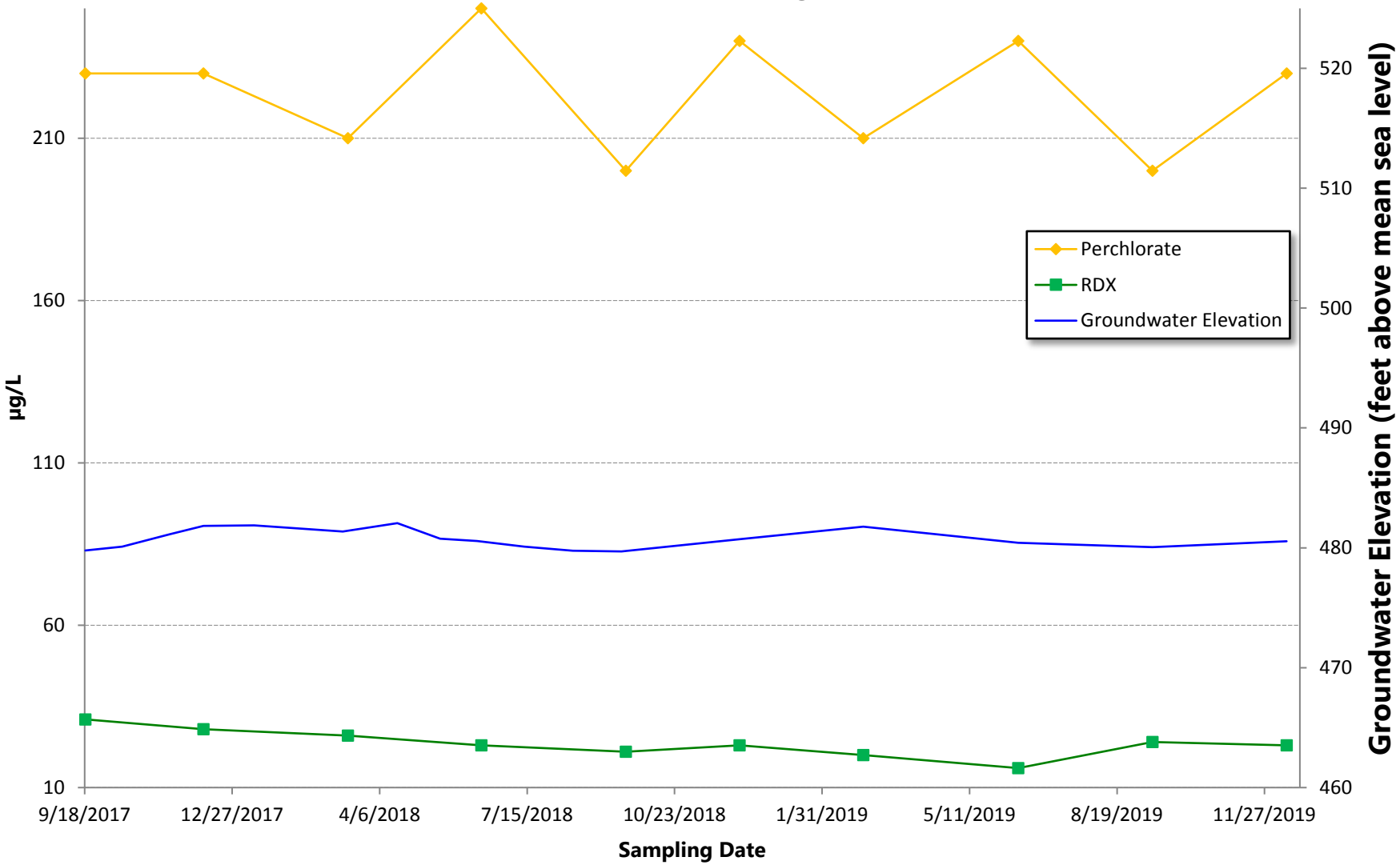
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW09A



PBS

March 2020
PBS Project 76151.009

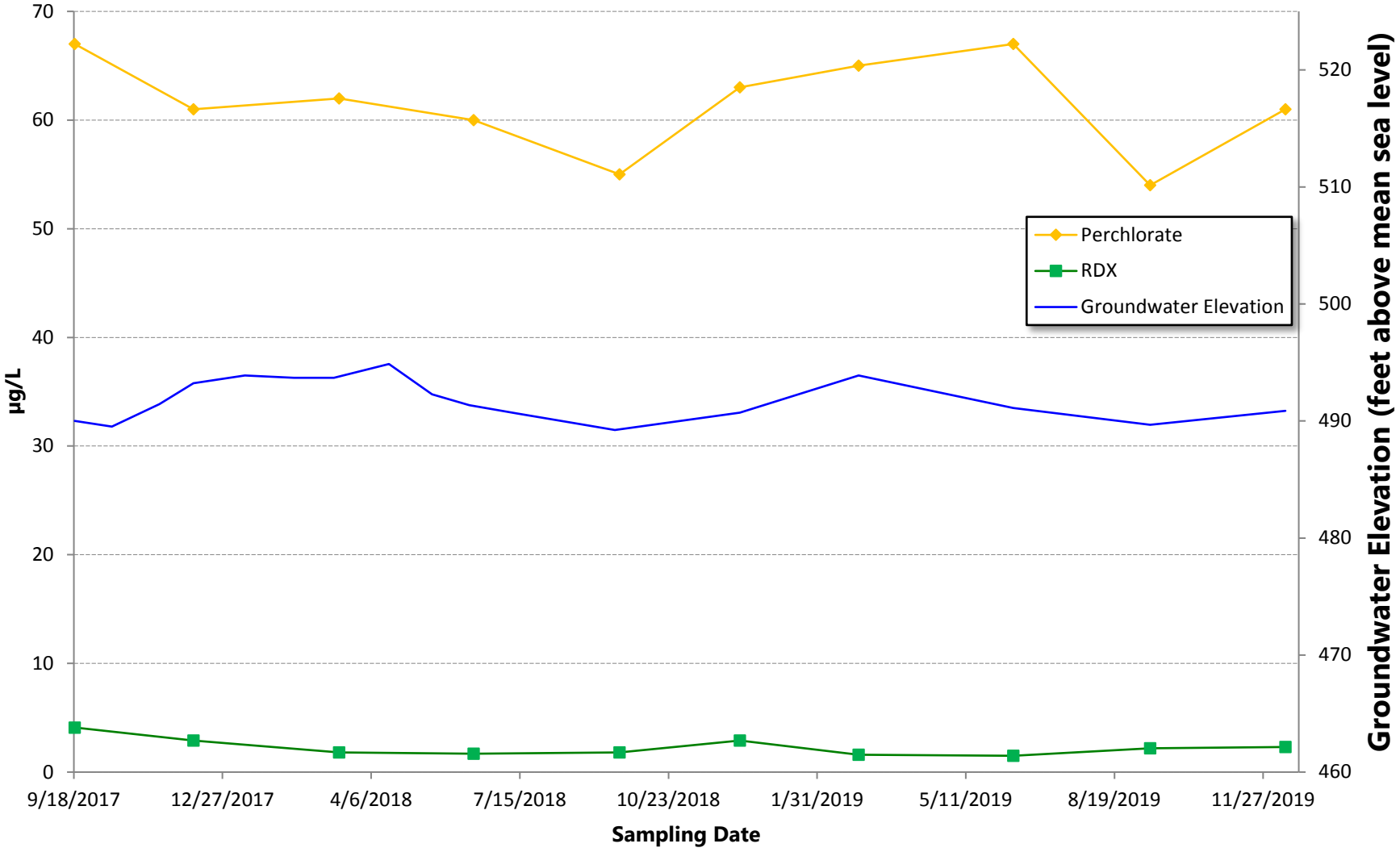
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW09B



PBS

March 2020
PBS Project 76151.009

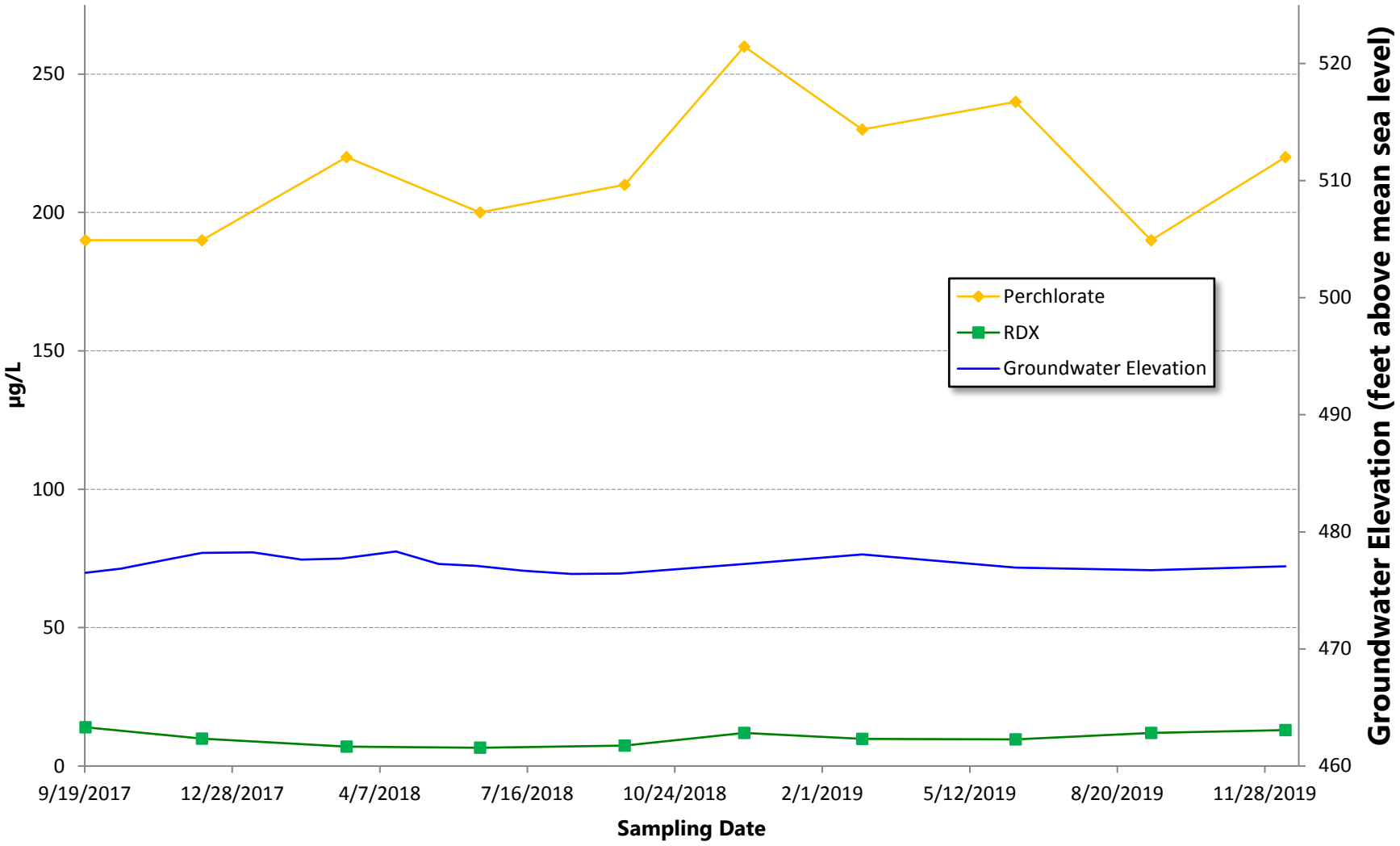
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW010A



PBS

March 2020
PBS Project 76151.009

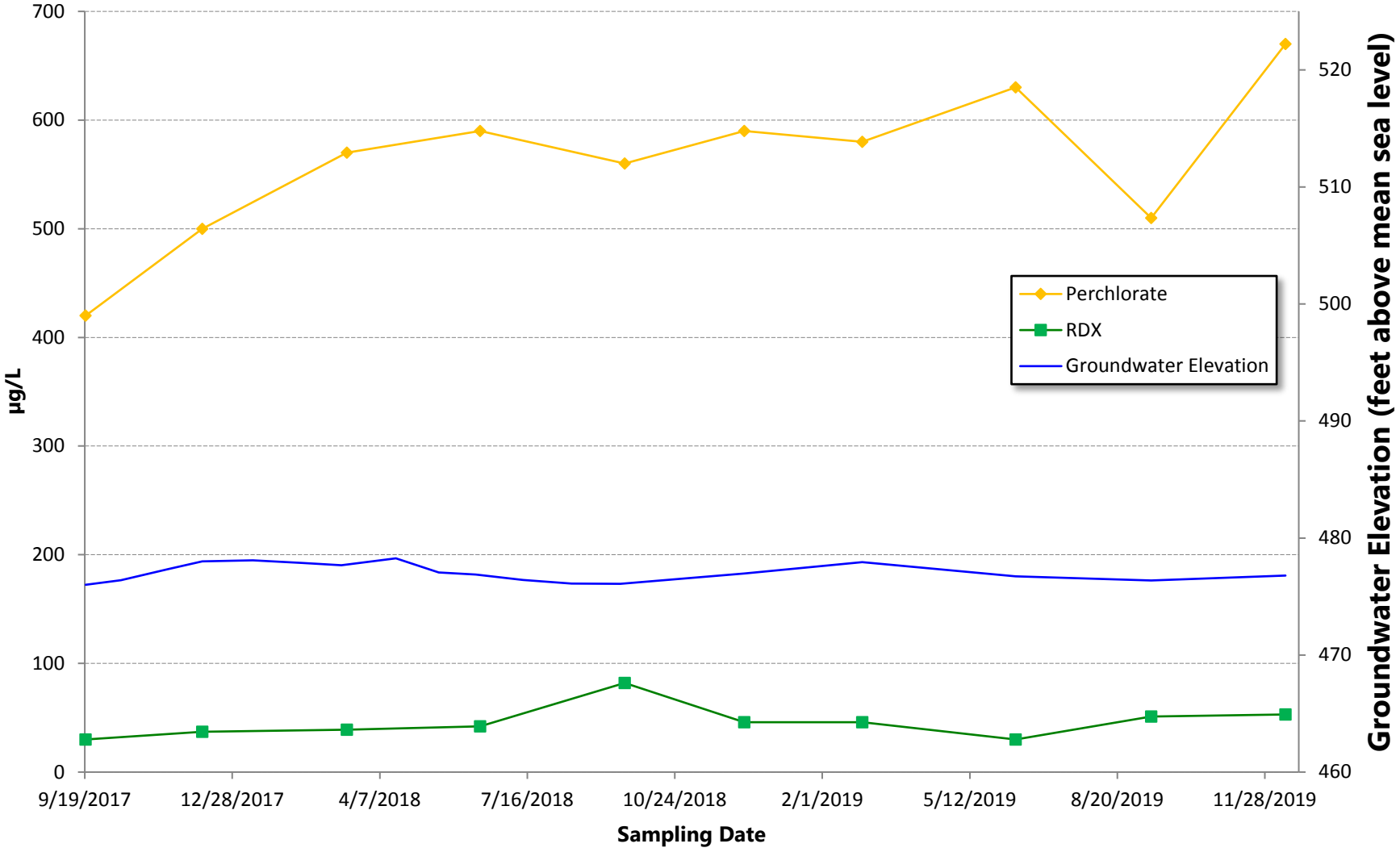
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW010B



PBS

March 2020
PBS Project 76151.009

Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW011B



PBS

March 2020
PBS Project 76151.009